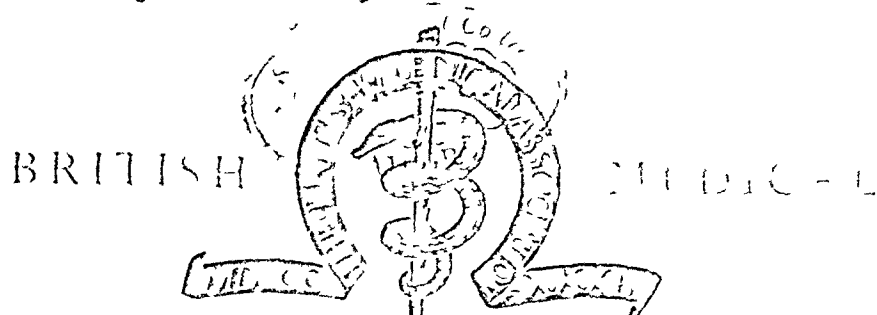






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JOURNAL OF THE



ASSOCIATION

SATURDAY APRIL 2 1933

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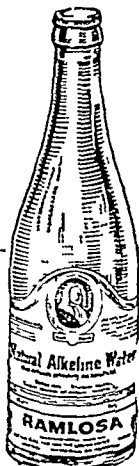
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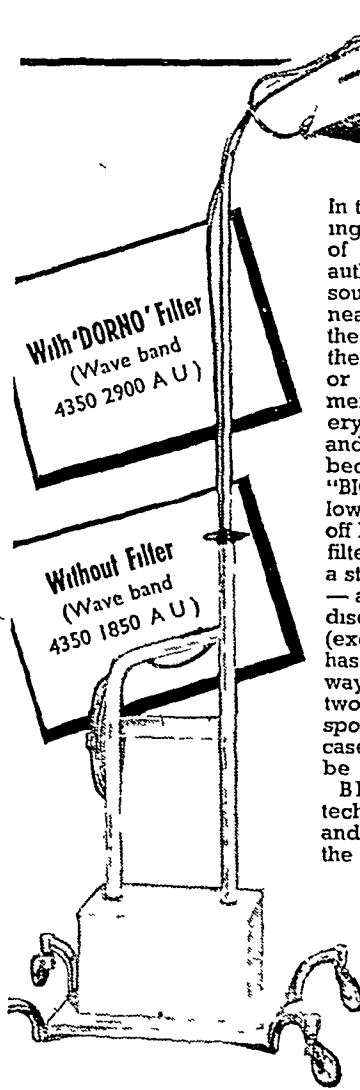
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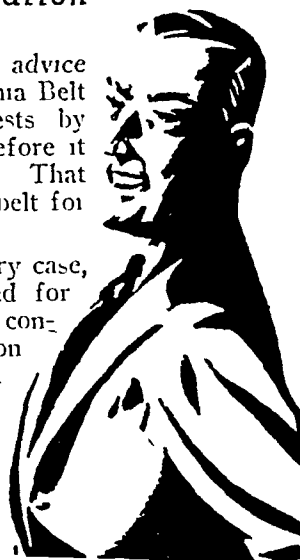
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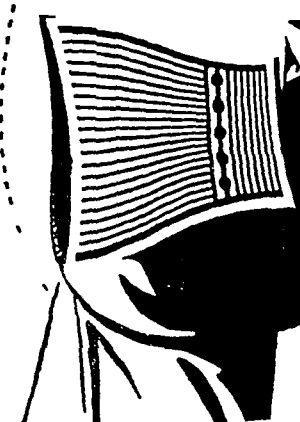
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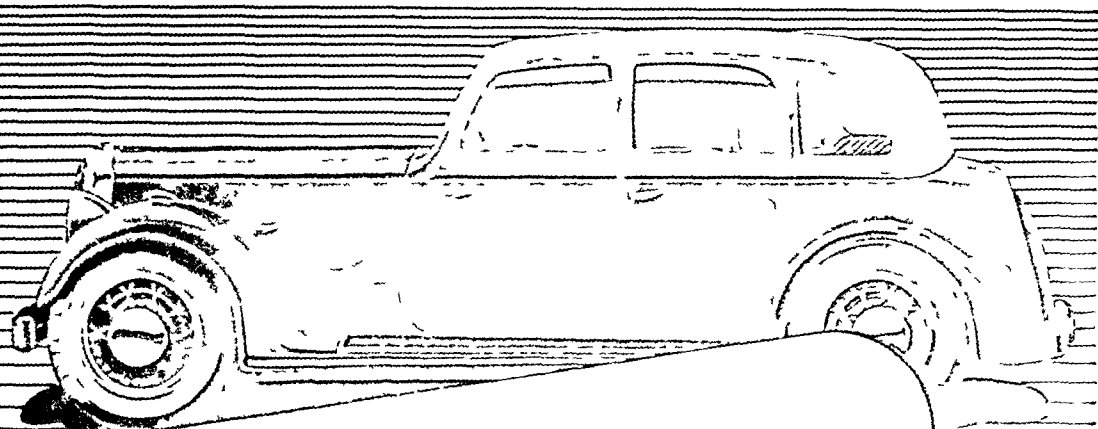
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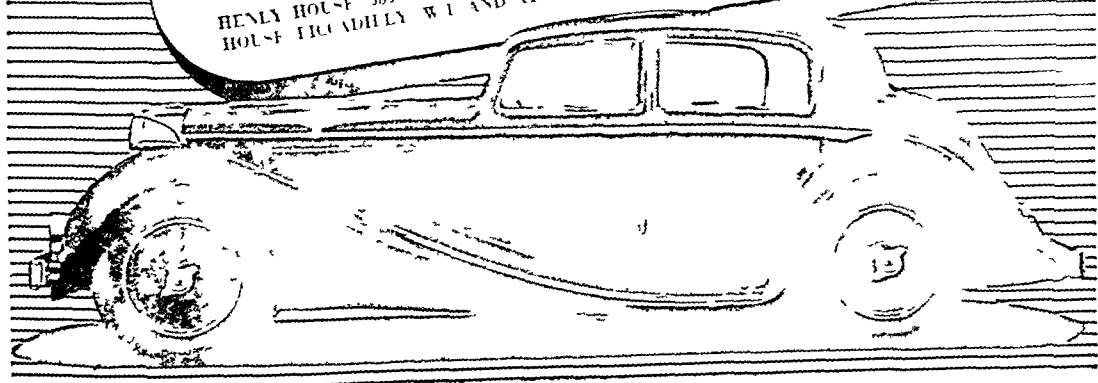
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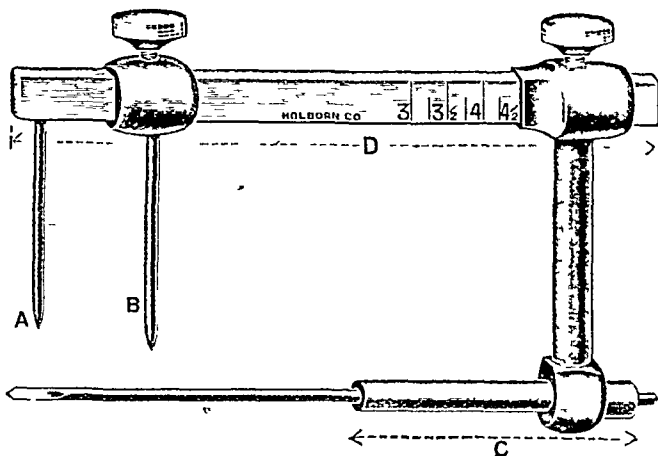
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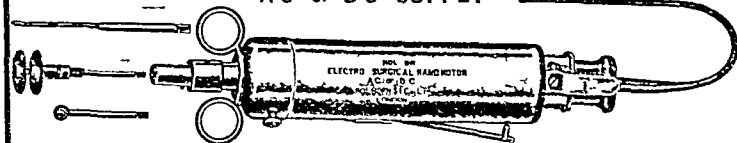
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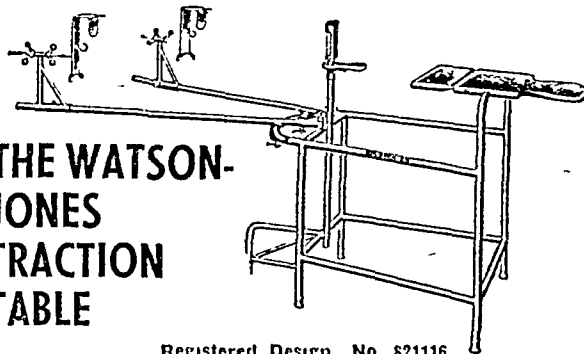
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does not yield to medical treatment. The retention of mental appreciation of sound and the preservation of hearing are governed by the use of the highest quality hearing aid available. The obvious choice is the AMPLIVOX, the first and most widely used high fidelity hearing aid. I should be glad to send you full particulars of the AMPLIVOX hearing aids.

*A. Edwin Stevens*

Governing Director

# AMPLIVOX LTD

AMPLIVOX HOUSE, 2, Bentinck Street, London, W 1  
29, St Vincent Place, Glasgow, C 1  
62a, Bold Street, Liverpool, 1

Telephone WELbeck 2591/2  
Telephone Central 3097  
Telephone Royal 4944

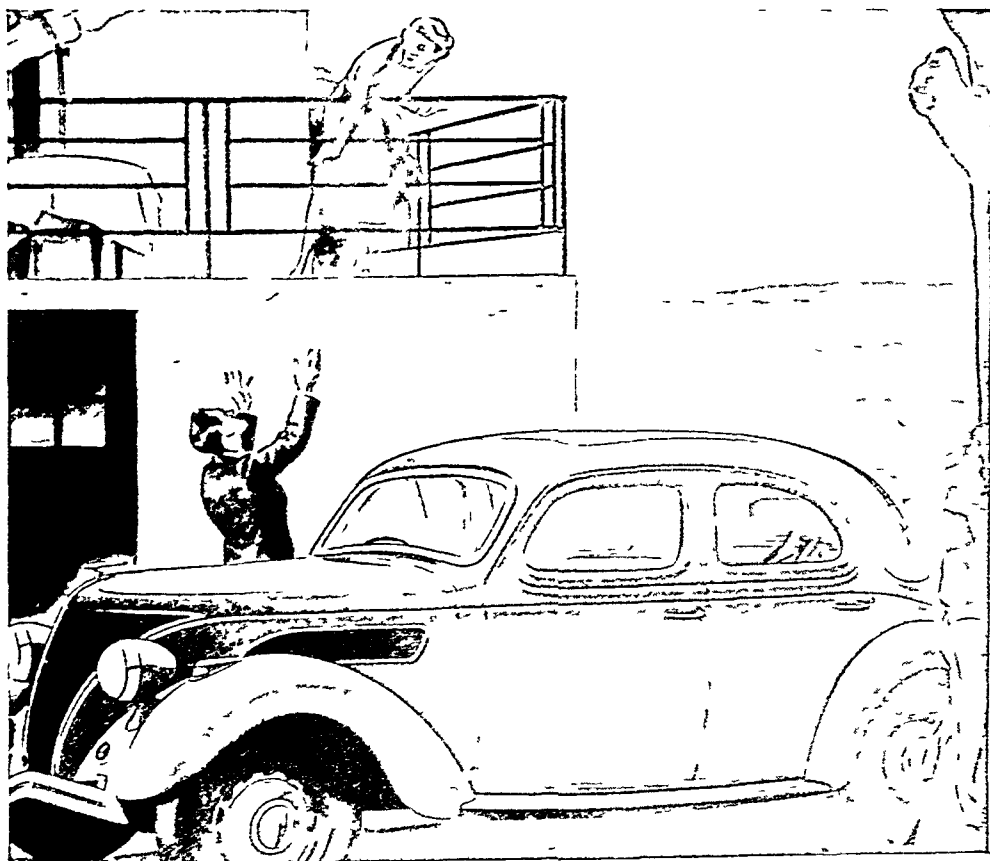
The AMPLIVOX is obtainable in the United Kingdom only from the manufacturers—AMPLIVOX LTD—and from Messrs T Hawksley W H Pettifor and Aids for the Deaf. There are appointed representatives in Australia, New Zealand, Canada, South Africa, India, Eire, France, Belgium, Holland, Norway, Sweden, Denmark and Roumania.

## FORD V-8 "22"



Powerful, comfortable roomy—the Ford V-8 "22" is no less wonderfully light on all controls beautifully working most handily, finished in so and out to in first economical to run and maintain in all to do—a luxury car beyond argument—the one which is run to treat perfect satisfaction by some of the most keenest on pounds, shillings and pence. See it in the local Ford Dealer's depot. Try it, driving our self on the most machine you can map-out. Then reflect that we can give immediate delivery of certain colour schemes. The complete, equipped FORD V-8 "22" Saloon de Luxe illustrated is £240 at cost. Catalogue on application or from Ford Dealer throughout the British Isles.

Overseas Delivery, etc., Ford Cars made a ready enquiry to by a Ford agent throughout London Showrooms.



FORD MOTOR COMPANY LIMITED DAGENHAM ESSEX LONDON SHOWROOMS: 88 REGENT STREET W 1

# *A Guaranteed Service for Deaf Patients.*

- 1 An audiometer test to determine the amount of hearing loss
- 2 Adaptation of a suitable aid to conform to individual requirements
- 3 A trial of the selected aid at home, without obligation to purchase
- 4 Submission of a full report to the doctor concerned, enabling him to supervise the trial
- 5 A guarantee covering any alterations made necessary by changing aural conditions
- 6 Every reliable type of hearing aid available, valve amplifiers, air conduction, bone conduction, and full non-electric range

**ALLEN & HANBURYS LTD.**

Acoustic Department 48 WIGMORE STREET, W 1

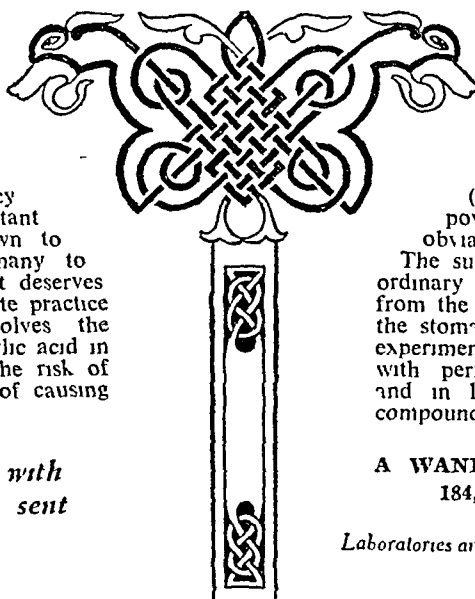
Telephone Welbeck 3903

Members of the Medical Profession are invited to make full use of the service offered, with every confidence that genuine assistance will be rendered in the selection of a suitable hearing aid

## FOR EFFECTIVE CONTROL OF PAIN

AMONG the many and diverse analgesics which have been evolved by modern chemical research acetyl salicylic acid retains its reputation as one of the safest and most effective. Its tendency to liberate salicylic acid—the irritant properties of which are well known to physicians—has, however, caused many to hesitate to employ it as widely as it deserves. Exhaustive trial in hospital and private practice proves that "Alasil" definitely solves the problem of administering acetyl salicylic acid in an effective form being free from the risk of irritating the stomach or bowels or of causing general reactions.

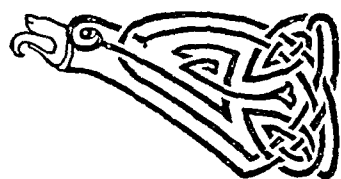
*A supply for clinical trial with  
full descriptive literature sent  
free on request*



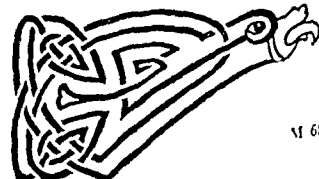
In "Alasil" the desirable therapeutic effects of acetyl salicylic acid are well exhibited by its calcium acetyl salicylate moiety while the presence of "Alocol" (Colloidal Hydroxide of Aluminium) a powerful gastric sedative and antacid, obviates any tendency to gastric irritation. The superior absorbability of "Alasil" over ordinary salicylate compounds and its freedom from the risk of liberating free salicylic acid in the stomach have been well proved by careful experimentation. "Alasil" can be prescribed with perfect safety to patients of all ages and in larger doses than ordinary salicylate compounds.

**A WANDER, Ltd, Manufacturing Chemists,**  
184, Queen's Gate, London, S W 7

Laboratories and Works KING'S LANGLEY HERTS



# ALASIL





# RADIOSTOLEUM

(Standardised Vitamins A and D)

For administration in convalescence  
in reduced resistance and in all  
manifestations of a deficiency of  
Vitamins A and D, whether  
the deficiency be acute  
or chronic

*Sample on request*

THE BRITISH DRUG HOUSES LTD LONDON N 1

R575 343

## HAY FEVER VACCINES PROPHYLACTIC and CURATIVE

Immunisation should be commenced in  
susceptible patients now. In treatment  
the initial dose is determined by the

### OPHTHALMIC TEST OUTFIT

Prepared for DUNCAN, FLOCKHART &  
CO by the RESEARCH LABORATORY of  
the ROYAL COLLEGE OF PHYSICIANS,  
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*Literature on application to—*

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# A + B + C + D

## 'Nestrovite' is made in 2 forms

### TABLETS & EMULSION



"Only those concentrates should be used whose potency is known"—  
B M J, Nov 2, 1935

The composition of 'Nestrovite' and the potency of the four vitamins, A, B<sub>1</sub>, C and D, are clearly stated on every packing. The preparation is reliable, palatable and not expensive, and is made in England. A 4½ fl oz bottle of Emulsion contains 36 teaspoonfuls each representing an average dose for an infant. The tablets are issued in boxes of 20 and 100.



# NESTROVITE

Trade Mark

Vitamin Tablets and Emulsion

Brand

Distributors Roche Products Limited London N 13 and Welwyn Garden City



### For Spring-time Lassitude

The administration of Livogen, with its measured content of Vitamin B<sub>1</sub>, liver extract and haemoglobin overcomes anorexia, reinstates normal peristalsis, restores vitality and dissipates that condition of lassitude and inertia so frequently encountered in the early days of spring.

## LIVOGEN

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THE BRITISH DRUG HOUSES LTD  
LONDON N 1-

Lgn/S/57

# STREPTOCIDE

(p aminobenzenesulphonamide Evans)

For oral administration

The therapeutical indications include

1. **THE**

Acute Puerperal Sepsis Erysipelas  
Tonsillitis Streptococcal Meningitis  
Gonorrhoeal and B Coli infections of  
the Genito-Urinary tract

A report to the Therapeutic Trials Committee on the value of Streptocide in Puerperal Fever appeared in the Lancet, November 27th and December 4th 1937

Streptocide is issued in Tablets and folded Powders

Tablets					Powders				
In bottle of	25	0.5 gm	2/-	0.25 gm	1/9	Bottle of	12	0.25 gm	2 6
	100		6/6		5/3			0.5	3 3
	250		15/-		10/-				

Made at EVANS BIOLOGICAL INSTITUTE by

EVANS SONS LESCHER & WEBB Ltd  
LIVERPOOL AND LONDON

the prevention of infection —

it is now generally agreed that dependence of the vitamin B complex may be related to increased susceptibility to certain kinds of infection.

(Proc. P. C. C. M. d. 1937 30 17)

A popular method of raising the vitamin-B content of the diet consists in the systematic administration of Marmite. This yeast extract is rich in all the vitamins of the B group, and is being increasingly prescribed for its health-promoting properties.

Marmite is ordered as a routine measure all the year round in private practice and in hospitals, schools and welfare centres, and when epidemics prevail its use is especially indicated. On account of its appetising flavour Marmite is appreciated by patients of all ages, but children find it a particularly attractive dietary adjunct.

**in preventive and curative medicine and in convalescence**

# MARMITE

For sample and literature apply to —

**THE MARMITE FOOD EXTRACT CO LTD** Walsingham House Seething Lane, London, E.C.3

Injars 1-oz 6d 2-oz 10d 4-oz 1s 6d 8-oz 2s 6d 16-oz 4s 6d Special quantities 1 - Mar. is picked for use in the case of all work orders and



# Peptonised Chicken Jelly (BENGER)

# Peptonised Beef Jelly (BENGER)

IN ALL-GLASS CONTAINERS

The new all-glass container in which these jellies are packed, ensures that they reach the invalid in perfect condition

Served in their jelly state with a few biscuits, or dissolved in hot water in "beef tea" form, these preparations make a valuable and easily assimilated restorative for weak digestions

*NOTE —Peptonised Chicken Jelly and Peptonised Beef Jelly (Benger) are entirely free from preservatives*

BENGER'S FOOD LTD.,

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CHESHIRE



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SYDNEY (N.S.W.) 30 George Street

CAPE TOWN (S.A.) P.O. Box 32

M.C.B.

Feed Track Mark

## Oral Vaccine for the prevention of Colds and Influenza

Since Genatosa brand Oral Vaccine was introduced to the Medical Profession last Winter, extensive clinical and laboratory tests have shown that it establishes a high degree of immunity against colds and influenza, the oral vaccine has also proved successful in the treatment of chronic bronchitis and similar respiratory infections

This vaccine contains hemolytic streptococci, in addition to other organisms incriminated in the causation of colds and influenza infections. It has been found that the ingestion of the oral vaccine against colds and influenza also develops immunity to diseases caused by hemolytic streptococci

Particulars concerning Genatosa brand Oral Vaccine will be found in the new brochure on Vaccine Therapy which has recently been published by Genatosa Ltd. This booklet also gives information regarding a wide range of vaccines administered by hypodermic injection and the standard types of Local Immunity Products. A copy of the brochure will gladly be supplied to any physician on request

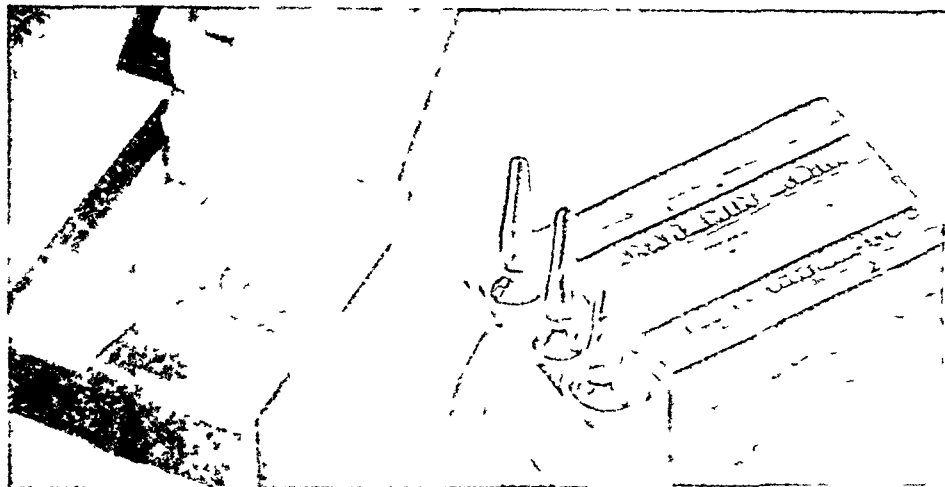
# GENATOSAN LIMITED

VACCINE DEPARTMENT, LOUGHBOROUGH, LEICS



# ANAHÆMIN B.D.H.

it is possible almost to guarantee a rise of half a million in red blood-cells weekly  
for a 1 lb 2 oz bottle



Sample on request

THE BRITISH DRUG HOUSES LTD LONDON N 1

1/5 1

## WHEREVER and WHENEVER MINERAL METABOLISM

is important,

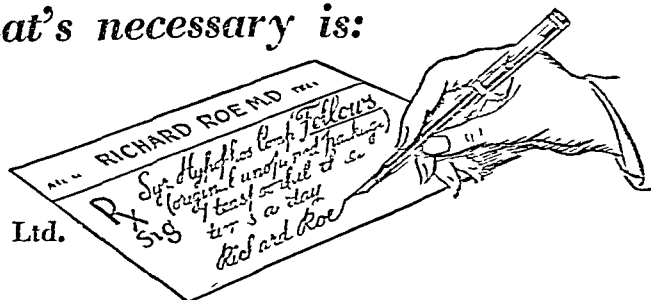
the hydrogen-ion balancing qualities of  
Compound Syrup of Hypophosphites

TRADE **"FELLOWS"** MARK

have a distinct and important place.

*All that's necessary is:*

Samples on request  
Fellows Medical Mfg Co Ltd.  
286 St Paul Street West  
Montreal Canada



TRADE  
MARK

'AMYTAL'

BRAND

*Iso-amyl Ethyl Barbituric Acid***FOR SEDATION AND HYPNOSIS**

⑥ The tranquil sleep of children is always the envy of less fortunate adults to whom at times this boon is denied because of sickness or other conditions which upset the psychic or emotional equilibrium

'Amytal' supplies the relaxation and sleep which are essential to recuperation of vital forces. It may be prescribed wherever there is need to combat insomnia, restlessness, or apprehension. A noteworthy margin of safety is characteristic of 'Amytal,' and since destruction of the hypnotic within the body appears to be accomplished rapidly there is little tendency to unwelcome side-reactions or after-depression.

'Amytal' is supplied in  $\frac{1}{4}$ -grain,  $\frac{1}{2}$ -grain, and 1 $\frac{1}{2}$ -grain tablets in bottles of 40 and 500.

*Lilly*  
TRADE MARK

**ELI LILLY AND COMPANY LIMITED**

2, 3 & 4, Dean Street, London, W 1

Distributing Agent in Britain for ELI LILLY AND COMPANY, INDIANAPOLIS, U S A

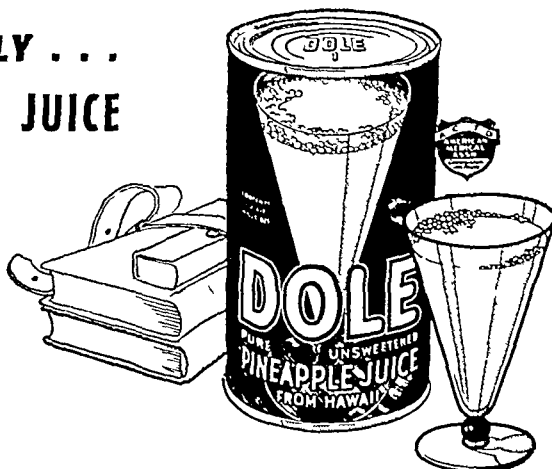
## SCHOOL CHILDREN ESPECIALLY . . . ARE FOND OF THIS PURE FRUIT JUICE

GOOD work, as every doctor knows, is very often dependent upon good health. And a well regulated diet is important for maintaining good health.

Dole Hawaiian Pineapple Juice is the natural juice of sun ripened, Dole grown pineapples. It contains no added sugar or preservatives of any kind.

The exclusive Dole Fast Seal Vacuum Packing Process returns, to a high degree, those important fresh fruit constituents found in the ripened pineapple so valuable, not only to growing children, but to adults as well! Also this tangy, tropical juice is a natural source of vitamins A, B and C. That's why, with schooltime when parents are asking about diets and menus for their children you can recommend with assurance pure unsweetened Dole Pineapple Juice—the original pineapple juice from Hawaii.

J. K. Husband & Co. Ltd., 10 Finsbury, London, E C 3



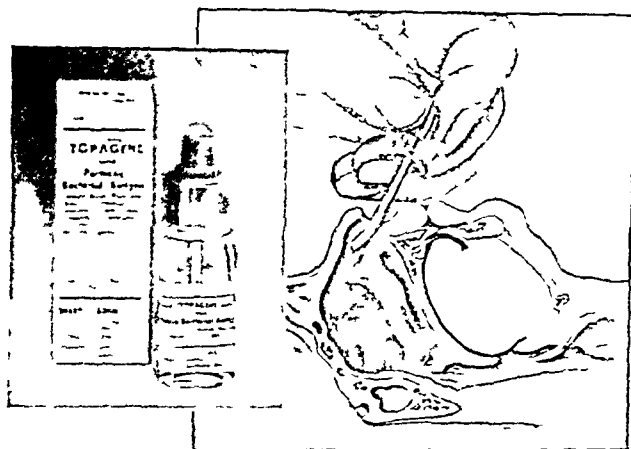
**THE LEI WOMAN**—An old Hawaiian custom ever new is the habit of decorating departing or returning friends with beautiful wreaths of native flowers. The fragrant ulu, maile, plumeria, pikake and ginger are used extensively in the making of leis. It is a picturesque sight on steamer days to see the native women with their skilful hands weaving the fragrant garlands.

### HERE IS A TYPICAL ANALYSIS OF DOLE PINEAPPLE JUICE

Moisture	85.3%	Crude Fibre	0.02%
Ash	0.4	Titratable acidity as citric acid	0.9
Fat (ether extract)	0.3	Reducing sugars as invert sugar	12.4
Protein (N x 6.25)	0.3	Carbohydrates other than sugars (by difference)	0.38

**P.S.** We would like you to enjoy a long cool glass of this refreshing juice! Write to us on your letterhead and we will send you a sample tin free.

## Treatment of Pertussis by the Intranasal Instillation of 'TOPAGENE' Mulford



**'TOPAGENE'** Pertussis Bacterial Antigen is indicated in the specific treatment of pertussis by intranasal instillation. It is a sterile solution of soluble antigenic substances derived from recently isolated phase I culture of *H. pertussis*. Each c.c. represents the antigenic substances derived from 20,000 million organisms. Its use clinically has resulted in definite cessation or amelioration of the paroxysmal cough and a decrease in the duration of the disease.

Slingsinger, in *Journal of Pediatrics*, 9 42, 1936, states that 'We feel that

the high percentage of favourable results and the simplicity of the method of treatment definitely class this intranasal antigen as a valuable therapeutic procedure in the treatment of active cases of whooping cough.'

The experience of Gold reported in *Journal of Pediatrics* 10 641, 1937 shows definite benefit in 85% of the cases treated early in the paroxysmal stage of the disease.

'Topagene' Pertussis Bacterial Antigen is supplied in 5-c.c. vial fitted with pipette bulb stopper.

*Descriptive literature sent on request*

MULFORD BIOLOGICAL LABORATORIES,

**SHARP & DOHME LTD.**

76/78, CITY ROAD, LONDON, E.C. .

# Convalescence

In convalescence a tonic is required that will co-operate with, and augment, the natural recuperative powers of the body, rather than one which will have only an immediate stimulating effect. In the latter case there is always the danger of disappointment, due to an artificial improvement that the natural powers are unable to stabilise

Medical evidence extending over many years has established the value of Sanatogen in promoting convalescence. In "The Elements of Pharmacy, Materia Medica and Therapeutics", Sir William Whitla writes —

*The interesting and valuable researches conducted by Tunncliffe and Beddoes upon metabolism, in which Sanatogen was experimented with, establish the fact that its organic phosphorus is almost entirely assimilated when the food is administered in the amount necessary for the needs of the body. When given in addition to other food, the amount of nitrogen and phosphorus retained in the organism is increased, the tissue metabolism is more complete, the constituents of the ordinary food being more thoroughly utilised, appetite is increased and the body weight augmented."*

Similarly gratifying observations are constantly being notified, and, as Sanatogen is entirely free from fats, sugars and carbohydrates, it can safely be prescribed in all types of cases. It is rapidly and easily digested and assimilated, even in cases exhibiting severe gastric inflammation, and for this reason it is a valuable addition to enemata. It can be added to any non-acid beverage or food, and, consequently, monotony in its administration can always be avoided.

# SANATOGEN

A CHEMICAL COMBINATION OF 95% MILK  
CASEIN AND 5% SODIUM GLYCEROPHOSPHATE

Clinical samples and literature available on request to

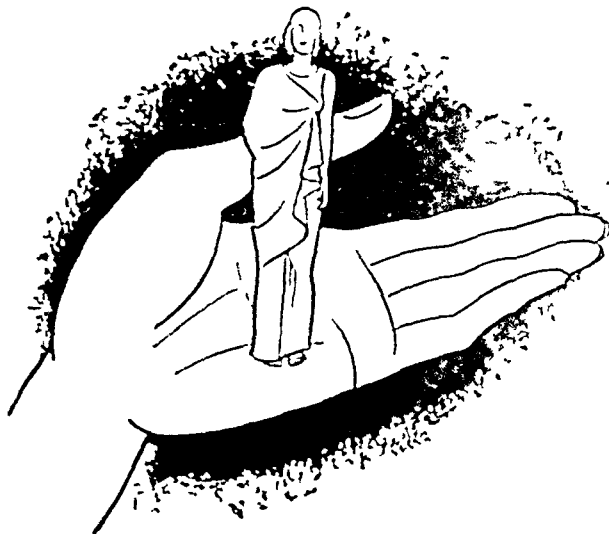
**CENATOSAN LTD.,  
LOUGHBOROUGH,  
LEICESTERSHIRE.**

## DOSAGE

For children and adults two tea-spoonfuls three times daily or according to circumstances. For infants 1 teaspoonful added to each bottle feed.



Sold by all chemists  
price 2/3 to 19/9



## The destiny of the woman—in the hands of the physician

The timely and thorough medical treatment of female genito-urinary diseases is frequently a decisive factor in the health and happiness of the patient

### OBSTINATE LEUCORRHOEA

of an infectious or non infectious character (Gonorrhoea, post-gonorrhoeal conditions, trichomonas colpitis, constitutional catarrh, etc.) can be treated simultaneously from two or three directions in a particularly active and effective manner by means of

### SPUMAN STYLI

vaginal, cervical, urethral treatment

SPUMAN as a medicinal foam therapy is the most rational method of treatment for every kind of leucorrhoea

Send for free samples and full particulars. State combinations desired.

### MEDICAL LABORATORIES Ltd.

40, PALL MALL, LONDON, S.W. 1

Telephone WHITEhall 2486

I free from my own experience with what difficulties one has often to contend in cases of obstinate leucorrhoea of various types and how often the desired result is still not achieved. Every one of my colleagues will welcome a new absolutely reliable method of treating this cruel

DEUT. BUNDES. MED. ZEITSCHRIFT  
Mo. 49/1/34

#### Survey of the indications

Spuman therapy provides the most suitable remedy for every description of leucorrhoea

Leucorrhoea of constitutional origin *Spuman cum lacte acid*

Gonorrhoea (including the ascending form) purulent inflammation of the urethra vulvovaginitis gonorrhoea *Spuman cum sil. or protarginate, Spuman cum sil. or nitrate Spuman cum zinc sulphate Spuman cum ichthyol*

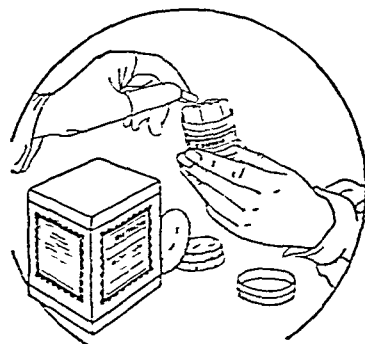
Postgonorrhoeal leucorrhoea leucorrhoea associated with trichomonas *Spuman cum salicylic acid*

Adnexitis parametritis inflammatory tumours *Spuman cum salicylic acid Spuman cum ichthyol*

Endometritis portio erosions *Spuman cum salicylic acid Spuman cum acid tannic Spuman cum ichthyol Spuman cum zinc sulphate*

Dyspareunia *Spuman cum ichthyol*

Leucorrhoea resulting from carcinomatous ulcers *Spuman cum zinc sulphate*



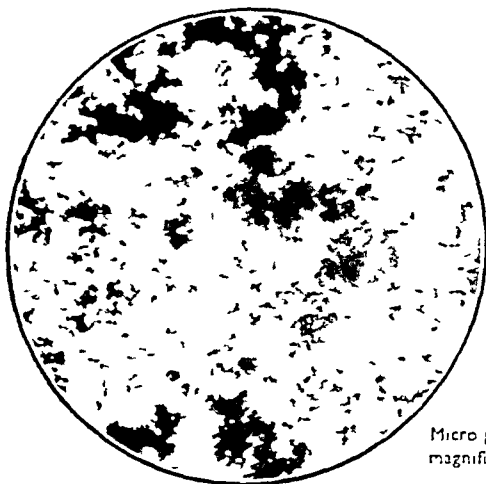


## 'PLASTULES' FOR ANÆMIA

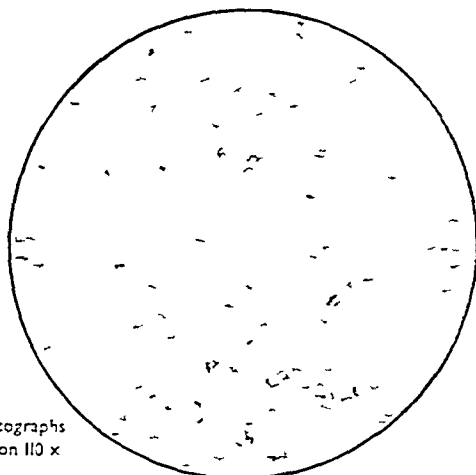
Small dosage, easy assimilation, and excellent results are all characteristics of 'Plastules' brand Hæmatinic Compound. The suggested daily dose of only three 'Plastules' Plam is usually sufficient to induce an early response in cases of secondary anæmia. 'Plastules' obviate the

necessity of massive non feedings, ensure the co-operation of the patient and provide an economical form of non medication . . . Doctors are invited to write for samples and literature on 'Plastules' brand Hæmatinic Compound Plam and 'Plastules' with Liver Extract

# Visual evidence of the minute sub-division of 'BiSoDoL'



An antacid powder com-  
pounded by ordinary methods



Micro photographs  
magnification 110 x

BiSoDoL reduced to fine  
sub-division by special pro-  
cesses in compounding

Comparison shows a remarkable distinction in the state of sub-division between an ordinary antacid powder and 'BiSoDoL.'

'BiSoDoL' is composed of Bismuth Subnitrate Magnesium Carbonate Sodium Bicarbonate, Papain Diastase and Peppermint Oil, compounded by a special process. It conforms to the most recent demands of modern gastro-intestinal therapy.

'BiSoDoL' can be recommended with confidence in all conditions involving hyperacidity.

Samples for clinical trial will gladly be sent on request.

## BiSoDoL

REGD

## ENDOCRINE DISTURBANCES OF THE SEX GLANDS

THE **»Bayer«**

### HORMONE PREPARATIONS

Highly effective and standardised

**'UNDEN'**

TRADE MARK BRAND  
OVARIAN HORMONE

For substitution therapy in  
deficient formation of follicular hormone

The pure follicular hormone

**'LUTREN'**

TRADE MARK BRAND  
LUTEOSTERONE

In Hæmorrhages

The corpus luteum hormone

For the prevention of threatened  
abortion, and in menorrhagia

**'PROLAN'**

TRADE MARK BRAND  
ANTERIOR PITUITARY HORMONE

To increase and stimulate  
ovarian activity

The gonadotropic hormone of the  
anterior pituitary lobe. Indicated in  
menorrhagia and sterility

**'PRELOBAN'**

TRADE MARK BRAND  
ANTERIOR PITUITARY HORMONE

For simultaneous stimulation  
of metabolism and of the  
functions of the male and  
female sex glands

The whole gland extract of the  
anterior pituitary lobe. In pre-  
mature senility, infantilism and other  
endocrine disturbances. Can be  
combined with Prolan

**'ERUGON'**

TRADE MARK BRAND  
TESTOSTERONE

Whole gland testicular extract

Indicated in prostatic hypotrophy  
and male impotence

*Fifty Years of*

1888  1938

PHARMACEUTICAL  
PRODUCT

**BAYER PRODUCTS LTD.**

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No. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

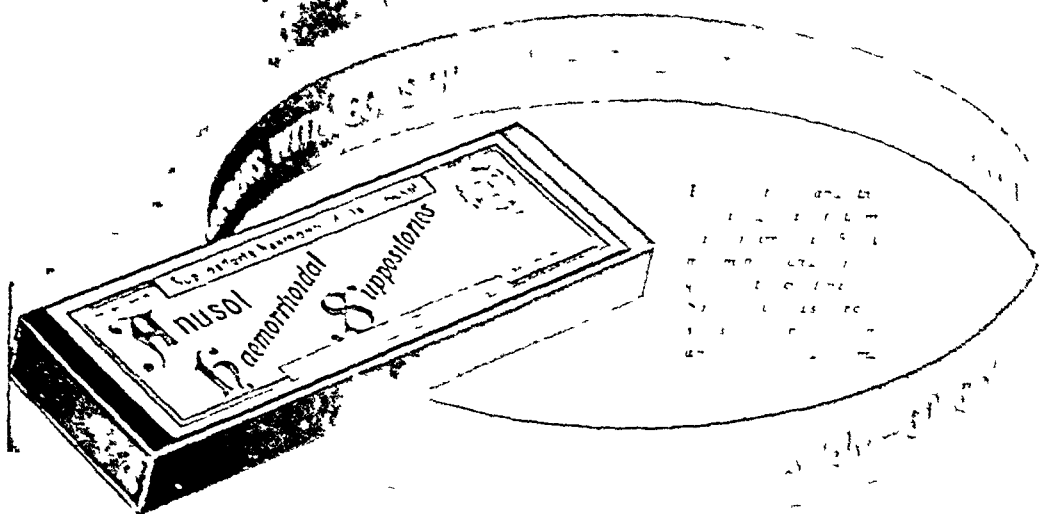
BLACKFRIARS HOUSE PAPSONAGE MANCHESTER

Dublin Office

MOLESWORTH HOUSE 12 SOUTH FREDECK ST DUBLIN



# The Vicious Circle in Haemorrhoids



## Effectively Broken

First there is marked relief from pain and irritation. The suppositories afford this alleviation not by narcotic or analgesic drugs but by their emollient and protective effect.

Under this soothing influence inflammation subsides, thus congestion is reduced; then pressure-pain disappears and the patient obtains genuine relief from the most distressing symptoms. The tendency to bleeding diminishes as venous stasis is relieved and the return circulation is improved.

By softening the faeces the suppositories promote easy evacuation, so the patient loses his fear and is helped back to regular bowel action.

This sequence of good effects follows without the occurrence of any unpleasant, dangerous or systemic disturbance.

In this entirely mechanical and rational way, Anusol Suppositories provide freedom from the distressing symptoms of haemorrhoids and other inflammatory and painful conditions in the ano-rectal region.

# ANUSOL

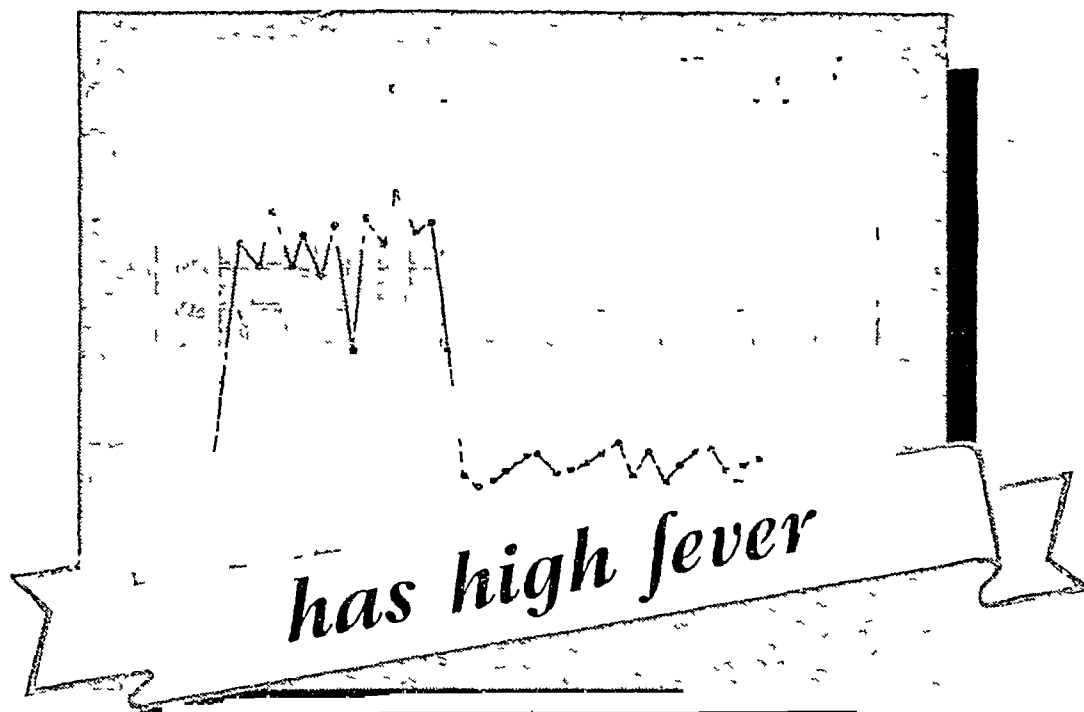
BRAND

## Haemorrhoidal Suppositories

*Available also in Ointment form or collapsible tube form*

WILLIAM R WARNER & CO LTD, POWER RD., CHISWICK LONDON W.4

## Your Patient . . .



Food must obviously be restricted; yet some stimulating effect on digestion is desirable to maintain strength. Thirst is a problem . . .

Brand's Essence does not cause thirst. And you will appreciate other reasons why this unique stimulant is of value to your patient. Brand's will not strain the most enfeebled system because it precipitates no solids and contains no irritants. A lively flow of the gastric ferments is aroused, but excess acid is effectively dealt with through protein-adsorption. Easy assimilation gives quick effect to Brand's potent protein-sparing properties.

**BRAND'S** CHICKEN OR BEEF **ESSENCE**

*is never contra-indicated*

BRAND & CO. LTD., SOUTH LAMBETH ROAD, LONDON, S W 8

# Haematopoiesis

# NEO-HEPATEX

(Parenteral)

**Prolonged and world-wide experience of Neo-Hepatex has proved that no other liver product surpasses it in potency.**

The combined advantages of high hæmopoietic power and low price render treatment with Neo-Hepatex remarkably economical in cost

Physicians everywhere are now agreed —

- (a) That in Liver therapy the variation of requirement in different cases of primary anæmia is so pronounced as to render it impossible to foretell the dosage required with any degree of certainty
- (b) That whilst a system of dosage based upon minimal quantities may be harmful there is no danger in over-dosage

Adequate dosage of Neo-Hepatex, though small in volume, ensures rapid progress with eventually the longest possible intervals between the injections necessary for maintenance

*Neo-Hepatex is issued in ampoules*

Boxes of 6 x 1 cc 5/-, 6 x 2 cc 7/6, 3 x 4 cc 6/6

Made in England at Evans Biological Institute by

**Evans Sons Lescher & Webb Ltd.**  
LIVERPOOL and LONDON

## REPORTS AND ANALYSES

### MOUSSEC

(MOUSSEC LTD., 175-6, PICCADILLY, W.1)

This is a sparkling wine of the champagne type prepared from imported grape must and fermented in this country by suitable selected champagne yeasts. The treatment of the wine during and after fermentation is the same as carried out in the well-known wine houses in France. When analysed the following results were obtained:—

Alcohol (by volume)	12.0	per cent.
Equivalent to proof spirit	20.65	"
Total extractives	3.93	"
Consisting of—		
Invert sugar	1.97	"
Cane sugar	0.29	"
Fixed acidity (as tartaric acid)	0.51	"
Mineral matter, &c.	1.16	"
Volatile acidity (as acetic acid)	0.06	"

The wine has the appearance, composition, and general properties of an ordinary dry French champagne. It is light and pleasant to the palate, and has an agreeable aroma. The manufacturers would seem to have succeeded in making, in this country, an attractive and wholesome wine closely resembling the imported product.

THE LANCET, JULY 6, 1935

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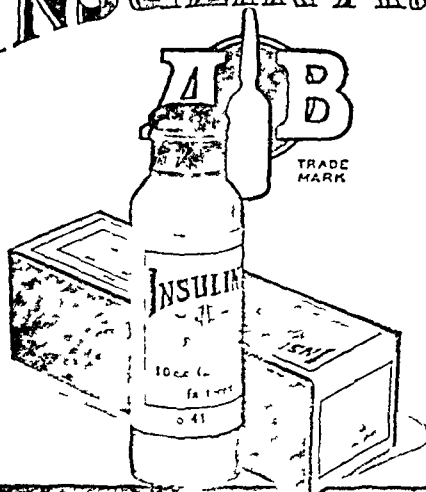
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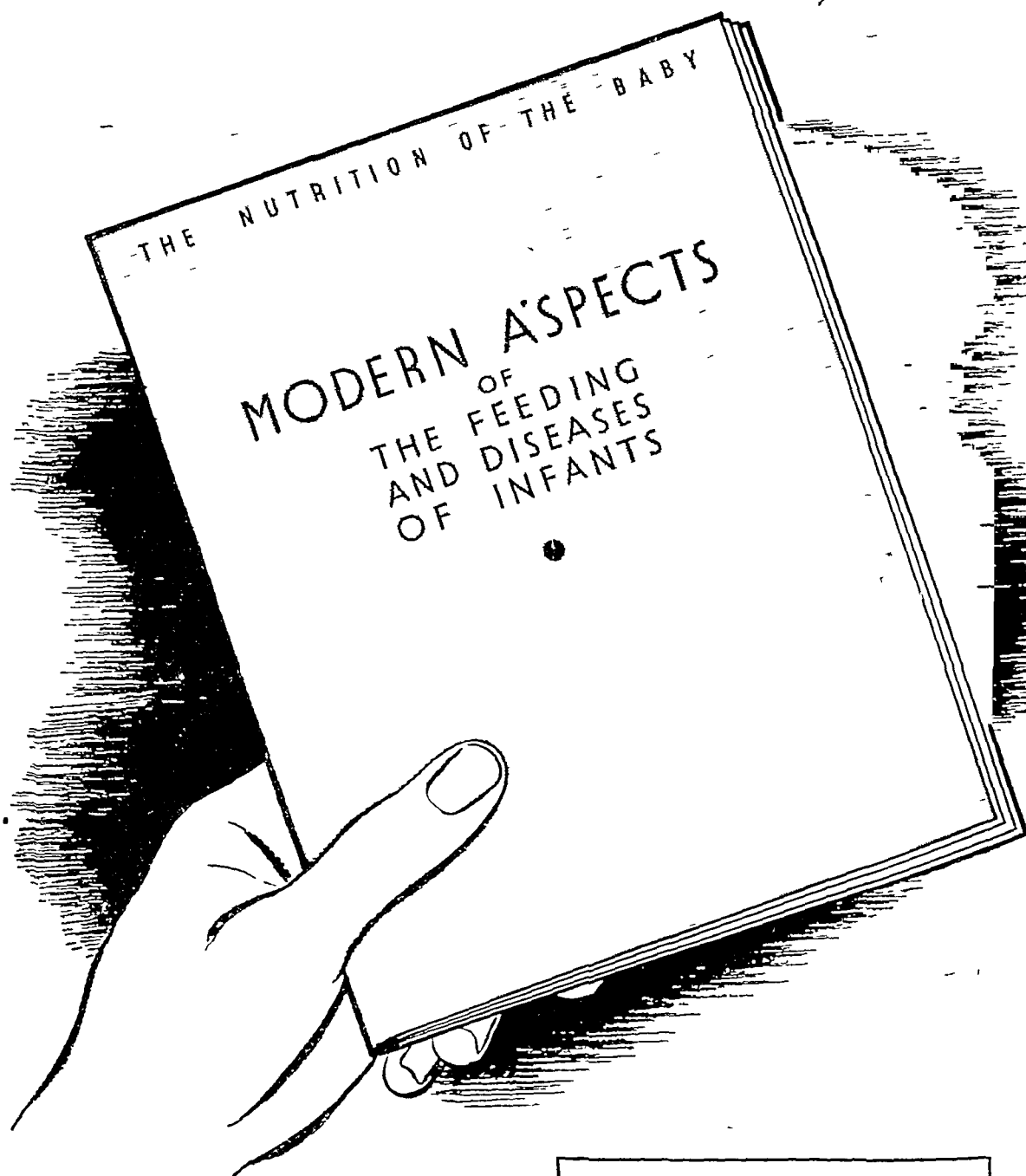
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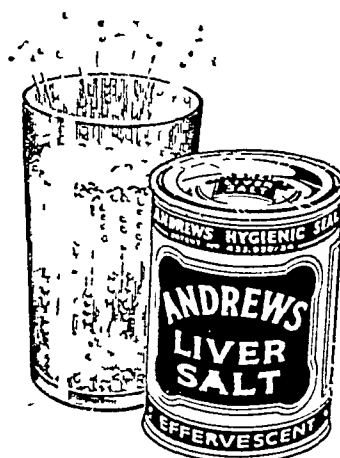
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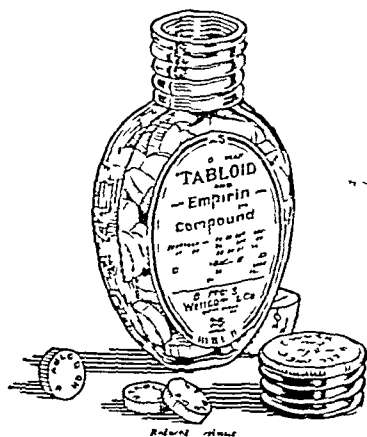
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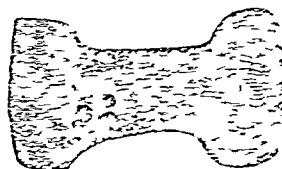
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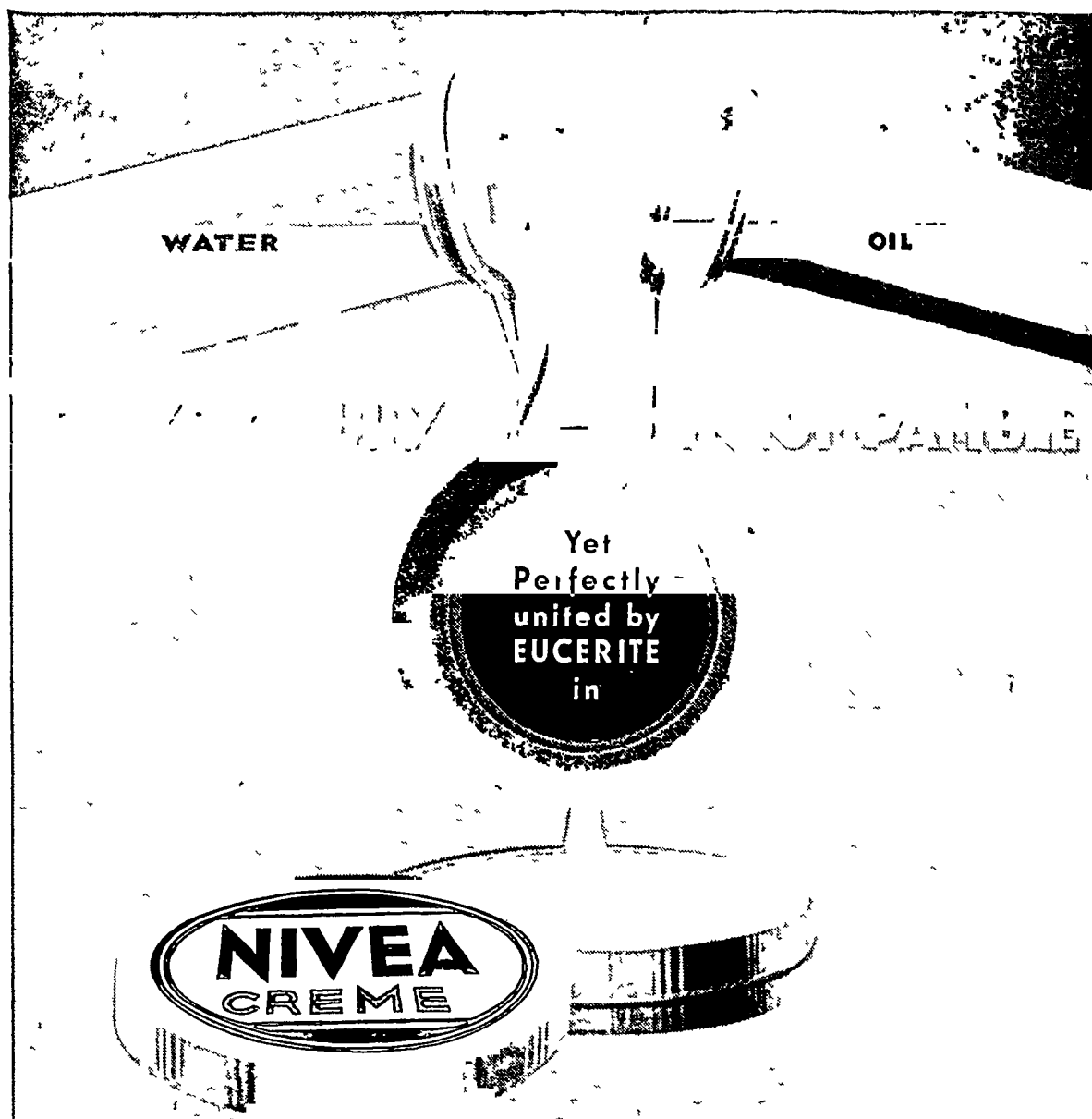
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## THE ALKALOID EPHEDRINE\*

By

J. H. GADDUM, Sc.D., M.R.C.S., L.R.C.P.

Professor of Pharmacology, University College, London

The alkaloid ephedrine is present in extracts of various plants belonging to the genus *Ephedra* which all grow in roughly the same latitude in Northern China, Northern India and Spain. One species has been used as a drug in China for about 5000 years under the name of ma huang. The plant consists almost entirely of bundles of green stems lying parallel without much branching. The leaves are reduced to small dry scales arranged in twos or threes round the stem at intervals, so that the plant looks rather like an equestrian. In actual fact the ephedras are gymnosperms and are therefore related to the pines and firs whereas the equestrians are not flowering plants at all and are very distinct relations of the ephedras.

The chemical structures of ephedrine and pseudo-ephedrine are here shown. These alkaloids both of which

surviving reference was published about 2000 years later. This represents a big gap in the literature but it is probable that many references from this period have been lost. After the beginning of the Christian era the rate of publication increased from about one paper per century to four papers a century in the period 1800 to 1880.

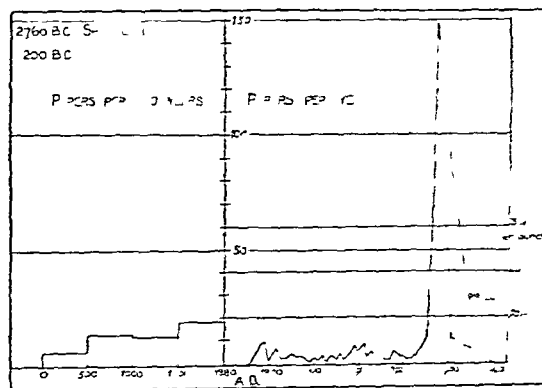
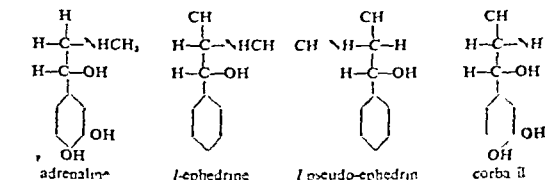


Chart showing the history of scientific work on ephedrine.



are present in the green stems of some kinds of ephedra are optical isomers of one another and closely related to adrenaline. The molecules of ephedrine and pseudo-ephedrine each contain two asymmetric carbon atoms. There are therefore four optical isomers. The two laevorotatory isomers are included in the formulae given here. The dextro isomers are the mirror images of these. The difference between ephedrine and pseudo-ephedrine depends on the position of the two asymmetric carbons relative to one another and is represented graphically by drawing  $-NHCH_3$  and  $-OH$  near to one another in the case of ephedrine and opposite to one another in the case of pseudo ephedrine. l-ephedrine and d-pseudo ephedrine are the natural isomers and are more active pharmacologically than the other isomers.

### Early References to Ma Huang

The history of scientific work with ephedrine is shown graphically in the chart which is based on a bibliography by B. E. Read showing all the papers on the subject up to 1934. The rate at which papers on ephedrine appeared is plotted against time. The first pharmacological experiments were carried out in China in 2760 B.C. by the Emperor Shen Lung who tasted all the drugs in the pharmacopoeia and classified them accordingly. Ma huang was classified as a medium drug. The next

A famous pharmacopoeia written in China in A.D. 1394 says that ma huang is of use as a circulatory stimulant, diaphoretic, antipyretic and sedative in cough. Modern observations confirm most of this. Ephedrine does stimulate the circulation under certain conditions and has been found beneficial in whooping cough. Its diaphoretic effect has been observed in man but attempts to demonstrate it in animals have been unsuccessful.

### Modern Literature

After 1880 the rate of publication increased so rapidly that it is necessary to plot the results on a different scale.

Ephedrine was isolated by the Japanese worker Nagai (1887) and given the name by which it is known today. Pharmacological investigations showed that large doses had toxic effects and ephedrine acquired a reputation as a dangerous poison. Its medicinal action was discovered and added in 1892. Takahashi and Miura (1892) came to the conclusion that ephedrine dilated the pupil by stimulating the sympathetic nerves. It is remarkable that they should have reached this conclusion so long ago before anything was known of adrenaline or even about the properties of suprarenal extract. The only other substance the kidneys secrete which has a similar action was cocaine. At about the same time ephedrine came on the market in Europe as a mild stimulant and was almost entirely not employed for other purposes and was soon discarded. For many years little research was done except by chemists who worked out the details of the chemical structure and had synthesised all the optical isomers by 1921.

\*S. Dines Ringer Memorial Lecture delivered at University College Hospital Medical School, March 8, 1938.

The pharmacology of ephedrine was reinvestigated in Japan by Amatsu and Kubota in 1917. It was shown to have sympathomimetic effects like those of its chemical relative adrenaline. Ephedrine was put on the market in Mukden as a remedy for asthma but since the results were published in Japanese they attracted no attention in the Western world, and were even unknown to Chen and Schmidt when they started to work on ma huang in 1923. A Chinese druggist told them that this was a really active drug and would be likely to prove interesting. They therefore made extracts of the plant injected them into dogs, and observed the resulting rise of blood pressure. They isolated the alkaloid and showed that it had adrenaline-like properties before they discovered that ephedrine had been isolated and studied before. Nevertheless this work of Chen and Schmidt had a very important effect, because it aroused interest in ephedrine and stimulated the production of papers. Their original paper was published in America in 1924. By 1927 the rate of publication had risen from less than ten papers per year to about 150. Thereafter the rate slowly fell, but more papers are still produced each year than before Chen and Schmidt's article appeared.

Ephedrine provides an example of the practical application of pharmacological discoveries in clinical medicine. It is interesting to note that fundamental observations on its action were made on three separate occasions before they caught the imagination of the world. Once the imagination was caught the demand for ephedrine was great, and the world now consumes about ten tons a year—corresponding to about 1,000 tons of ma huang.

Synthetic ephedrine was introduced in 1927—the year when interest in ephedrine was at its height—under the name of ephedrin. This preparation consists of a racemic mixture of the two optical isomers and is therefore slightly less active than the natural *laevo*-ephedrine. Competition brought the price down from 33s 4d an ounce in June 1929, to 5s 10d an ounce a year later and 2s 6d in 1936. Thousands of tons of ephedra were exported from China, India, and Spain, mainly to America, where very large stocks are held now, and someone must be making a lot of money, because the wars in Spain and China have sent the price up to about 12s an ounce. Synthetic ephedrine has thus come into its own and it has become economically possible to sell synthetic *laevo*-ephedrine which is presumably equivalent in all respects to the natural product. This fact has probably kept the price of natural ephedrine from rising still higher.

### The Pharmacological Effects of Ephedrine

The pharmacological effects of ephedrine resemble those of adrenaline in many ways. For example, under suitable conditions ephedrine raises the blood pressure by constricting the blood vessels and stimulating the heart. It dilates the pupil, dilates the bronchi, inhibits the intestine, and raises the blood sugar. In large doses it has various other effects, which have been attributed to an indiscriminate stimulation of smooth muscle and to stimulation of autonomic nerve ganglia. I am not concerned with these effects now, nor with its action on the central nervous system, but with the adrenaline-like action of small doses. The actions of the two drugs resemble one another in many ways but various differences have been noticed. I propose to give a list of these now and to discuss them more fully later.

1 Ephedrine is more stable and has a more prolonged action than adrenaline and unlike adrenaline, it is effective when given by the mouth.

2 Section of the sympathetic adrenergic nerves to certain tissues followed by degeneration increases the effect of adrenaline and diminishes that of ephedrine. An injection of cocaine has similar effects.

3 Ephedrine has often been found to have much less action on isolated tissues than might have been expected from its effects in the body.

4 If the same dose of ephedrine is given repeatedly the effect diminishes with each successive dose. This is not true of adrenaline. This immunity lasts for only a few hours. Rabbits which have received injections of ephedrine every day for several months still react to ephedrine with a rise of blood pressure (Ruhl, 1929).

It is evident that although the actions of ephedrine resemble those of adrenaline superficially the two actions are not exactly the same, and various workers have come to the conclusion that the two drugs act on different parts of the sympathetic mechanism. I want to tell you of some new observations, and of a new theory which explains some of the peculiarities of the action of ephedrine.

### The Cholinergic and Adrenergic Nerve Groups

Before discussing these new facts I propose to recall to your minds certain recent advances in our knowledge of the mode of action of motor nerve endings. Evidence has been advanced that most, if not all, motor nerves produce their effects by liberating a chemical substance at their ends. This chemical substance carries the impulse across the synapse and, by its pharmacological action, produces the effects which were formerly supposed to be produced by the nerve itself. Motor nerves can be divided into at least two classes according to the nature of the chemical substance liberated. Most motor nerves liberate acetylcholine, but some of them liberate adrenaline or a closely allied substance. Sir Henry Dale has suggested that the former group should be called cholinergic and the latter group adrenergic. These words supplied a real need and have spread all over the world.

Some years ago, when I was working in Sir Henry's laboratory, I helped to identify the substance liberated at cholinergic nerve endings as acetylcholine. Chang and I (1933) showed that, by suitable pharmacological tests it was possible to distinguish acetylcholine from other choline esters, and then Feldberg and I applied these tests (1934) to the substance liberated in a sympathetic ganglion and identified it as acetylcholine, as distinct from other choline esters. Later similar results were obtained in experiments with other nerves, and more recently I have been trying to apply tests to discover whether or not the substance liberated by adrenergic nerves is adrenaline. This question is particularly interesting to us because the theory that nerves liberate adrenaline was first advanced by Professor T. R. Elliott in 1904. It is also particularly important because Cannon and Rosenbluth (1937) have presented evidence that two different substances are liberated on stimulating different kinds of adrenergic nerves. They believe that both substances are similar to adrenaline, but that neither of them is identical with it.

### Substrate Competition

The experiments with acetylcholine were made much easier owing to the discovery that eserine (physostigmine) preserved acetylcholine from destruction in the body. In the absence of eserine the acetylcholine liberated at nerve endings was apt to be destroyed before it could be detected, but when eserine was added the acetylcholine was preserved and the experiments were successful. The enzyme which destroys acetylcholine is known as choline esterase and it is probable that the eserine acts by combining with choline esterase and blocking it up (Easson and Stedman, 1936). The eserine molecule is in certain respects similar to the acetylcholine molecule and choline esterase does not seem to know the difference. The molecules of enzyme combine with eserine which is comparatively stable, and are therefore no longer free to devote them

selves to the destruction of acetylcholine. This chemical phenomenon is known as substrate competition. A substance which would preserve adrenaline in the body in the same sort of way that eserine preserves acetylcholine might therefore be expected to facilitate experiments with adrenergic nerves as eserine has facilitated experiments with cholinergic nerves. Such a substance would probably be similar in chemical structure to adrenaline but more stable. There is reason to believe that ephedrine acts in this way.

The adrenaline molecule may meet its end in various ways. The catechol group makes it unstable. In watery solution its tail curls up and becomes attached to its head forming a red indole derivative. This change is inhibited by blood and is not the only fate of adrenaline in the body which contains several enzymes capable of destroying adrenaline in different ways. Various workers have recently been drawing attention to one particular enzyme known as amine oxidase which destroys adrenaline and various other amines by removing the nitrogen. Blaschko, Richter and Schlossmann (1937) have shown that ephedrine is not destroyed by amine oxidase but that in the presence of ephedrine the enzyme is prevented from destroying adrenaline. They attribute this action like that of eserine to substrate competition.

These experiments of Blaschko, Richter and Schlossmann were carried out with minced tissues and the rate of destruction of adrenaline was calculated from measurements of the increased oxygen uptake due to adrenaline. The results clearly show the presence in certain tissues of an enzyme which destroys adrenaline and which is inhibited by ephedrine. They throw no light on the part played by the enzyme in the body but they show that if this enzyme should turn out to be the agent which destroys adrenaline when it has produced its effect ephedrine would be likely to inhibit this destruction and play a part similar to that played by eserine at cholinergic nerve endings. My main purpose is to discuss the evidence for the theory that amine oxidase and ephedrine do in fact act in this way. This theory explains some of the peculiarities of the action of ephedrine and I therefore propose to return to these peculiarities and discuss their relation to the theory.

#### Peculiarities of the Action of Ephedrine

In the first place the fact that the actions of ephedrine are more prolonged than those of adrenaline might be explained on the theory that the action of adrenaline is normally controlled by the action of amine oxidase and that ephedrine owes its prolonged action to its immunity to this enzyme. The prolonged action of ephedrine could however be explained in other ways since ephedrine is normally resistant to other destructive agents besides amine oxidase.

In the second place experiments on the effect of the degeneration of nerves confirm the theory that some of the actions of ephedrine resemble those of eserine. After degeneration of its nerve supply the pupil becomes more sensitive to acetylcholine and adrenaline but much less sensitive to eserine and ephedrine. After degeneration of the nerves the liberation of chemical transmitters presumably ceases so that substances whose actions depend on preservation of the transmitter naturally lose their effect. The action of small doses of ephedrine on the cat's nictitating membrane on the other hand is increased by degeneration of the nerves (Bulbring and Burn 1937). In this case ephedrine presumably acts exactly like adrenaline.

The third peculiarity of ephedrine which I mentioned is the fact that it often has less action on isolated tissues than might be expected from its activity in the body.

Schaumann (1928) suggested that this difference might be due to the presence of adrenaline in the body and its absence in isolated tissues. He found that when adrenaline in a concentration of one in ten millions was added to the Ringer's solution perfusing a frog's legs the addition of a similar concentration of ephedrine caused marked vasoconstriction. In the absence of adrenaline these concentrations of ephedrine had no effect. Burn (1932) obtained similar results when dog legs were perfused with blood. Incidentally Schaumann observed that when high concentrations of ephedrine were added to perfusion fluid containing adrenaline the ephedrine caused vasodilatation. This observation falls in line with various others which show that *high* concentrations of ephedrine antagonize adrenaline. The observation led Schaumann to the discovery that the injection of ephedrine increased the effect of the subsequent injection of adrenaline on the blood pressure of rabbits and dog. Similar results have been obtained by others. Csepai and Dolezal (1928) found that ephedrine increased the effect of adrenaline on the blood pressure of man. On the other hand Curtis (1929) observed that large doses of ephedrine antagonized the effect of adrenaline on the blood pressure of dog. Reinitz (1929) found that low concentration of ephedrine increased the effect of adrenaline on the rabbit's uterus. High concentrations had the opposite effect. Pak and Tang (1931) discovered that the application of ephedrine to a rabbit's conjunctiva sensitized the pupil to the subsequent local application or intravenous injection of adrenaline. Kwiatkowski and I have recently seen similar effects in a frog's heart, a rabbit's ear and a cat's nictitating membrane.

Low concentrations of ephedrine have thus been shown to increase the actions of adrenaline in much the same way that eserine increases the actions of acetylcholine. This effect of eserine is generally attributed to the inhibition of choline esterase but so far as I know no one has suggested that the corresponding effect of ephedrine is due to the inhibition of an enzyme. Now that Blaschko, Richter and Schlossmann have demonstrated the inhibition of amine oxidase by ephedrine *in vitro* the evidence is as complete in the case of ephedrine as it is in the case of eserine. The possibility of other explanations must however be borne in mind.

These results provide a new method of studying the mechanism at an adrenergic nerve ending. Eserine increases the action of cholinergic nerves presumably by inhibiting the destruction of the acetylcholine which they liberate. Kwiatkowski and I have found that ephedrine has a similar action on the adrenergic nerves in a frog's heart, a rabbit's ear and a cat's nictitating membrane.

#### The Effect of Ephedrine on Adrenaline and Adrenergic Nerves

I hope I have convinced you that, under appropriate conditions ephedrine potentiates the actions of both adrenaline and adrenergic nerves. If this effect is due to the protection of adrenaline from destruction ephedrine should increase the amount of detectable adrenaline liberated on stimulation of adrenergic nerves. Kwiatkowski and I have obtained direct evidence of this in experiments with the perfused ears of rabbits. For these experiments the ear was perfused with the solution known as Locke-Ringer by means of a special device which ensured that the rate of flow was practically constant and was not affected by stimulation of the nerves. A sensitive colorimetric test for adrenaline devised in my laboratory by F. H. Shaw (1938) was applied to the outflowing fluid. This test is not affected by ephedrine and makes it possible to distinguish adrenaline from closely allied sub-

stances When the nerves were stimulated in the presence of ephedrine an adrenaline-like substance was detected in much higher concentration than had been possible without ephedrine

These results show that ephedrine protects the substance liberated by the nerves, and support the theory that the sensitization of adrenergic nerves is due to this effect. Since amine oxidase is the only enzyme which has so far been shown to be inhibited by ephedrine they suggest that this enzyme is present near the nerve endings and constitutes the normal mechanism for destroying the chemical transmitter. I think, however, that the main importance of the results is that they have made it possible to obtain the chemical transmitter in higher concentrations than before and to discover something of its properties. It has been suggested, for example, that the substance liberated by adrenergic nerves such as those in a rabbit's ear is not adrenaline, but noradrenaline. By means of a specific modification of the colorimetric test this possibility has been excluded.

### Ephedrine and Adrenaline Antagonism

I have said nothing so far about the explanation of the fourth peculiarity of ephedrine—the diminishing effect of successive doses—nor about the action of large doses in antagonizing adrenaline. I believe that these effects are two aspects of the same phenomenon. Schaumann observed both effects when he perfused frogs with Ringer's solution containing adrenaline. Successive doses of ephedrine produced less and less vasoconstriction, and eventually large doses caused vasodilatation. In this preparation the vasoconstrictor action of ephedrine was probably due entirely to inhibition of amine oxidase, since there was no effect in the absence of adrenaline. The inhibitory effect can be explained on the theory that ephedrine combines with the same receptors in the muscle as adrenaline, but produces no effect when so combined. The receptors thus become blocked up so that adrenaline cannot affect them. Similar explanations have been put forward to account for the antagonistic actions of a number of different pairs of drugs. I think that such a theory was first suggested in 1880 by Ringer and Morshard to explain the antagonism of atropine and pilocarpine on the frog's heart. It is similar to the theory of substrate competition, which I have already discussed. Curtis (1929) put forward this theory to account for the action of large doses of ephedrine in antagonizing adrenaline. He could not explain the diminishing effect of successive doses of ephedrine in this way, because he supposed that ephedrine was acting in the same manner as adrenaline, and it would not seem likely that ephedrine could antagonize itself by keeping itself out, so to speak. The most reasonable explanation now seems to be that ephedrine antagonizes itself by keeping out the adrenaline through which it would otherwise have acted.

### Uses of Ephedrine

Pharmacology can sometimes point the way to therapeutics, but it is often very difficult to predict what the end of the journey will be like. I believe that the first sample of ephedrine to enter University College Hospital did so in 1925—in my pocket. Little was known at that time about ephedrine except that it produced prolonged stimulation of the sympathetic and was active when given by the mouth. Perhaps it should have been possible to foresee most of the clinical applications but a knowledge of these has come gradually and rather erratically. I remember thinking that ephedrine might be of value in Addison's disease. Experience showed that it is not

The oldest clinical use of ephedrine depended on its action on the pupil. If a 6 per cent solution is dropped in the eye the pupil dilates in about 7½ hours, and stays dilated for five to twenty hours. The pupil still reacts to light and accommodation is not affected. Ephedrine has been employed for ophthalmological diagnosis in preference to atropine or homatropine. It is said not to increase the intra-ocular pressure.

The best-known use of ephedrine is probably in the treatment of asthma. It dilates the bronchi and relieves attacks in much the same way as adrenaline, compared with which it is less often effective, but its action lasts longer, and it can be taken by the mouth. I suspect that many people take too much. An eighth of a grain is often enough. It has been found to relieve whooping cough. It has also been used with a certain amount of success in other allergic conditions such as hay fever and urticaria. It is used to prevent, or cure serum sickness. It is having rather a vogue now for local application to the nose where it produces vasoconstriction and dries up secretions. It is of little or no value in vasomotor shock, but it is employed to counteract the fall of blood pressure due to a spinal anaesthetic. Ephedrine has been used successfully in both the prevention and the cure of the attacks of heart-block known as Stokes Adams's syndrome. This is an effect which might have been predicted, because an improvement in conduction in the bundle of His is one of the effects of sympathetic stimulation.

Ephedrine has been widely and successfully used to prevent the pathological sleep of narcolepsy, though it is being replaced for this purpose by its more efficient chemical relative known by the name of benzedrine. The fact that benzedrine produced this effect was discovered suddenly and accidentally, but the history of this use of ephedrine is long and complicated. In 1913 Arritt tested the action of the series of drugs in waking up rabbits which had been anaesthetized with chloral hydrate. He knew that cocaine had a stimulant action on the central nervous system, and found that it would wake up his anaesthetized rabbits. He also knew that cocaine stimulated some parts of the peripheral sympathetic system, and thought that the two effects might be associated. So he tested other sympathomimetic drugs for their power to wake up rabbits. His theory was wrong, because adrenaline had no action so that the two effects were not necessarily associated, but ephedrine woke the rabbits up. Later work has shown that ephedrine has complex effects on the central nervous system which are not yet understood. It has been found to awaken animals anaesthetized with avertin, paraldehyde and evipan. It also restores reflexes and stimulates the respiration, but it seems to have the opposite effect on animals anaesthetized with barbitone or phenobarbitone. Clinically ephedrine has been found to encourage sleep in children and to prevent it in adults. It causes euphoria in some people. The discovery of these facts led to the use of ephedrine in narcolepsy.

The use of ephedrine in myasthenia gravis could not, I think, have been predicted. Its value in this disease was discovered accidentally by Harriett Edgeworth (1930), who was both a scientist and a victim of the disease. She was taking ephedrine for dysmenorrhoea and found it had a very good effect on her myasthenia. This observation was confirmed, but not explained. It has tended to be overshadowed by the marked effect on this disease of physostigmine and its relations. The use of ephedrine in dysmenorrhoea was originally based on the questionable

theory that dysmenorrhoea was due to parasympathetic over-activity. Favourable reports have been published.

Ephedrine is also employed in enuresis. Its effectiveness—if it is indeed effective—might be explained in the same way but it is more likely that the action is on the central nervous system. Perhaps I should add that like so many drugs ephedrine has been recommended as a cure for sea sickness.

The toxic effects ascribed to overdosage are general nervousness and insomnia and tremor vomiting and sweating palpitations urinary retention and skin eruptions. When large doses are given to rabbits over a long period they cause enlargement of the heart with pronounced degenerative changes (Rühl 1929).

## REFERENCES

- Arita Y (1913) *Arch int Pharmacol* 23 451  
 Ariatsu H and Kubota S (1917) quoted from Chen and Schmidt (1930)  
 Blaschko H, Richter D and Schloemann H (1937) *Biochem J* 31 2187  
 Buisson E and Burn J H (1917) *J Physiol* 91 459  
 Burn J H (1922) *J Pharmacol* 46 75  
 Cannon W B and Rosenblueth A (1937) *Autonomic Nervous System* The Macmillan Company New York  
 Chang H C and Gaddum J H (1919) *J Physiol* 78 255  
 Chen K K and Schmidt C F (1929) *J Pharmacol* 24 39  
 — (1930) *Ephedrine and Related Substances* Bullie Tindall and Cox London  
 Clegg K and Doleman F (1928) *Arch exp Path Pharmacol* 134 109  
 Curtis F R (1929) *J Pharmacol* 35 331  
 Easson L H and Stedman E (1916) *Proc Roy Soc B* 121 142  
 Edgeworth H (1910) *J Amer med Ass* 94 1136  
 Elliott T R. (1904) *J Physiol* 31 20 P  
 Feldberg W and Gaddum J H (1914) *Ibid* 81 305  
 Nagai N (1887) *Pharm Z* 32 700 quoted from Chen and Schmidt (1930)  
 Pak C and Tane T K (1933) *Chun J Physiol* 7 229  
 Reinitz N (1929) *Skand Arch* 57 138  
 Ringer S and Morshead E A (1880) *J Physiol* 2 235  
 Rühl A. (1929) *Arch exp Path Pharmacol* 140 257  
 Schaumann O (1928) *Ibid* 138 203  
 Shaw F H (1938) *Biochem J* 32 19  
 Takahashi D and Miura K (1922) *Mitt med Fak Tokio* 1 255

The psychological reactions of thirty problem children who received benzedrine sulphate for one week are recorded by C Bradley (*Amer J Psychiat* November 1937 p 577). In fifteen there was spectacular improvement. Many became much less emotional without however losing interest in their surroundings they also experienced a sense of well being. In this group were some children who had previously expressed their irritability in group activities by noisy aggressive and dominating behaviour these became more placid and easy going under the influence of benzedrine. No significant changes were detected in the blood or body weight but in six cases the onset of sleep was delayed for the first night or so. Loss of appetite and nausea were shown by a few children only. The behaviour changes reached their maximum during the second and third hours after the administration of the drug and there was a gradual reversion to the state normal for the particular child during the following six to twelve hours. In all cases the full effects became manifest on the first day of administration continued daily through the week and disappeared as soon as the drug was discontinued. The optimum dose was found to be 20 mg. In eight cases gastro intestinal symptoms were provoked these eight children were given subsequently daily doses of 10 mg for a week, two derived no benefit, suggesting that the lowest dose which they could tolerate was therapeutically ineffective. No relationship was established between the children's ages or weights and their reactions to benzedrine. The author advises that this drug should be further tested experimentally before being recommended for the treatment of behaviour problem children. He suggests that its action might be explained on the lines that it rectifies the impaired control activity which has given rise to disorders of behaviour.

## AMENORRHOEA ITS AETIOLOGY AND TREATMENT\*

BY

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The data accruing from the present-day intensive study of sex physiology are at times bewildering and often overwhelming in their complexity. Nevertheless from a conflicting mass of scientific evidence new facts are emerging which are furthering our knowledge of the processes associated with menstrual and reproductive function and new therapeutic agents are gradually being added to the armamentarium of the clinician. These new therapeutic agents have been enthusiastically accepted and applied in the treatment of all gynaecological conditions that might be associated with underlying endocrine disturbances. In some such conditions they are eminently successful—for example in many postmenopausal disorders—but endocrine therapy has not fulfilled the early promise predicted. Disappointing response to treatment however may not be due to faulty or ineffective preparations but rather to their indiscriminate application. Without some knowledge of the therapeutic action of the various sex hormones and their relation to the mechanism of menstrual periodicity therapy must in the main be conjectural. In this paper I am dealing with a small series of seven cases of amenorrhoea most of which have been investigated as fully as present-day methods permit.

## Methods of Investigation

1 *History*.—A full anamnesis is of great importance. Special attention should be directed to the state of previous health and to the occurrence of any unusual circumstances present immediately before or at the time of cessation of menstruation. Frequently a history of change or occupation domestic worry grief or social estrangement is obtained which has an important bearing in regard not only to aetiology but also to prognosis and treatment. Details of previous menstrual rhythm and loss should be elicited. The presence or absence of menorrhagia may also be important as regards prognosis. The presence is rather more favourable than the absence. Information should be obtained as to any increase of weight and its association with the onset of amenorrhoea.

2 *Detailed Examination of the Reproductive Tract*.—Whilst the whole reproductive tract must pass under review the size of the uterus requires special attention as in many cases this gives an approximate index of ovarian function. It is important where possible to examine the endometrium histologically—first, to exclude tuberculosis and secondly to obtain information regarding ovarian activity.

3 *Radiographs of the Sella Turcica*.—Though pathological changes of the sella are rarely found, we may discover in some cases distortion of the sella pointing to gross pituitary disease. Occasionally amenorrhoea is one of the initial features in pituitary lesions and it is on account of the cessation of menstruation that the patient may seek medical advice.

4 *Estimation of the Basal Metabolic Rate*.—This is the only available method of forming an approximate estimation of thyroid function. As the function of the

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thyroid gland is controlled by a specific hormone of the anterior pituitary some knowledge of its activity may provide an index of pituitary function. However, although a hypophysis is functioning in a normal manner in regard to its thyrotropic secretion, this does not necessarily imply that it is also active in respect of its gonad-stimulating hormone.

**5 Determination of Sugar Tolerance**—As pancreatic function is controlled by a specific hormone of the anterior pituitary this test may sometimes be of value as an index of pituitary activity. Occasionally, however, amenorrhoea is the only symptom in early cases of diabetes mellitus, and unless the sugar tolerance is determined the condition may be entirely overlooked until it has reached a more positive phase.

**6 Determination of the Hormone Excretion**—Estimation of the urinary excretion of the gonadotropic and the follicular hormone affords presumptive evidence of anterior pituitary and ovarian function. As these glands are intimately concerned with the control of the menstrual cycle some knowledge of their activity is of the greatest importance.

In the series of cases under review analysis of the total twenty-four-hour output of urine was carried out, according to the technique already described (MacGiegor, 1936) at weekly intervals over a period of one month or longer, and, considered in conjunction with other data, this has in many cases been of value in formulating a basis of treatment. Low values for oestrin excretion show that ovarian function is subnormal, and therefore a reactivating therapy in the form of hypophyseal preparations is indicated.

### Functional Amenorrhoea

The causes of functional amenorrhoea may be classified broadly into (a) psychogenic influences, and (b) general hormonal disturbances.

#### (a) PSYCHOGENIC INFLUENCES

The underlying cause of the endocrine dysfunction is not clear. The onset of amenorrhoea, however, so often follows a mental trauma as to suggest that the motive factor may in some cases be psychogenic. Further, the data obtained from an analysis of the hormone excretion suggest that the hypophysis is primarily influenced by a psychological factor operating either via the higher centres or directly through its autonomic nervous control. The effect of the psychogenic disturbance varies in degree, depending on individual susceptibilities, from amenorrhoea of short duration to a more marked constitutional upset. In the initial stages of this investigation the importance of a possible psychological factor was not realized, and accordingly definite figures regarding its incidence are not available. In a proportion amounting to 60 per cent, however, this factor was present. As illustrating the influence of minor upsets such as environmental and occupational changes on the menstrual cycle, the menstrual histories of thirty-eight nurses may be cited. It was found that during the first year of their training 29 per cent had amenorrhoea varying in duration from one to ten months.

There are thirteen cases in this series in which the outstanding feature was the constitutional disturbance present. They all had in common loss of weight—compared with normal standards for height and age the pro-

Table showing the Investigation Findings in Thirteen Cases of Anorexia Nervosa

Case No	Age	Duration of Amenorrhoea (years)	Weight	Corrected Percentage Weight	B M R	Blood sugar Tolerance					Sella Turcica	Utero cervical Canal	Endometrium	Gonadotropic Hormone	Oestrin
						F S	Hours								
							1/2	1	1 1/2	2					
1	18	3	st 6 lb 7	-26	-18	100	150	140	128	102	Normal	2"	Fibrotic	-	-
16	20	2	5 9 1/2	-28	-28	90	120	150	140	110	,	2"	V scanty	-	-
20	22	2 1/2	6 7	-31	-21	85	137	106			,	2"			
21	26	3	7 0	-25	+ 2	104	121	118	99			2 1/2	Resting	-	+
26	20	4	6 7	-29	+18	88	100	94	90	90		2 1/2"		+	-
27	19 1/2	1 1/4	5 13	-25	-27	91	119	100	90	88		2	V scanty		-
33	29	4	6 10	-28		94	116	147	99	83		2		-	-
40	21	4	5 9 1/2	-37	-21						Normal	2 1/2"		-	-
54	22	1 1/2	5 11 1/2	-33	-19							2	V scanty	-	-
55	24	1 1/2	7 4 1/2	-15	- 1	98	112	100	90		"	2		-	-
81	23	1 1/2	7 4	-26	-10							2 1/2"			
85	15	7 12	6 7 1/2												
86	19	1 1/4	5 7		-19	82	146	189	216	190		2"			

### Classification of Material

Investigation carried out on the above lines showed that in twenty out of a total of ninety-seven cases examined the amenorrhoea was due to a recognizable pathology in the pituitary, ovaries or uterus and in a few cases was associated with systemic disease. These will be the subject of a later article. In seventy-seven cases although no obvious pathological condition was observed laboratory findings disclosed a disturbance of function particularly of the ductless glands closely concerned with the menstrual process. These cases are therefore described as functional.

portion of those under weight varied from -15 to -37 per cent—distaste for food, amenorrhoea, and with two exceptions, uterine hypoplasia (see Table). These features are characteristic of anorexia nervosa. Sheldon (1937) lays emphasis on physical aspects of anorexia nervosa which suggest that in some cases there is an underlying hypofunction of the anterior pituitary. He says 'In the chain of events which leads to amenorrhoea the pituitary is involved. While this is undoubtedly true it may be suggested that in all probability there is an underlying psychological cause in these cases and that the pituitary hypofunction is a secondary phenomenon. As, however, many individuals sustain a similar mental shock



without any resulting sequelae it is presumed that in these patients who display the syndrome of anorexia nervosa there is an inherent psychological maladjustment which cannot withstand mental trauma.

#### (b) GENERAL HORMONAL DISTURBANCES

In approximately 40 per cent of the cases no history was obtained of an abnormal psychological stimulus preceding the amenorrhoea; in these it has been presumed that a general hormonal imbalance was the cause of the menstrual disorder. The investigation of these patients showed however that dysfunction of the pituitary was present. Whether this was a primary or a secondary phenomenon it was impossible to ascertain.

#### Treatment of Functional Amenorrhoea

After each case had been investigated it is outlined the resulting data were studied. Those cases exhibiting deviations from the normal were treated appropriately. For example where the basal metabolic rate was low thyroid medication was given; where anaemia was found iron was administered. Such treatment was not followed by a return of menstruation in any one case. Those who were over weight excluding diabetics were put on a strict anti-obesity regime until their weight was within normal limits. With this treatment alone six patients menstruated spontaneously. It is not clear whether the obesity in such cases is due to a temporary slowing of the general metabolic processes consequent on anterior pituitary hypofunction or is directly associated with derangement of the fat regulating centre in the hypothalamus arising from the same nervous factor as is responsible for the amenorrhoea. Whatever the cause of the obesity or its relation to amenorrhoea a suitable regime to counteract it meets with a favourable result in some cases. It is a clinical impression that a strict anti-obesity regime is more efficacious in such cases than thyroid therapy.

The treatment of anorexia nervosa is admittedly difficult. Psychotherapy may be beneficial but the one patient in the series who was treated in this way although improved in general health remained amenorrhoeic. In my opinion improvement of the patient's general health should be the first consideration and as this is difficult to carry out in domiciliary environment a hospital or nursing-home regime is essential. After a satisfactory response has been obtained from treatment along general lines endocrine therapy should be instituted.

Of the thirteen cases of anorexia nervosa one patient has died as a result of her condition. Seven have had an irregular response to treatment in that one or two uterine bleedings have occurred. The following is the history of one of the cases treated.

*Case No. 85*—This patient aged 18 started to menstruate at 13 and her periods were regular 5/28. Her weight at Christmas 1936 was 9 st 7 lb. She had influenza in January 1937 and was operated on during the same month for appendicitis. After operation her weight was 8 st 13 lb. On return to school she became very worried at not being able to keep pace with her companions. She gradually went off food and in February 1937 her periods stopped. She slowly lost weight and there was a complete loss of appetite and an apparent inability to eat. She also had attacks of biliousness. When seen on July 23 1937 her weight was down to 6 st 7½ lb and her blood pressure was 90/70. On examination no physical defect was found. She was an alert girl always on the move. Her condition was diagnosed as one of anorexia nervosa and complete rest in bed in a home was advised. After a few days of this treatment she began to take an interest in food became relaxed and generally felt better. After seventeen days of this negative regime her appetite

became normal and there was a tendency to increase in weight. It was now considered that more rapid improvement might follow if menstruation could be re-established. In deference to the parents' wishes examination of the reproductive tract was not carried out. It was presumed however from the findings obtained in similar cases that there was a certain degree of uterine hypoplasia. On this assumption and despite the knowledge that the hypofunction of the pituitary might be aggravated oestradiol benzoate therapy was instituted. She was given a daily injection of 5 mg of dimenformin for six days and after a few days a further daily injection of 5 mg for seven days—that is a total dose of 65 mg of dimenformin. On September 10 ten days after her last injection a slight show was seen. The patient was given 100 mouse units of antostab (serum gonadotrophic hormone) intramuscularly at three-day to four-day intervals for five injections and after an interval of ten days a further course of five injections, each consisting of 150 M.U. of antostab plus 100 M.U. of phyostab (urine gonadotrophic hormone) over a period of fifteen days. She had a further show on November 10 and a further course of five injections of antostab plus phyostab was instituted. Uterine bleeding ceased. Uterine bleeding followed on December 8 lasting three days. Her weight had increased to 8 st on December 9. She is taking her food well and is now anxious to resume her studies.

#### Endocrine Therapy

##### (a) OVARIAN PREPARATIONS

The role of oestrogenic therapy in the treatment of amenorrhoea is in my opinion a subsidiary one. There are few cases in which it succeeds when given alone. Such therapy is unnecessary if the uterus is of normal size; this indicates that there is enough hormone in the circulation to stimulate full development of the uterine musculature but not an adequate amount for endometrial growth. When the uterus is in a hypoplastic condition oestrogenic therapy is called for in order to promote full uterine growth and increased tonicity so that the organ may be receptive to the stimulation of the normal secretions of the ovaries when these have been reactivated by anterior pituitary preparations. Should it not be possible to measure the uterus after such treatment the production of uterine bleeding it is suggested may be taken as a rough index of full development of the uterine musculature. The other indication for oestrogenic therapy is the finding of an excess of gonadotrophic hormone excretion. In such cases it may be postulated that sustained overstimulation of the ovary resulting primarily from a temporary hyperactivity of the anterior pituitary may result in a condition of ovarian hypofunction or fatigue. Direct inhibition of the pituitary or stimulation of its secretion as a result of oestrogenic therapy permits the ovary to elaborate its own hormones at a normal concentration. In this way oestrogenic therapy may be curative in some cases manifesting an excessive excretion of gonadotrophic hormone. The importance of urinary hormone analysis prior to treatment is obvious.

Before anterior pituitary preparations were available the oestrogens alone or combined with corpus luteum hormone were the form of therapy most favoured. The general scheme of treatment with the oestrogenic hormones was the intramuscular injection of 5 mg of oestradiol benzoate every three to four days or five injections. If no result was obtained at the end of ten days after the last injection similar courses were repeated always with ten to fourteen days in between. Three cases were treated by oestrogenic substances. Twelve of these including a few who had intensive therapy failed to respond to treatment. Sixteen responded irregularly in that uterine bleeding was provoked as a result of the treatment but there was no continuation of a cycle on its

cessation. In two cases exhibiting excessive excretion of gonadotropic hormone menstruation became regular, and in one it has continued regularly for twelve months, the other, however, relapsed after three cycles. Analysis of the urine during the relapse showed that the excretion of gonadotropic hormone had again become excessive. After further treatment, however, there have been two periods.

#### (b) ANTERIOR PITUITARY THERAPY

The preparations available for therapeutic use are the anterior pituitary gland products, the anterior-pituitary-like or chorionic hormone prepared from pregnancy urine, and the gonadotropic hormone prepared from the serum of pregnant mares. The rationale of this form of treatment is ovarian stimulation, but it must be emphasized that it is a substitutive therapy. I believe that a temporary or, in some cases, a sustained anterior pituitary hypofunction resulting from a psychological disturbance may so vitiate the general hormonal balance that the disorganization may be perpetuated after a normal psychological status has been established. The stimulation of the ovary by anterior pituitary preparations permits it to elaborate its own hormones, which, in turn, stimulate the uterus. The restoration of normal ovarian activity promotes an adjustment of the general endocrinal imbalance.

Four cases were treated with anterior pituitary gland extract (gonadotrophon). In three there was no response, whilst in the fourth case uterine bleeding has been produced during the past five months, a course of therapy, however, was given each month during that time. Many cases were treated with anterior pituitary extract containing thyrotropic hormone (ambion) alone or combined with urine gonadotropic hormone (pregnyl), but no continuous response was obtained with this therapy.

The predominant effect produced by the chorionic hormones in the experimental animal is luteinization of follicles. These hormones have been shown to have no effect on the ovaries of monkeys (Johnson 1935). In amenorrhoea, therefore, where ovarian function is presumably subnormal or in abeyance and the secretion of oestrin is at a minimum, there are no ripening follicles capable of being luteinized. Highly luteinized ovaries, with the elaboration of progesterone, would only rarely bring about a secretory phase in the endometrium owing to the absence of the prior action of oestrin. Support was obtained for this view in that curettage in these cases seldom disclosed an endometrium stimulated to such a degree as to be capable of being changed to a secretory phase. Sixteen cases were treated with chorionic or urine gonadotropic hormone with very disappointing results. Only two responded satisfactorily.

#### (c) SERUM GONADOTROPIC HORMONE

This hormone is capable of stimulating ovarian growth and function in monkeys (Engle and Hamburger 1935), and has a gonad-stimulating effect in the hypophysectomized experimental animal. In this respect its biological action is similar to that of the anterior pituitary gland. At the present time, therefore, this preparation seems to be the one which is likely to be most beneficial in cases where ovarian stimulation is required. Engle and Hamburger have shown that it has the same effect on the ovaries of monkeys as the anterior pituitary hormone found in castrate urine. This hormone believed by many to have a follicle stimulating action only has been demonstrated by Frank Salmon and Friedman (1935) and Lipschutz (1935) also to produce luteinization provided a sufficiently high concentration is given. Since there is no conclusive evidence that more than one anterior

pituitary sex hormone is secreted this postulate has been used as the basis for therapy. It is considered that the difference between the hormone present in pregnant serum and that in urine may be due to chemical interactions. In this series of cases, therefore, both hormones have been given together.

The scheme of treatment adopted was as follows. When the uterus was found to be hypoplastic, as indicated by the length of the utero-cervical canal, oestradiol benzoate therapy was administered until the uterus was fully developed. If the uterus was of normal size initially, this preliminary treatment was omitted. Thereafter 100 M U of serum gonadotropic hormone and 100 M U of urine gonadotropic hormone were given intramuscularly combined as one injection every three to four days for five injections. If no uterine reaction resulted after an interval of ten to fourteen days a further five injections were given as previously, and again after an interval of ten to fourteen days another five injections were given. It is advisable, if there is no response to three courses of injections, to defer further treatment for a period of from two to three months. In a few cases response to the first or second course of therapy was immediately followed by a further course of injections in order to supplement pituitary function and cause full reactivation of the ovaries.

Thirty cases were treated in this way with serum and urine gonadotropic hormones. Of these, ten responded satisfactorily to therapy. In three cases, however, after several months of regular menstruation a period was missed, a further course of serum plus urine gonadotropic hormone was then given resulting in a return of the normal cycle. Twelve responded irregularly in that one or two periods occurred after treatment. Eight failed to respond after one or more courses of therapy. Included in the irregular responses are a number of cases in which treatment has only recently been instituted, and it is possible that several of these may continue to menstruate normally.

The following is a resume of the history and treatment of three of the patients in this group treated by serum and urine gonadotropic hormone.

*Case No. 80*—This patient aged 26 had never menstruated. Her basal metabolic rate was +19 per cent. Blood sugar tolerance: fasting blood sugar 123 mg per 100 ccm at half hourly intervals after 50 grammes of glucose, 180, 140, 125 mg per 100 ccm. The utero-cervical canal was 24 inches in length. The endometrium was scanty and not sufficient for histological examination. The sella turcica was normal. With regard to analysis for hormones, the twenty-four-hour output of urine was examined for the gonadotropic hormone and oestrin on five consecutive occasions at weekly intervals and 40 ccm of blood were also tested for oestrin on four consecutive occasions at weekly intervals. No oestrin was found in the blood by the methods used. The urine gonadotropic hormone on every occasion was negative. The amount of oestrin excreted in the twenty-four hour output of urine was: (1) 19–36 M U, (2) 10–20 M U, (3) less than 11 M U, (4) 22–44 M U, (5) 22–44 M U. On account of the increased metabolic rate treatment with Lugol's iodine was given until the basal metabolic rate was within normal limits. Thereafter hormone preparations were administered over a period of fourteen months in various courses of therapy. The patient was given a total dosage of 16,000 R U of pregnyl, 145 gonadotropic units of ambion and 126 mg of dimenformon. As a result, several uterine bleedings occurred at irregular intervals but there was no continuation of menstruation on cessation of this treatment. The patient was then given 10 courses of 200 M U of serum gonadotropic hormone plus 200 M U of urine gonadotropic hormone combined as one injection at three day to four day intervals, ten days

intervening between each course making up a total of twelve injections. As a result of this therapy the patient had five uterine bleedings at regular monthly intervals. The rhythm was not maintained however and a further course of five injections of serum gonadotropic hormone plus urine gonadotropic hormone was given in May 1937. Since this last course of treatment menstruation has continued regularly at monthly intervals.

**Case No. 65**—This patient a girl aged 17 had never menstruated. Her twin sister menstruated at 14 and has regular periods. On investigation her weight was 7 st 12 lb and her height 5 ft 5 in. Secondary sex characteristics were normal. The basal metabolic rate was -10 per cent. The sella turcica was smaller than normal. Blood sugar tolerance, fasting sugar 87 mg per 100 ccm, at half hourly intervals after 50 grammes of glucose 180 150 120 89 mg per 100 ccm. The external genitals were normal, the cervix healthy and the uterus in good position, the utero-cervical canal measured 24 inches by the sound. The endometrium was so scanty as to be insufficient for examination. The urine was examined for hormone content on two occasions. Urine gonadotropic hormone was negative and urine oestrin less than 10 MU per twenty-four hour output. The patient was treated with Collip's maturity factor over a period of two months without effect. In October 1936 a course of therapy with 200 MU of serum gonadotropic hormone combined with 200 MU of urine gonadotropic hormone was given at three-day to four-day intervals for five injections. There was no result from this course of treatment and it was repeated in November 1936. Ten days after the last injection uterine bleeding occurred for three days, since then menstruation has been regular every twenty-eight days—that is over a period of thirteen months.

**Case No. 35**—This patient a woman aged 24 first came under observation in August 1933. Menstruation began at 15 and had been regular (4/28) until January 1935. Her father died in November 1932. Before any investigation was carried out the patient was put on progynon by injection and drages orally and between August 21 and November 22 1933 71 300 MU of progynon were injected and 7 800 MU given by mouth. Uterine bleeding started on December 3 and lasted five days. A further total course of 20 000 MU was then given by injection and 1 650 MU by mouth in the form of progynon. A uterine bleeding occurred from January 3 to 4 1934. Thereafter another course of 40 000 MU of progynon oleosum given by injection was followed by uterine bleeding on February 25. She then had by injection 80 000 MU progynon oleosum and 120 000 MU oestrogen without effect. The patient was admitted to hospital for investigation. Her weight was 7 st 10½ lb and her height 5 ft 4 in. The basal metabolic rate was -7 per cent. The sella turcica was normal and x-ray examination of the chest proved negative. Blood sugar tolerance, fasting sugar 100 mg per 100 ccm, at half hourly intervals after 50 grammes of glucose 150 126 100 98 mg per 100 ccm. Fields of vision were normal. The utero-cervical canal measured 24 inches, the endometrium was very scanty. The twenty-four hour output of urine was examined for hormones on five occasions at weekly intervals. No gonadotropic hormone or oestrin was demonstrated in the urine but a positive blood oestrin was once obtained.

Between November 18 1934 and May 20 1936 the patient had divided in various courses of therapy 95 mg of dimenarton 9 100 RU of pregnol and 90 gonadotropic units of atbinon in conjunction with 1 800 RU pregnol. During that time the patient saw traces of blood on five occasions. The last bleeding was on March 22 1936. From May 31 to August 25 1936 she was given two courses of serum gonadotropic hormone along with urine gonadotropic hormone. The total amounts of the two courses were 2 000 MU of each preparation. Menstruation started on August 19 the bleeding lasting four days, since then—that is during sixteen months—it has been regular 4-5/28-day type.

It is not likely that menstruation will proceed spontaneously in every case of amenorrhoea responding to

this therapy cognizance must be taken of the motive factor producing the amenorrhoea. It is however probable that menstruation will follow regularly if by periodic supplementing of the anterior pituitary gonadotropic hormone when it is necessary the menses can be kept going long enough. It is not improbable that the dosage of the gonadotropic hormones given in this series was inadequate in many cases but the amounts available at the present time preclude the administration of a much higher dosage.

### Spontaneous Onset of Menstruation

It is difficult to assess the results from any one line of treatment in amenorrhoea as the possibility of the spontaneous onset of menstruation must always be considered. This applies particularly to indiscriminate treatment without prior investigation. Sometimes from an analysis of the urine for hormone content carried out at weekly intervals it can be predicted that menstruation is likely to ensue spontaneously.

In eleven out of seventy-seven cases of functional amenorrhoea menstruation recommenced spontaneously. The period of amenorrhoea varied the longest period of secondary amenorrhoea being five years whilst one patient with primary amenorrhoea started menstruating at the age of 25. This latter case is of interest in that treatment had been instituted over a period of six months and during that time in various courses of therapy the patient had had a total dosage of +600 R U of pregnol 200 mg of dimenarton and 45 mg of progestin. One of these courses was carried out on the lines indicated by Kautmann (1934). No uterine bleeding was produced as a result of the treatment. It must be added that marriage was advised when that question arose with this patient, and after eleven months of conjugal life menstruation ensued. This is the only case of primary amenorrhoea in the series which has menstruated spontaneously.

### Discussion

The factor or factors responsible for the cessation of menstrual rhythm are rarely apparent. It is therefore necessary that every avenue of approach in the investigation of each case be explored in an attempt to elucidate the underlying cause or causes. An investigation such as suggested reveals in some cases a pathological cause of the amenorrhoea but in the majority of cases only disturbances of function are found. Further the investigation is of value in that it often yields presumptive evidence of the degree and nature of the disorder. Rational therapy formulated on this basis is obviously more likely to meet with success than that which is largely empirical.

It has been suggested that the aetiological factor in the majority of cases of functional amenorrhoea is a psychological one, yet in many cases it is undoubtedly not only a suggestion but a true statement of fact. Just as an abnormal psychological stimulus may result in amenorrhoea so also may a similar factor result in a return of menstruation in an amenorrhoeic patient. This may explain why in some cases menstruation recommences spontaneously after months or years of amenorrhoea.

Although in a few cases of amenorrhoea the oesrogenic are of value in many they are contraindicated as they may produce a further inhibition of an already under-functioning hypophysis. The results obtained in the present series and those of many other investigators indicate that the chorionic hormones *per se* have for the reasons already stated very little place in the treatment of amenorrhoea. Until reliable anterior pituitary gland

preparations are available, when a true substitutive therapy can be carried out, the most hopeful preparation seems to be the serum gonadotropic hormone alone or combined with the urinary gonadotropic hormone.

No differentiation has been made between primary and secondary amenorrhoea as it has been found that when congenital defects are excluded the findings are comparable in both types, and therefore the treatment is similar. The prognosis is just as favourable in primary as in secondary amenorrhoea.

### Summary

1 The investigation required in a case of amenorrhoea is detailed, and some consideration is given to the value of each procedure.

2 The primary and secondary factors responsible for the inhibition of menstruation are discussed.

3 The results of treatment based on the investigation findings are presented.

My thanks are first of all due to the members of the honorary gynaecological staff of the Royal Infirmary, Edinburgh for permission to investigate and treat cases under their care. I also most cordially thank Dr A. N. Macbeth of Organon Laboratories, Dr H. Neumann of Schering Ltd., Dr T. A. Lloyd Davies of Boots Pure Drug Co. and Messrs. Prunes and Byrne Ltd. for the generous way in which they have placed their preparations at my disposal. I also express my appreciation and thanks to Glaxo Laboratories for making available to me large amounts of anterior pituitary preparations.

The expenses of this investigation were partly defrayed by a grant from the Medical Research Council.

### REFERENCES

- Engle, E. T. and Hamburger, C. (1935) *Proc. Soc. exp. Biol. N.Y.* **32**, 1531.  
Frank, R. T., Salmon, U. J., and Friedman, R. (1935) *Ibid.* **32**, 1666.  
Johnson, C. E. (1935) *Am. J. Obstet. Gynec.* **29**, 120.  
Kaufmann, C. (1934) *Proc. roy. Soc. Med.* **27**, 849.  
Lipschütz, A. (1935) *Endocrinology* **19**, 42.  
MacGregor, T. N. (1936) *Trans. Edinb. Obstet. Soc.* **56**, 153.  
Sheldon, J. H. (1937) *Lancet* **1**, 369.

D. Whyte and R. O'Regan (*N. Zealand med. J.*, December, 1937, p. 381) refer to a previous paper published in February 1937 in which they stated that the treatment of complete prolapse of the rectum by Gabriel's injection technique was "safe, painless and effective." They now wish to qualify this statement, as a case has been seen in which the patient's life was in serious danger for some weeks from sloughing of the rectal wall and secondary haemorrhage, although the final result was satisfactory. The patient, a man of 55, was suffering from intractable prolapse of the rectum with continued mucous discharge. Seven submucous injections were given each of 2 c.c. of 5 per cent carbolic acid in almond oil, and three perirectal injections of saline solution. Vomiting and headache persisted for a week, and on the eleventh day after operation a sudden copious haemorrhage from the rectum occurred. Examination under anaesthesia was carried out, and a large sloughing area was found on the posterior wall of the rectum extending into the pararectal tissues the sacrum being palpable through a mass of blood clot. An acriflavine gauze pack was inserted and was replaced two days later by a small flavine vaseline pack. Nineteen days after the original operation a left inguinal colostomy was done. Six blood transfusions had been given during this period and repacking had been carried out several times on account of bleeding. At the end of two and a half months proctoscopy showed the rectum to be healed and firmly fixed in the sacral hollow, and at the end of a further month the colostomy was closed and the patient made a good recovery.

## RATE OF SEDIMENTATION OF RED BLOOD CELLS AS A CLINICAL TEST IN GENERAL PRACTICE

BY

E. SCOTT, B.A., D.M., B.Ch.

This investigation was undertaken two years ago to determine the value of the blood sedimentation rate (BSR) as a test for the general practitioner. From my material I have chosen the experiments which are most likely to be of use. For the test to be practical it must conform to certain conditions. It must be quick, easy of application, and independent of elaborate apparatus. These conditions are satisfied. The blood can be collected and the tube filled in the time it would take to spread a blood film, and the reading, which takes place an hour later, can be jotted down by any educated person. The work has been done in three places—Ashford Hospital, my surgery, and the patient's home. As regards the last mentioned, to avoid the dangers of transport with a filled tube it is a good plan to leave the tube to be read by the patient at the required time or marked with a strip of stamp paper. Attention to minute differences in end results is undesirable and may be misleading. The BSR is altered in a variety of pathological conditions that affect the body as a whole. It is thus, within limits, an indication of the existence of organic disease, particularly of an inflammatory nature, and a guide in the assessment of recovery. In theory it runs parallel to the temperature chart, but it covers a wider field, is slower to rise and decline, and can indicate infection in the absence of pyrexia. It affords a closer comparison with the Arneth count. It is the extent and scope of the test which constitute its strength and weakness and render its investigation difficult. The test has become a routine one in hospital practice in many parts of the Continent, particularly Germany, Scandinavia, and Switzerland. It is rapidly becoming popular in England, where it is used as a standard control in the treatment of tuberculosis and chronic rheumatism. Individual readings are not very instructive. I have, in consequence, endeavoured to gain information by choosing cases of known disease and compiling charts with BSR readings as far as possible from inception to cure. In most cases these are correlated with temperature readings.

### Technique

There is a somewhat wide choice of tubes, but I have found that Linzemeier's answers all requirements. This tube is marked at the level reached by 1 c.c. of fluid, and is graduated in millimetres downwards to 24. The reading is particularly easy, and it is noteworthy that if these graduations are extended they divide the c.c. into 48, so that figure 1 on Linzemeier's tube represents roughly a BSR of 2 per cent. This affords a useful method of comparison with other apparatus. With a hypodermic syringe and needle a solution of 3.8 per cent sodium citrate is drawn to the 0.2 c.c. mark and blood is collected from a vein until the 1 c.c. point is reached. The piston is then withdrawn slightly and the syringe contents are thoroughly mixed by repeated inversion. The citrated blood is injected into the sedimentation tube up to the top mark (1 c.c.). The tube is placed vertically in a stand and the height of the supernatant clear fluid read off in an hour's time. These tubes are made by Hawksley and Sons, and I have obtained them from

Allen and Hanbury's who also supply the sodium citrate solution in convenient rubber capped bottles. It is well to run sterile water (not alcohol) through the syringe and needle and to cleanse the tube with sterile water immediately before use. There is usually slight misadjustment to the 1 cm mark owing to the presence of bubbles in the citrated blood but the margin of error is seldom greater than 1 and is too small to be of clinical importance. The arbitrary limit where the BSR becomes pathological has been suggested by Dr T C Hunt to be at the 10 mark and I have adopted this as a working criterion of the normal. It must be understood that BSR = 10 like 98.4 F on the temperature chart represents a maximum and not an average or ideal

to be more stable in the male (Note the rise to 9 on March 18 which is analysed more fully in Chart B). No 2 is very unstable at the beginning a period of malaise followed by the rise to 15 on June 25 culminated in a violent bilious attack—an unexpected occurrence with no apparent explanation. The rises to 9 on October 9 and to 10 on December 18 were the accompaniments of a severe head cold. No 3 presents many difficulties. The BSR was very high in the early stages. At this time the individual was greatly below weight (7 st 7 lb) but this began to go up in the autumn reaching 8 st 4 lb in October and thereafter remaining steady. This was an index of a general improvement in health which is probably reflected in the lower level and increased stability of

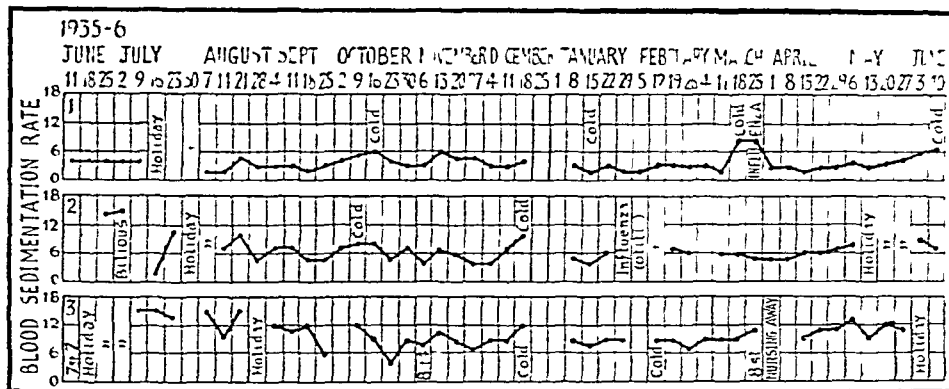


CHART A (1, 2, and 3)

The temperature to which the tube is exposed has been stated to exercise a disturbing factor on the end result. A few simple experiments have convinced me that this factor can be disregarded in practice. The tubes should be stood in an ordinary room. So long as the direct rays of the sun or the immediate vicinity of a fire are avoided I do not anticipate any difficulty from variations in temperature. Anaemia can of course profoundly affect the result. It is sufficient to say here that small degrees involving a haemoglobin content of not less than 80 per cent are not of material importance.

#### The BSR in Normal Health and its Relation to Minor Disturbances

With this particular technique 10 has been generally adopted as the maximum BSR reading in normal health. Making a series of tests in persons apparently in normal health I found the average reading to be 4 in men and 6 in women. Most observers agree that the BSR tends to be at a higher level in women than in men. Another interesting find is that if the BSR of the same individual is taken at different times a variation of two, three or even four in the reading is frequently encountered for no obvious cause and corresponding to no obvious deviation from health. In order to investigate this more thoroughly charts were instituted of three individuals—myself (Chart A No. 1) and two nursing sisters (Chart A Nos. 2 and 3). Readings were taken at weekly intervals throughout the year and omissions reduced to a minimum. Minor maladies not sufficient to incapacitate such as colds are indicated as far as possible.

If we attempt to analyse these three charts separately we note the comparative stability of No. 1. It is probable that as in most clinical tests of this sort the BSR tends

to be more stable in the male (Note the disturbance caused by a cold on December 18).

The consideration of Charts A 1, 2, and 3 leads to the conclusion that each individual has an optimum BSR and that moderate deviations indicate minor maladies. In the case of No. 1 the optimum is 2; that of No. 2 is 6

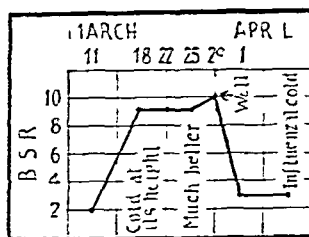


CHART B

and that of No. 3 is 9. Consequently a BSR of 9 in the case of No. 1 would indicate minor illness whereas the same reading in the case of No. 2 would be compatible with complete well being. The 10 mark is no in every instance a true maximum of the normal but it affords a fairly accurate working criterion. Chart B is an analysis of my own BSR during a severe influenza cold in March. Note the fairly rapid rise and the slow decline, the latter lagging after the clinical symptoms had cleared up.

#### The BSR in Pregnancy

Fahraeus was the first to point out that the BSR constantly raised during pregnancy, the only physiological condition in which this phenomenon has been observed

The change, however, does not take place until the later months, and the test is valueless in the diagnosis of pregnancy during the early stages. Chart C was that of a primipara, and began at the tenth week of gestation. For Chart D I am indebted to Dr J A Moore Hall. The BSR readings during pregnancy have been charted, and the matter is pursued to its conclusion where the BSR returns to normal in the fourth week of the puerperium.

### BSR in Infections

In the role of the BSR in acute and chronic infection lies its main claim to merit as a clinical guide. It can be discussed under three headings: (1) localized, (2) pulmonary, (3) general. The last two have been, and are still being, the subject of extensive investigations by many

discomfort the patient made a normal recovery. The BSR was only 6 on the day following the onset of the illness and on the fourth day reached 18 where it remained for a few days before starting to decline.

**Case 2 (Chart F)**—A healthy man aged 49 was admitted to hospital for inguinal hernia. Operation was performed and progress was satisfactory until the seventh day, when severe pain was felt in the right side with rise of temperature, apparently from pulmonary congestion or a small infarct. Pain lasted for a few days after the temperature had fallen. Note the slow but steady fall of the sedimentation rate and the (presumably) steep rise. The BSR apparently started at normal. It reached 18 on the third day after the onset of symptoms and its peak (28) on the fourth day, which was two days after the pyrexia had declined and the patient's symptoms had nearly cleared up. Subsequently its fall was uneventful.

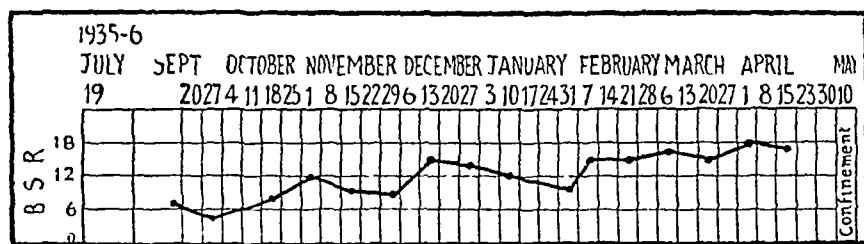


CHART C—Readings during pregnancy

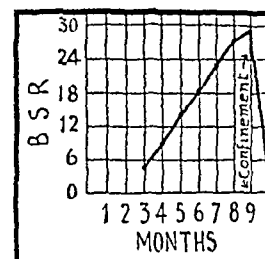


CHART D—Readings during pregnancy

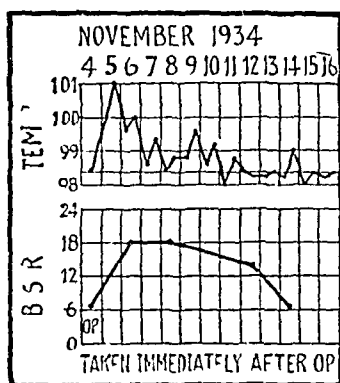


CHART E (Case 1)

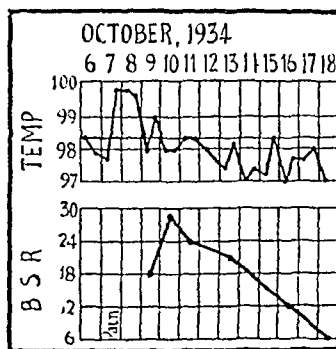


CHART F (Case 2)

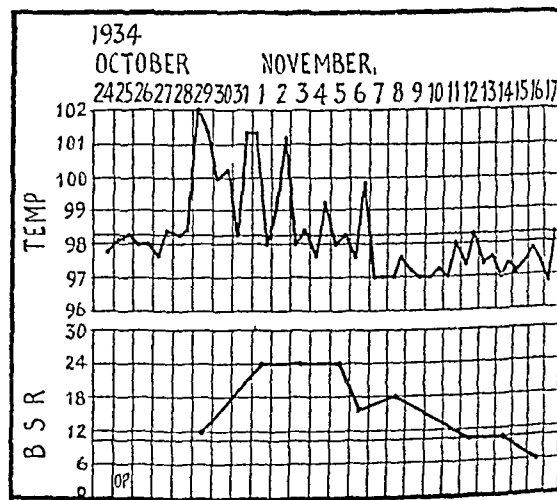


CHART G (Case 3)

workers throughout the world, particularly as regards pulmonary tuberculosis in the one case and rheumatoid arthritis in the other. I accordingly devote myself to the phenomena observed in localized infection.

The characteristic of the BSR curve in the case of an acute infection which ends in recovery is a comparatively steep rise and a slow gradual descent. Though the rise is steep it is slow compared with temperature or pulse-rate variations which, in the case of fulminating disease can show extreme disturbance within a few hours. The BSR is unlikely to present much change in the first forty-eight hours and is hardly likely to reach its peak before the fourth day—often an appreciable time after the maximum pyrexia. This is demonstrated in Charts E, F and G.

**Case 1 (Chart E)**—In this case that of a man aged 37, operation was performed for acute appendicitis on November 4, 1934, the second day of the illness which had supervened on a subacute condition lasting three weeks. The appendix was full of pus. Drainage was not done. After a few days

**Case 3 (Chart G)**—The patient a man of 50, was pale, thin, and anxious. Appendicectomy for chronic abdominal pain was performed on October 25, 1934. Recovery was uneventful until October 29, when he complained of acute pain in the left side. The temperature rose steeply, and he developed the physical signs of pleurisy in the left base. Recovery took place and the temperature subsided by November 7, a few days after which he was allowed to get up. Radiographs taken on November 12 revealed a patch, indefinite in outline at the left base and a small quantity of pleural fluid. The next day the fluid had disappeared but the patch was still distinctly visible in the film. The patient was discharged well on November 17. His BSR was 12 on the first day of the pleurisy, when his pyrexia was at its peak at 102 F. The BSR reached 24 three days later and remained there for four days, starting a steady decline four days after the main febrile disturbance had subsided.

This methodical use of the BSR limits its value in the diagnosis of acute disease, and reserves its main field of usefulness for chronic infection. For instance, it is valueless as a guide in acute appendicitis, where operation



thoroughly cleared pus being found. Convalescence was uneventful and she was discharged on May 15 with the wound and the tympanum healed and hearing nearly restored to normal. Complete recovery ensued, and the patient had no complaints to make when last seen on September 25.

### Summary

1 A simple method is described in which Linzemeier's tube is employed.

2 The figure 10 is selected as the usual maximum reading attained in health.

3 A chart method is employed. By taking weekly readings throughout the year it is shown (a) that the BSR varies in health within moderately wide limits, (b) that each individual has an optimum reading, (c) that moderate deviations from this can usually be attributed to minor ailments.

4 During pregnancy the BSR is undisturbed until about the fourth month, when a steady rise takes place till term.

5 General principles are deduced from the behaviour of the BSR in local infection. The rise of the BSR to an appreciable degree takes about three days. Its decline is comparatively slow, and is (a) continuous and satisfactory, (b) interrupted, due to complications, or (c) incomplete and unsatisfactory. Cases should be followed up until the BSR returns to normal.

I owe my thanks to Dr T. C. Hunt, who first aroused my interest in the subject and to Professor J. R. Fraser for suggestions and criticism.

Towards the expense of this research a grant was made by the British Medical Association.

## ASCORBIC ACID IN BRONCHIAL ASTHMA

### REPORT OF A THERAPEUTIC TRIAL ON TWENTY-FIVE CASES

BY

H. B. HUNT, M.D.

There is a certain amount of evidence that ascorbic acid may play a part in allergic conditions in general and asthma in particular which, although suggestive, is difficult to correlate exactly, and is perhaps best classified in three groups as follows.

#### Theoretical Considerations

1 Hypersensitivity to foreign proteins results after adrenalectomy in dogs (Simpson, 1937). In asthma a condition of protein hypersensitivity also exists, and hypoplasia of the adrenal glands has been noted in asthmatics coming to necropsy (Adam 1931, Waldbott, 1933-4). An eosinophilia is not uncommon in either asthma or Addison's disease. At least one case has been recorded of the association of these two conditions (Wilkinson, 1937).

2 Adrenaline, the most potent anti-allergic remedy yet known, is a secretion of the adrenal medulla. The fact that cortical extracts have been employed in asthma without any marked success (Cohen and Rudolph, 1934-5, Wilmer and Miller 1936) tends to show that if the suprarenal glands are affected in this condition then the medulla rather than the cortex is involved.

3 Ascorbic acid is normally present in the adrenals. Indeed it was from this source that Szent-Györgyi originally isolated vitamin C.

From these disjointed observations it appears probable that (1) asthma or allergy may be associated with adrenal hypofunction, (2) the medulla is chiefly at fault, (3) some especial relation exists between ascorbic acid and the adrenals. Dr L. J. Harris has suggested (in a personal communication) that as, in the light of recent observations, one of the functions of ascorbic acid appears to be to prevent the oxidation of adrenaline, it may be possible, by giving suitable doses, to conserve sufficient adrenaline to prevent the occurrence of asthmatic symptoms.

#### Vitamin C in Anaphylaxis and Allergy

Claims have been made that ascorbic acid will protect guinea-pigs against anaphylaxis (Hochwald, 1935, Salomonica, 1936), and in human beings will diminish the cutaneous reactions to tuberculin, in positive reactors when given intravenously (Heise *et al.* 1937). Hochwald (1936) has employed ascorbic acid in cases of bronchial asthma, and found it of some value in preventing symptoms when given regularly, or aborting symptoms when injected intravenously in massive doses (500 to 1,500 mg). Epstein (1936), while unable to confirm the work of Hochwald when he used ascorbic acid in either asthma or hay fever, did find that it was distinctly valuable in the treatment of asthma if employed in conjunction with injections of gold salts.

#### Investigations

In view of what has been said above there is reason to expect that ascorbic acid may prove useful in the treatment of bronchial asthma. It is not suggested that asthma is a deficiency disease or even that the majority of asthmatics suffer from a subclinical C avitaminosis. Ascorbic acid was given to exert any anti-allergic properties which it may possess rather than to correct a specific deficiency. As all of the cases were out-patients it was not practicable to employ the usual laboratory procedure of estimating any possible avitaminosis. However, among the whole of the patients attending the asthma clinic of the Birmingham General Hospital during the last year I detected only one who showed any clinical signs of vitamin C deficiency. In this case the symptoms—bleeding of the gums and lassitude—were very mild, and cleared up after suitable treatment with ascorbic acid.

*Clinical Material*—Twenty-five patients were investigated—sixteen females and nine males, five of them were children. Other allergic symptoms were present in seven teen cases, and chronic bronchitis in nine. Thus, although small, the series was fairly representative.

#### Dosage and Method of Administration

The ascorbic acid was dispensed in tablets of 50 mg (the synthetic preparation of Roche Products Ltd, redoxon, was employed throughout), two of these being given for each day, one to be taken in the morning and one at night. Each patient received one or two weeks' supply of tablets when attending the clinic. The course was designed to last for eight consecutive weeks, but as attendances were not as regular as could be desired all the patients did not complete eight weeks' treatment and of those who did not every one covered the course in eight consecutive weeks. During this treatment no medicine or injections such as vaccines were given apart from antispasmodics—for example ephedrine or "felfol" powders—or medicine for a troublesome cough. Five patients (quite apart from the group of twenty-five mentioned above) seen when symptoms were present were



given massive doses of ascorbic acid by injection. One of them received 500 mg intramuscularly, another 800 mg intravenously and the remaining three 500 mg by the same route.

### Results

In reviewing the twenty five cases after several weeks treatment by oral medication with 100 mg of ascorbic acid daily no evidence could be found of any marked improvement in the amount of wheezing, the incidence of attacks or the general condition. None of the five patients who received injections of ascorbic acid in doses of 500 mg or over experienced any relief in their symptoms after a period of twenty to thirty minutes and the amount of adrenaline subsequently required to relieve the spasm was in no way diminished. Thus it was impossible to confirm the statement of Hochwald (1936) that asthmatic symptoms could be relieved by large intravenous injections of ascorbic acid. It may be mentioned that in these five cases symptoms were severe in two instances and slighter in three.

### Conclusions

The investigations described above have not shown ascorbic acid to be of any value in the treatment of bronchial asthma when given in comparatively large doses either by injection or by mouth.

I wish to thank Professor W. H. Wynn for the facilities he offered me in the investigation and also Roche Products Ltd for the supplies of redoxon which they kindly placed at my disposal.

### REFERENCES

- Adam J (1931) *Glas med J* 116 81  
Cohen M. B. and Rudolph J. A. (1935) *J. Allergy* 6 279  
Epstein A. (1936) *Schweiz med Wschr* 66 1037  
Heise F. H., Martin G. J. and Schwartz S. (1937) *Brit J Tuberc* 31 2  
Hochwald A. (1936) *Zbl inn Med* 56 769  
— (1936) *Klin Wschr* 15 89  
Salomonica B. (1936) *J Immunol* 31 209  
Simpson S. L. (1937) *British Medical Journal* 1 229  
Waldbott G. L. (1937) *J. Allergy* 5 123  
Wilkinson J. F. (1937) *Lancet* 2 61  
Wilmer H. B. and Miller M. M. (1936) *J. Allergy* 8 77

R. Benda (*Prag med Z* January 25 1938 p. 67) does not agree that a retroverted uterus discovered during a routine examination and producing no symptoms should be left untreated. He recommends replacement and insertion of a pessary in all cases. Operative treatment is indicated if after one year's conservative treatment the uterus still becomes displaced after removal of the pessary. Replacement of a gravid retroflexed uterus should only be undertaken in hospital. Although spontaneous replacement may take place and although it may be aided by lying in the prone position it must not be left to chance. When retroversion is due to pelvic peritonitis conservative treatment of the pelvic inflammation is indicated. The insertion of a ring pessary in the treatment of uterine prolapse is only of value when the levatores ani are still intact. It is valueless when the neck of the cervix is elongated and when cystocele or rectocele is present. Of the various operative procedures Benda advises Wertheim-Schauta's method of interposition of the uterus between the vagina and bladder or Halban's fixation of the uterus to the bladder. He attacks anterior and posterior colporrhaphy as an operation attended by an appalling proportion of relapses. Measures for the prevention of uterine prolapse include careful forceps deliveries, more frequent use of episiotomies and exercises in the puerperium. Benda advocates that women should be encouraged to get up five days after a normal confinement but they should not be allowed to do their ordinary work for some time afterwards.

## THE FEMALE CLIMACTERIC AND THE MENOPAUSE

By

H. R. DONALD, M.A., B.M., M.R.C.P.

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Visiting Physician Crumpsall Hospital

The recent advances made in the physiology of the sex hormones have tended to stimulate rather than to satisfy our curiosity. The shafts of light that have been shed on a few isolated points have by contrast served merely to accentuate the darkness of surrounding ignorance. This is particularly true of the existing knowledge of the female climacteric. The common employment of the terms menopause and climacteric as though they were synonymous advertises the looseness of present conceptions for although both these conditions possess certain similar features there is no possible justification for regarding them as identical. Some of this confusion may be due to the tendency to make deductions from the similarity of the symptoms of the artificial and of the physiological menopause. Such argument by analogy is always risky as in the case of the experimental diabetes of pancreatotomy and its supposed clinical counterpart and in view of the unknown causation of the physiological menopause any inferences should be drawn with extreme caution. Since a clear differentiation between the menopause and the climacteric is becoming increasingly important the two subjects are here reviewed from both the theoretical and the clinical standpoint.

### The Menopause

The use of the term menopause should be restricted to its literal meaning of the cessation of the menstrual life. It should also imply the termination of the menstrual life. The cause of this permanent amenorrhoea is not known but it is commonly accompanied by two principal endocrine changes. First there is a relative diminution in circulating oestrogens which are almost or completely absent from the blood stream three years after the cessation of the menses in probably a less than 10 per cent of women. It is doubtful however if the menopause is due directly or solely to a decline in the ovarian secretion of full endometrial hyperplasia which may be regarded as a specific oestrogenic function may persist for many years after the establishment of amenorrhoea. Its occurrence has been variously reported in forty out of 130 and thirty out of 130 postmenopausal subjects (Noyl and Taylor 1936). The site of formation of these oestrogens is not known but some at least may originate in the ovary. In the second place there is an increased content of prolactin in both the pituitary gland and the urine and the significance of even this finding is not appreciated. The increased content of prolactin in the pituitary is probably more characteristic of a resting than of a secreting state and it may be of interest to quote the work of Engelhart and Häusler (1936-7) who reactivated the senile ovaries of rats by the implantation of pituitary tissue.

### The Climacteric

The term climacteric is derived from the Greek meaning a rung of a ladder and originally was used to describe certain critical epochs in the life of both men and women at which the body was considered to undergo radical changes. These epochs were supposed to recur at intervals of nine years from the commencement being a adolescence and at the sex period years the

latter being referred to as the "grand climacteric" The term may therefore be used to signify certain changes in function, and to a less extent in structure, which take place at or after middle age These changes lack any uniformity and show great variation in severity The most distinctive mental changes are a progressive introversion of the mind, with depression, inertia, and insomnia, while the normal physiology of the body is subject to innumerable disturbances, the majority of which are characterized by transient or persistent sympathetic discharge (Donald, 1937) common among these latter symptoms are headache, dizziness, various rheumatic affections, and swelling of the extremities or face

In the past no investigator has drawn any practical distinction between the menopause and the climacteric and hence no attempt has been made to establish any endocrine relation or difference between these two conditions From the clinical view-point there can be but little doubt that involutionary changes affect glands other than the ovaries A mild degree of myxoedema is considerably more common than states of true hyperthyroidism, the occasional occurrence of which may perhaps be due to the trophic influence on the thyroid gland of a hypertonic sympathetic nervous system Similarly, the majority of cases of diabetes mellitus which originate at the climacteric would appear to be due to a depression of insular activity, and only a small percentage of cases may be attributed mainly to excessive glycolysis from sympathetic discharge I have seen several cases the symptoms of which bore a striking resemblance to Addison's disease, even to the characteristic pigmentation and fall in blood chlorides It would therefore seem likely that these multiple glandular disturbances may possess some common origin, which for reasons previously mentioned may well be a reduced secretion of the anterior pituitary

It will thus be seen that the climacteric differs from the menopause in being a general rather than a local disturbance, and in being a chronic immeasurable clinical state rather than a clear-cut observable symptom

#### Relation between Menopause and Climacteric

In the past it has been assumed that the menopause initiated the climacteric and that the two conditions were clinically inseparable This conception is open to considerable criticism and doubt Since the principal symptoms of the climacteric are to a large extent non-specific in nature and essentially nervous in origin, their time of onset severity, and chronicity may be regarded as the resultant of at least two intrinsic forces (1) the fundamental constitution of the individual, in which I include the basic endocrine pattern and its consequent influence upon the tone and equilibrium of the autonomic nervous system, and (2) the individual degree of endocrine change which occurs at the climacteric In general the more unstable a nervous system is the smaller are the degrees of endocrine change which are capable of disturbing it Now since this constitutional factor varies so widely in different individuals considerable variation in the onset and severity of climacteric symptoms might be expected, even supposing that the rate and degree of endocrine involution were constant In point of fact, however, much evidence has recently accumulated to suggest that these endocrine changes also are subject to great individual variation

Although in many women oestrogenic substances are absent from the blood and urine three years after the menopause, in many others this reduction is extremely

gradual, for these substances have been found to persist in considerable quantity in both the circulation and the urine for twenty years or more after the menopause (Robson *et al* 1934, Frank, 1934, Frank, Goldberger, and Spiegan, 1934, Frank Goldberger, and Salmon, 1936) A further indication of this persistent oestrogenic secretion may possibly be given by some observations which I have made on the amounts of oestrone and oestradiol that are effective in producing proliferative bleeding in the post-menopausal subject The work of Kaufmann and others has demonstrated that approximately 25 mgm of dihydroxoestrin injected intramuscularly are required to produce proliferation of the endometrium in the castrated subject In the treatment of the climacteric by oestrogenic compounds, however, ten out of 120 patients have reported the occurrence of uterine haemorrhage after very much smaller amounts Details of these cases are summarized in the accompanying table

Case No	Age	Years past Menopause	Duration of Treatment in Weeks Prior to Haemorrhage	Weekly Replacement of Oestrin in Mg	Total Replacement in Mg
1	69	18	13	1 B 2 O	13 B 26 O
2	63	17	5	6 B 3 O	31 B 5 O
3	63	11	4	1 B, 2 O	4 B 8 O
4	58	18	4	2 B, 2 O	8 B 8 O
5	57	10	6	2 B 2 O	12 B 12 O
6	56	5	9	2 B, 2 O	18 B 18 O
7	54	4	24	1 B 2 O	24 B 48 O
8	50	2	20	2 B 2 O	40 B 40 O
9	50	1	6	2 B 2 O	12 B 12 O
10	48	1	5	2 B 2 O	10 B 10 O

B Dihydroxoestrin benzoate given intramuscularly O = Oestrone given by mouth

Cases 3, 6 and 7 were curetted and typical endometrial proliferation was found Case 2 had a recurrence of haemorrhage after six weeks of further treatment by 0.6 mg oestrone daily by mouth

The figures show that there is a marked difference in response between the castrate and the post-menopausal subject\* From these considerations two conclusions may justifiably be drawn

1 The severity of climacteric symptoms need not be in proportion to the degree of endocrine change This has already been pointed out by Salmon and Frank (1936) who found that such symptoms could not be correlated either with the amount of circulating oestrogens or with urinary prolactin and yet these symptoms could be relieved by the adequate administration of oestrin

2 Great individual variation may be expected not only in the severity and chronicity of the climacteric but also, and more particularly, in its time of onset

From the theoretical side alone, therefore there is reason to suspect that the menopause and the climacteric may not always possess a close temporal relation

#### Practical Considerations

How are these theoretical considerations borne out in practice? In probably 80 to 90 per cent of women the menopause is closely related to the onset of climacteric symptoms These symptoms usually coincide with the cessation of the menses, but may precede or follow the establishment of amenorrhoea by a few years While this close association of the menopause to the climacteric

\* One apparently indisputable case of uterine bleeding in a castrate following the administration of only 2 mg of dihydroxoestrin has however been reported (Werner, A A, *et al*, *J Amer med Ass* 1937, 109 1027)

is usual it is by no means invariable. The following case histories are typical of many others in my possession.

#### ILLUSTRATIVE CASES

**Case 1**—Mrs C aged 65. This patient cannot remember exactly what her age was at the menopause—probably about 48. Had far too much to do to be bothered about that sort of thing. She put on a little weight at that time but had no flushes or any other symptoms. She experienced good health until two years ago when she became more easily fatigued and subsequently developed giddiness with falling so that she was afraid to go out of doors by herself. She also had insomnia, depression and slight puffiness of the ankles. Blood pressure 175/115. The patient was referred for special advice on account of her rapidly failing vision associated with pallor of both optic disks. The subjective symptoms cleared rapidly with 0.1 mg oestrone thrice daily by mouth with six injections of 1 mg oestradiol given twice weekly at the commencement of treatment. Six months later with correction she was reading 6/6 J1 in both eyes.

**Case 2**—Mrs W aged 68 thinks the menopause must have occurred near the age of 46 since her little girl was about 2 years old at that time. She may have experienced occasional flushes about then but was not inconvenienced in any way. She always enjoyed good health until five years ago when she had an attack of sciatica. Shortly afterward symptoms of rheumatism began in the fingers and for the last three years she had suffered from recurrent neuritis of the arm pain and stiffness in the knees, insomnia, little sleep and mental depression. The rheumatism on account of which she first presented herself had previously been treated unsuccessfully with gold and physiotherapy. She failed to show any decisive improvement from small desensitizing doses of vaccine and was accordingly placed upon 0.1 mg oestrone three times daily by mouth. In three months she was able to kneel and rise without pain and her fingers though much deformed were also painless. The patient protests against any suggestion that treatment should be discontinued since with it she feels so much stronger, more energetic and more cheerful.

**Case 3**—Mrs L aged 70. She does not remember the date of the menopause but thinks it must have been about the age of 50. She cannot recollect any symptoms at that time. Her health was excellent until three years ago when her age began to tell on her heart. She suffered from palpitations, shortness of breath on exertion, oedema of the ankles and to a lesser extent of the wrists, insomnia and mental depression. There was also some pain and stiffness in both knees. The heart was found to be much enlarged and the first heart sound was of poor quality. The blood pressure was 165/120. She was given 0.1 mg oestrone three times daily by mouth with 1 mg oestradiol intramuscularly twice weekly and within six weeks she had lost all subjective symptoms. The oedema had disappeared and her usual optimism and ability to sleep had returned. She has continued to improve during the last six months.

**Case 4**—Mrs R aged 70. The menopause occurred at about the age of 50. She suffered from occasional flushes at that time and has had pericardial rheumatism of the knees with muscular rheumatism for the last six years with dizziness, headaches, insomnia and depression for two years. The subjective symptoms were rapidly controlled with 0.1 mg oestrone thrice daily by mouth and 1 mg oestradiol intramuscularly once a week.

It will thus be seen that while the menopause was undoubtedly accompanied in these cases by occasional mild phenomena such as hot flushes or some gain in weight the onset of that wide assortment of nervous symptoms which characterizes the climacteric was delayed for fifteen years or more.

#### Conclusions

Both on theoretical and on clinical grounds therefore it is important to differentiate between the climacteric

and the menopause. The former unlike the latter is not an epoch but an era; it represents not a simple change but rather the summation of innumerable independent factors; it is a chronic state of potential nervous disharmony which need of necessity bear no relation to the menopause but which may mature or be activated many years later. Ten years ago these considerations might have been thought of academic interest. To-day however they possess a practical significance which it is difficult to overstress.

Good health depends upon normal function. The importance of abnormal function in the production of morbid symptoms and morbid structural change is great and is by no means fully appreciated. The function of the body is the expression of its physical constitution of which the neuro-endocrine pattern forms the backbone. Just as the constitution is modified in the first third of life by the endocrine changes of adolescence so the functions of the body are modified in the last third of life by the changes of the climacteric. These functional changes are responsible in later years for the facilitation of many diseases and the causation of much ill health. It is true that the exact nature of these changes defies analysis and will continue to do so for many years to come but the means for the relief of much suffering is already to hand. A ray gonadotropic preparations, insulin, thyroid, testosterone, luteal hormone and oestrogen all have their place in the treatment of these conditions. The employment of these remedies will vary according to the requirements of the individual cases and in the absence of any measurable indicators is largely a matter of detailed clinical analysis and not a little experience. While financial considerations may limit the use of certain of these preparations such restrictions seldom apply to oestrin. In those cases where the symptoms of the natural climacteric may be attributed mainly to lack of this hormone its replacement can when necessary be effected entirely by injection and be administered by the patient, relatives or district nurse. There are very few cases whose requirements exceed 1 mg of oestradiol two or three times a week while the majority may be kept comfortable on less. Such treatment cannot be regarded as a luxury any more than can the treatment of the diabetic by insulin. It is wrong to regard the various disturbances of the climacteric as innocuous or tolerable and therefore to be tolerated. Rather must they be looked upon as a warning of potential organic changes which if disregarded may ultimately lead to premature degeneration of all tissues particularly the heart and kidneys.

I have endeavoured to emphasize this distinction between the climacteric and the menopause in order to counteract the common impression that indications for endocrine and particularly oestrogen therapy are limited to a short period which follows the cessation of the menses. The delayed or late climacteric is by no means uncommon and much suffering can be spared by a wider appreciation of the virtues of oestrin in its treatment.

#### REFERENCES

- Donald H R (1947) *Brish Med J* 2  
 Engelhart E and Hausler H (1947) *ibid* 2 163  
 Frank R T (1947) *N Y St J Med* 34 1  
 ———, Goldberger M A and Sherman F (1947) *J Amer Med Ass* 133 9  
 ——— and Salmon L J (1947) *Proc S Soc E N Y* 33 61  
 Noak E and Vile E (1946) *Amer J Obst Gyn* 32 674  
 Robson J M, Giesse T N, Hirschman P E and Seere N (1947) *Brish Med J* 2 1  
 Salmon L J and Frank R T (1947) *Proc S Soc E N Y* 33 612

## Clinical Memoranda

### A Successful Femoral Artery Embolectomy

Successful cases of arterial embolectomy are still rare enough to justify the publication of the following notes

#### CASE RECORD

A woman aged 39 was suddenly seized with severe pain in the right knee at 10 p.m. on November 12, 1937. At 10.30 p.m. she was seen by Dr R. D. Miller, who, at 1 a.m. the next day, sent her into the Hull Royal Infirmary with a diagnosis of embolus in the arteries of the right leg. The patient was known to be suffering from auricular fibrillation associated with mitral stenosis of rheumatic origin, and about eighteen months previously she had had a 'stroke,' resulting in a left-sided hemiplegia. This was presumed to be due to a cerebral embolus.

On admission the patient presented the classical triad of pain, pallor, and paralysis, with some loss of sensation and absent pulsation of the distal arteries of the right leg. The pain was so agonizing that she cried for relief. The pallor was very marked from the knee downwards and less so in the thigh. The paralysis was incomplete, and this also applied to the loss of sensation. There was strong pulsation in the right common femoral artery, but nowhere else in that leg. It was obvious that the arterial circulation of the right leg had been suddenly and completely occluded by a clot but there was some uncertainty about the exact position of the latter. The concentration of the pain at the right knee, however, and the well-marked pulsation of the common femoral artery just below Poupart's ligament suggested that the termination of the popliteal artery was the most likely site of obstruction.

**Operation**—This was begun at 1.15 a.m. (about three and a quarter hours after the onset of symptoms) under spinal anaesthesia. That method was employed in preference to the usually advocated local anaesthesia owing to the fact that some sensation was present in the leg and that the site of the embolus was in doubt. The popliteal artery was first exposed and was found to be collapsed and pulseless, so this wound, which was quite vascular, was left open and the common femoral artery exposed in Scarpa's triangle. There was a little bleeding in this incision, but less than normal. The common femoral artery was found to be distended and to be pulsating vigorously as far as the bifurcation into its terminal branches which were collapsed. Just above the collapsed artery the outline of the embolus could be seen and felt. The common superficial and deep femoral arteries were carefully mobilized and thin rubber bands were passed behind them to act as tourniquets. Throughout the operation the wound and the instruments were kept soaked in a 2 per cent solution of sodium citrate. A longitudinal incision 1 cm in length was then made in the common femoral artery just proximal to the embolus which was carefully removed with fenestrated forceps. The clot was found to be in two pieces which were blocking the superficial and deep femoral arteries. The upper tourniquet was now momentarily released, whereupon a huge spurt of blood showed the proximal circulation to be free. The incision in the artery was then sutured with a continuous row of through and through stitches the suture material being fine vaselined silk. Release of the tourniquets showed haemostasis to be complete. The first incision was now examined and was found to be bleeding while the popliteal artery was pulsating strongly so haemostasis was obtained and both wounds were closed. The foot and leg had by this time become pink and warm. In closing the upper incision a stout piece of silk was passed under the common femoral artery at its upper end and brought out of the wound. This was to be used in the event of a secondary haemorrhage which fortunately did not materialize.

Convalescence was uninterrupted. On the first and second days following operation the pulsation of the popliteal artery was easily palpable and although subsequently the impulse was felt only with difficulty the leg itself remained warm and pink suggesting that the artery had remained patent.

#### DISCUSSION

Most of the statistics dealing with arterial embolectomy are taken from a series of 382 Swedish cases published by Einar Key and these show that the termination of the common femoral artery is the most frequent site for embolic obstruction, accounting for some 54.5 per cent of all cases.

The prognosis as a rule is bad, and in any one individual case is dependent on the following factors:

1 **Time**—Cases operated on within six hours have a fair chance of recovery, but after six hours the mortality rate of the limb and the patient rises rapidly. A successful case has however, been reported in which the operation was done sixteen hours after the onset of symptoms.

2 **General Condition of the Patients**—These patients are often suffering from carditis with decompensated valvular lesions, and therefore make poor subjects for operation.

3 **Site of Embolus**—The best results have been obtained in the axillary and brachial arteries, with a 44 per cent operation success. The femoral and popliteal arteries come next with a 20 per cent chance of recovery.

4 **Condition of the Artery**—Previous arteriosclerosis and rough handling of the vessel during operation are both apt to result in post-operative thrombosis of the affected artery. This is far more serious than ligation of the same vessel, since thrombosis tends to spread up and down the artery, thus interfering with the collateral circulation as well as the main stream.

Only about a dozen successful cases of arterial embolectomy have been reported in this country, and although a much larger number must undoubtedly have been carried out we are still behind the Scandinavian countries in this branch of surgery. The remedy is simple: early diagnosis and immediate operation.

I am indebted to Mr J. N. Young and Dr R. D. Miller for permission to publish these notes.

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#### BIBLIOGRAPHY

- Banks A. G. (1932) *British Medical Journal* 1, 56.  
Deitch H. I. (1936) *Lancet* 1, 475.  
Holdsworth, F. W. (1934) *Ibid.*, 2, 703.  
Jefferson G. (1925) *British Medical Journal* 2, 985.  
— (1934) *Ibid.*, 2, 1090.  
Key E. (1936) *Brit. J. Surg.* 24, 350.  
Larks G. E. (1934) *British Medical Journal* 1, 616.  
Riddell V. H. (1935) *Lancet* 2, 1230.  
— (1937) *Proc. roy. Soc. Med.* 30, 684.

At the March meeting of the Central Midwives Board for England and Wales the following were appointed regular examiners at the London Centre: A. C. H. Bell, M.B., F.R.C.S.; J. D. S. Flew, M.D.; Dame Louise Mellor, M.D.; J. V. O'Sullivan, M.D., F.R.C.S.; N. L. White, M.D., F.R.C.S. Approval was granted to the Central Middlesex County Hospital and Westcotes Municipal Maternity Home, Leicester, for the purpose of providing instruction in the essentials of obstetric analgesia and in the use of a recognized apparatus.

## Reviews

### METHODS IN CLINICAL PATHOLOGY

*Approved Laboratory Technique* By John A. Kolmer  
MD DPH ScD IID LHD FACP and  
Frederick Boerner VMD Second edition (Pp 893  
380 figures 12 plates 30s net) New York and  
London D Appleton-Century Company 1935

Variations in laboratory technique even in simpler routine work are endless and even the most enterprising and enlightened clinical pathologist has something to learn from others if he but knew it. Among the better bench books designed to spread the most useful information of this kind is Kolmer and Boerner's *Approved Laboratory Technique* which now appears in its second edition. This work was originally prepared under the auspices of the American Society of Clinical Pathologists and in its present form it has the sanction of twenty-eight named collaborators as well as in many cases of the originators of the methods described. It covers the whole range of laboratory investigation in relation to medicine including not only haematology bacteriology morbid histology and chemical pathology but toxicology and less readily classifiable methods such as tests for pregnancy while there are useful chapters on general laboratory management including the cleaning of glassware the use of the microscope and the handling of animals. Adequate emphasis is laid on the need for collecting specimens by proper methods and these methods are fully described. Serology has a full share of attention and added space has been devoted in this edition to mycology and parasitology.

Individual preferences are such that no one is likely to agree with each and every statement in this book but most of the procedures described are doubtless the best of their kind. A few methods of doubtful value are included such as Rivalta's test for serosamucin. Alternative tests are sometimes given with no indication of which is considered the better. The lists of bacteria which may be grown from different materials are not very helpful and frequently include non-pathogenic species and no mention is made of the desirability in interpreting agglutination tests of knowing the degree of agglutinability of the bacterial suspension used. With few exceptions such as these we find nothing to criticize and it can be said without hesitation that this work is a valuable practical guide. Its usefulness is increased by profuse and apposite illustrations.

### EXPERIMENTAL SURGERY

*Textbook of Experimental Surgery* By J. Markowitz,  
MB Tor Ph.D MS in Exp Surg. Minn. (Pp 528  
330 figures 31s 6d) London Baillière Tindall and  
Cox 1938

A textbook of experimental surgery fulfils a great need in laboratories where animal experiments are carried out. To obtain the details of various technical procedures requires much searching of the literature often only to find that important parts of the operation are described scantily or dismissed in a few lines. Dr Markowitz has attempted to fill the gap and for what he has done laboratory workers in the English speaking countries will be grateful. Unfortunately the book suffers from the injection at intervals of such sentences as: 'The scientific equivalent of worshipping Mammon is to worship an engine and Reader as de Quincey might have asked in his curiously overwrought but beautiful way: What is a plethysmograph? You who do not pretend to cumber-

some erudition and who have enough to do to keep up with the facts of surgery without branching into the technique of physiology be not ashamed (as de Quincey might again have said) if you do not know.

Details of all the usual instruments necessary for experimental surgery are given but Dr Markowitz omits scissors. Why? Bodie's table is recommended as the most useful but the figure illustrating this bears little resemblance to Bodie's original design. Sutures is considered but it is confusing to read on one page the continuous suture is therefore better for closing an incision than a lock suture and four pages later we do not recommend a continuous (Glover's) suture. Sentences referring to the closure of an incision. In a chapter on thoracic surgery it is stated that emphysema is the usual complication of thoracotomy in the dog. This is not the experience of at least one laboratory in this country where in a series of over 100 thoracotomized dogs this complication never arose. The modern method of pressure anaesthesia for thoracotomies is not mentioned in the text. Various operations which are carried out inside the chest cavity such as vagotomy, bronchotomy and splachnectomy are not described nor is any reference made to experimental work in this country on the oesophagus. O'Shaughnessy's experimental studies on cardiac surgery are not mentioned.

In spite of its many defects this book will prove useful in laboratories where animal experiments are conducted but it must be realized that while it gives in detail the experience and practice of one large laboratory of experimental surgery the experimental procedures recommended and described are not the only good ones in evidence nor can the practice of other laboratories in this country be ignored. This book should be a stimulus to British experimenters to compile a textbook which will cover the whole field and include experimental procedures on animals other than the dog.

### FORM-GIVING GYMNASTICS

*A Text Book of Gymnastics (Form giving Exercises)* By  
K. A. Knudsen Translated by F. B. A. Hansen (Pp  
364 216 figures 12s 6d) London J and A Churchill  
Ltd 1937

The widespread publicity given to the Government's physical fitness campaign has stimulated interest in physical education to an extent never before experienced and it behoves those concerned with the public health to understand fully what measures are desirable and what it is possible to achieve. An astonishing amount of vagueness exists concerning physical education and in many minds the mention of it wakes only a blurred image of excessively active arms and legs against a black ground or widely opened windows in the zero hours of a cold morning. To blot out this depressing image and replace it by a positive conception of the aims and possibilities of a constructive system of gymnastics medical practitioners and students can be strongly advised to read Knudsen's *Text-Book of Gymnastics*. Among the many that have been published recently this book is outstanding as one which combines an idealistic outlook with an intensely practical and rational scheme of work. We expect a high standard in Danish books on educational subjects and this one written by the former chief professor of physical education in Denmark maintains the record of achievement.

The book deals particularly with form giving gymnastics based on the Ling system and consequently its special aim is to mould and develop the body harmoniously. The spine and the joints and muscles concerned in a normal

ments, being of primary importance. This method is in opposition to the various gymnastic systems which tend to overdevelop single groups of limb muscles (for instance, the much-displayed biceps) and neglect the trunk and body as a whole. The exercises described are exacting for the teacher because they are apparently simple and not spectacular. Much keenness is needed to convince the class that their true aim is to prevent deformity by controlling bodily development and to correct incipient deformity. The chapter on the back, which precedes those on the form-giving exercises, is a valuable one and will be appreciated especially by those who have to examine numbers of school children. There are sections on "order exercises" and on game-like exercises suitable for children, but among these it is surely unnecessary and undesirable to describe one as "lunging to war." The photographs illustrating the exercises are good though rather small, and the anatomical diagrams and radiographs of the body in various positions are a welcome feature to students who have come to realize that they know very little of the action of muscles in spite of all the time spent in learning detailed anatomy.

Among the special exercises described for the back the spin-bendings are dearest to the author's heart, for they are the most valuable of all, and he urges parents to give their children sets of wall-bars at the earliest opportunity. He feels that rhythmical work, although attractive for children, is not sufficient for their development, and if given exclusively is apt to result in slipshod, "sloppy" action. The author is insistent that physical education should primarily be concerned with the individual and is therefore unsuitable for spectacular class shows. Physical training that is good for the various individuals in a class seldom makes successful show-stuff. Schools, please note!

## VITAMINS AND HORMONES

*Ergebnisse der Vitamin- und Hormonforschung* Vol. 1 Edited by L. Ruzicka and W. Stepp. With a Foreword by Sir Frederick Gowland Hopkins. (Pp. 470, 44 figures. RM 33 bound, RM 34.) Leipzig: Akademische Verlagsgesellschaft M.B.H. 1938.

In this monograph on the vitamins and hormones recent developments in these studies are brought together in the form of brief reviews by people who have been working closely on each subject. It is essentially a series of contributions from experts rather than a unified whole. Sir F. Gowland Hopkins contributes a reminiscent foreword. The emphasis is almost entirely biochemical rather than clinical. E. Glanzmann of Berne contributes a section on important vitamin problems in childhood. Vitamin C is dealt with by D. Giroud of Paris, vitamin B<sub>1</sub> by R. R. Williams of New York and the remainder of the B vitamins by C. A. Elvehjem of Madison; the vitamins concerned with reproduction are dealt with by H. Guggisberg of Berne. H. von Euler of Stockholm contributes a section on the significance of enzymes in cell life. The hormones are represented by a discussion of the chemistry of posterior lobe hormones of the pituitary gland by R. L. Stehle of Montreal, a section on the interrelationships between the hypophysis and the sex glands by W. Berblinger of Jena, the chemistry of cortin by T. Reichstein of Zurich and sections on the chemistry of the male and oestrogenic hormones contributed respectively by M. W. Goldberg of Zurich and G. F. Morrison of Toronto. Each author uses his own language.

The rather strictly biochemical bias of the book makes it of greater interest to those who are engaged in bio-

chemical and strictly biological research than to the clinical worker. Work upon the vitamins and hormones has become so complicated and specialized that there is a positive value in bringing together contributions from so many different fields. As Sir F. G. Hopkins says, it is logical that vitamins should be associated with hormones in a volume such as this. The brevity required to fit so many contributions into a single volume has the disadvantage of making some of them incomplete. It is surprising, for example, to turn to the section on anti-anæmic factors in the contribution on the B vitamins and to find that there is no reference at all to the interesting problem of the nature of the extrinsic factor involved in the aetiology of pernicious anaemia.

## RUDIMENTS OF ANATOMY

*Fundamentals of Anatomy* By Carl C. Francis, A.B., M.D. (Pp. 320, 176 illustrations, including 26 coloured plates. 12s. 6d. net.) London: Henry Kimpton, St. Louis: C. V. Mosby Company, 1937.

This elementary book by Dr. Carl C. Francis of the Western Reserve University, Cleveland, is designed to give the student a general knowledge of the essentials of anatomy. It is clearly written and illustrated, many of the figures having been specially drawn from specimens in the museum of the Western Reserve University. As stated in the preface, it is evident that "every effort has been made to keep the text concise." In effecting this, however, much that in our opinion is vitally essential has been omitted, and many details of anatomy a knowledge of which is important for the operative work of a practical surgeon are lacking.

In this type of book brevity in many instances leads to a mere enumeration of facts which, without any explanation of their practical or scientific bearing, become devoid of interest. We need only mention as an illustration of our meaning the additional interest which is brought into the study of the odontoid process of the axis vertebra when something is told of its mode of development and phylogeny. In justice, however, to the present work we may state that the text as a whole is remarkably free from errors, and that it contains in a very limited number of pages a large amount of information which is expressed in a simple, lucid style, and that this, combined with the clear printing in full of the names of the parts indicated in the illustrations, should prove of the utmost value in saving the reader time and trouble. Books of this type should prove serviceable as an introduction to anatomy for ambulance workers and nurses, but in our opinion the descriptive anatomy for medical students cannot be cut down to a minimum without seriously lowering the general standard of medical education.

## APPLIED MYCOLOGY AND BACTERIOLOGY

*Applied Mycology and Bacteriology* By L. D. Galloway, M.A. Cantab. and R. Burgess, M.Sc. Ph.D. Lond. (Pp. 181. 10s.) London: Leonard Hill Ltd. 1937.

Although it is a truism to say that microbiology has many important applications, it is one which is not always fully appreciated. We in medicine are apt to forget that, while the study of micro-organisms developed principally in its application to medicine, bacteria and fungi have other activities no less important to man. This one-sided development of microbiology and more particularly bacteriology, has been remedied to a considerable extent of late years, the study of bacteria and fungi in relation to agriculture and industry receives more and more attention. Undoubtedly there are many whose work brings

them into contact with microbiological problems but who are debarred from taking an intelligent interest in them owing to a lack of knowledge and it is for such people that Messrs Galloway and Burgess have written this small book.

The authors begin with a brief description of bacteria and fungi and their classification. This is followed by chapters devoted to the technical side of the study of micro-organisms and the first part of the volume closes with chapters on the metabolism of bacteria and fungi and the methods available for the control of these micro-organisms. Part II is concerned with the applications of our knowledge of bacteriology and mycology to the food industries to fermentation textile industries medicine and agriculture. Naturally in the space of 173 pages these matters can only be treated in bare outline but it is detailed enough for its purpose and the information given is well chosen and well arranged. For students of medicine its main interest is that it presents the study of bacteria and fungi in its true perspective and not solely in its relation to disease.

### Notes on Books

*Short Years The Life and Letters of John Bruce MacCallum M.D.* by ARCHIBALD MALLOCH is published in Chicago by Normandie House price 3.50 dollars. This charming record as shown by the letters and the running commentary of a talented medical man who though already distinguished as a histologist and a physiologist died before he reached his prime more than thirty years ago has evidently been a labour of love to the librarian of the New York Academy of Medicine Dr John who was a brother of W. G. MacCallum, the successor of W. H. Welch as professor of pathology at the Johns Hopkins University was a man of many interests. He was a good correspondent of the old fashioned model not of the concise telegraphic style of these days of universal hurry. His letters fortunately preserved by his family those to parents usually beginning "Dear Home" have been extensively utilized by Dr Malloch to tell the story of a life much handicapped and cut short by tuberculosis. With a circle of devoted friends he was cheerful and affectionate but his face showed lines of sadness and his notebooks and poems such as that beginning *Spirit of Death* now carved on his tombstone of grey granite bear out the accuracy of this index of the inner man. His poems as quoted in the volume are attractively arresting and two prose stories also incorporated here show talent of a rather unusual kind. He was an admiring pupil of Osler who nicknamed him "St John" and wrote of him "He was one of the most brilliant young men it has ever been my lot to teach."

The richly documented work entitled *Coming into Being among the Australian Aborigines* (London George Routledge and Sons Ltd 21s) by Dr M. F. ASHLEY-MONTAGU assistant professor of anatomy New York University is as its subtitle indicates a study of the procreative beliefs of the native tribes of Australia. The author has tried to collect all the available evidence relating to the procreative beliefs of the Australian aborigines and he confirms the truth of Spencer and Gillen's observations published in 1899 that there are aboriginal people in Australia without any knowledge of the relation between coitus and pregnancy. The objections which have been raised against the existence of such ignorance are critically examined by the author who shows that the procreative beliefs of the Australians form only a special case of the belief in the supernatural birth which is by no means peculiar to Australian aborigines. In a

chapter on phallic ceremonies or so called phallic worship it is shown that their performance so far from indicating a knowledge of the relation between intercourse and pregnancy is merely a ritual sort of sexual pleasure while in the following chapter on the operation of sub-incision or slitting open the penile urethra on its ventral surface the author maintains that the operation is no intended as a contraceptive measure but was instituted to cause the male to resemble the female with respect to the occasional effusion of blood and possibly to produce some termination of the male organ. Professor Malinowski to whom in conjunction with Professor Westermarck the volume is dedicated recommends it as the best introduction to anthropology indeed to the study of social science.

Professor HARRY BECKMAN'S well known volume *Treatment in General Practice* has now appeared in a third edition revised and entirely reset (Philadelphia and London W. B. Saunders Company 42s). Though many more items are included in it the text occupies fewer pages than its predecessor of 1934. The book contains a great deal of close packed information every disease is given its separate heading and the appropriate treatments are set out in some detail. There are a number of new sections others are regrouped and obsolete matters are now wisely omitted as being out of place in a book whose scope is already quite large enough. A further lease of popularity seems assured.

### Preparations and Appliances

#### ETHYL CHLORIDE ANAESTHETIC MASK AND HOLDER

Dr P. E. WOODROOFE (Bradford) writes:

This mask obviates the necessity for using both hands for the administration of ethyl chloride by combining a mask and a holder for the ethyl chloride bottle. As I consider there should be continuous spraying till the depth of anaesthesia required is attained the angle of the holder to the mask has



been so devised that whatever the position of the patient the ethyl chloride bottle is in action to the last drop. The holder is grooved so that the contents of the bottle can be fully observed. The mask and holder are chromum plated light and durable. The mask is made in two sizes—medium for adults or older children and a small one for younger children. The holders which fit the former have been made to fit the standard ethyl chloride bottles. A strip of rubber or felt can easily be inserted for any bottle not fitting into the holder. A garment tie pad can easily be secured to the mask by a rubber band at each end. Further details may be obtained from A. Charles King Ltd., London W.1. whom I wish to thank for their co-operation in making this instrument for me.



## PHYSICAL EDUCATION\*

BY

VISCOUNT DAWSON OF PENN, M.D., P.R.C.P.

As regards modern days, physical education may be said to have originated in Denmark, when in 1804 it was made an essential part of the curriculum in the national schools. Soon after came Ling, who designed a scheme of gymnastics based on his study of anatomy and physiology, and in 1813 became Director of a Central Institute in Stockholm. From this parent system physical training extended into various countries and developed in accordance with the needs and ideas of different communities. On the other hand, in Great Britain, so long and pre-eminently the home of games and sports, the idea of physical education fell on stony ground, and this country remained absorbed in its own ways.

In the course of the years which followed, Ling's system was found to be too static, formal, and sombre, muscular effort being regarded as an end in itself, and so arose in the year 1915 the gymnastic movement in Denmark of which Niels Bukh was the founder. Niels Bukh used planned exercises (gymnastics) to secure good posture, muscles strong and apt for the functions they had to serve, and rhythmic gymnastics to teach balance and grace of movement. On this basis of designed and directed training Bukh employed athletics, games, and folk dancing as a means of its expression. Thus was secured not only strength, suppleness, and even beauty of frame—the body giving the quick expression of the mind's behest—but also the team spirit, and withal joy in the doing.

### The English Paradox

It is interesting here to note that this system of Niels Bukh—namely, a combination in varying measure of physical training with games and sports—is, in Great Britain, held to be the correct comprehension of physical education. Indeed, in most countries physical training is organized side by side with games, sports, and the cult of the outdoor life. Meanwhile, England has presented a curious and conflicting spectacle.

On the one hand, the Board of Education, starting from small beginnings about thirty years ago, has steadily extended its field of physical education. With knowledge gathered from the great war it reformed its conspectus in 1919, and to-day physical education, based on a notably widened syllabus of 1933, occupies an important place in the curriculum of the elementary schools, though the Board of Education urges that existing facilities are far from adequate. Further, the Army School of Physical Training at Aldershot has during this century, acquired increasing reputation and influence. On the other hand, our public schools and universities have, for the most part, held obstinately to the view that their traditional and great institutions of games and sports are all-sufficing, and they have been slow to admit that these need to be supplemented by planned basic physical training.

Amid this divergence of opinion and practice of the Board of Education and the public schools and universities, public opinion has remained indifferent until this recent generalized awakening to the conviction that the standard of national fitness can and must be raised and that in large measure this can be achieved by physical training, games, sports, the provision of playing fields, and, in general, the cult of open-air activities. As is natural this rising enlightenment lacks as yet a direction proportional to its force and so carries with it the risk of unguided and ill-judged efforts which might detract from the benefits to health so keenly desired and expected.

Thus arises the importance of the medical profession making this subject its own, as bearing on the constructive health of the nation for the knowledge of the development and growth of the body rests on the medical sciences and there is a large field which, in the interests of physical education needs to be explored. The medical man is an educationist of the body, just as the schoolmaster is an educationist of the mind, and they must work together.

The Government, convinced that the development of better physique was essential to the welfare of the nation, had the alternatives of imposing a plan of physical education from the centre or of integrating existing local activities by propaganda and money grants. The latter course, which was the one adopted, has the disadvantage of being slow and cumbrous, and of provoking impatience and charges of inertia from lookers-on. On the other hand, the adoption of a central plan would have disorganized innumerable local activities, antagonizing rather than enlisting their sympathies and might have raised the bogey of disguised militarism. And so the National Council for Physical Fitness pushes forward, under the able guidance of Lord Aberdare and Captain Ellis, with the building up of a nation-wide scheme of educative and recreative physical training.

### Relation between Physical Training and Games

Team games and sports which carry no conscious purpose of physical training but are played for their own sake and the love of the game, excel in training the mind in alertness, concentration, and decision, the body to quickness of response, and in arousing a sense of joyous struggle coupled with the discipline of playing for the side—together a harmony of body, mind, and character. On the other hand, proficiency in games is compatible and often exists with defects of frame or function. Even though such defects may not make themselves felt at the time they may easily become a progressive handicap when manhood is reached. Again, games, unless correlated with basic physical training, can overstrain their votaries. The frame of a youth whose spirit outstrips his strength can be damaged by over-devotion to sport, and especially to one sport. With games in schools there is a tendency to focus attention on the boys who have the aptitude to play well. This, however inevitable, makes it the more necessary that the boy who is mediocre or dull at games should receive adequate physical training, or he will leave school with an uneducated body. And well-taught physical training is no dull exercise, but quickens and interests the mind and brings the exhilaration of effort. The same consideration applies to those classes of people whose opportunities for games and sports are scanty.

Sports and games are the fulfilment of physical training and should rest upon it, for planned physical exercises increase the strength, control, and response of the body and improve the form and style of the athlete. Moreover, physical training develops certain qualities which are basic to sound physical education such are posture, poise, flexibility and rhythm of movement, and efficient respiration.

### Posture

Good posture, whether standing or sitting, is not an innate quality. It has to be taught. This may be due to the fact that the development of the erect attitude is a recent chapter in the history of evolution. Good posture is characterized by stillness though not stiffness. It is effected by muscular tone, a reflex made up of afferent impulses from the sense organs of the muscles and, less important, from the ears and eyes, to the brain and efferent impulses which emerge from the cells of the anterior horns. The discharge of the efferent impulses for the maintenance of this muscle tone would only need to be slow, and therefore could be the longer maintained without muscle fatigue. It is said that the oxygen consumption and carbon dioxide output of muscle so

\* Opening address in a discussion at the Section of Physical Medicine, Royal Society of Medicine, March 18, 1938.



functioning is only 25 per cent higher than that of paralysed muscle. Training gives to the various groups of muscles which together maintain good posture—say, in the erect position—strength, control and co-ordination; there thus arises a postural sense which prompts the right balance of muscular tone. Good posture at first the result of conscious effort maintained by the cortex passes gradually into an unconscious habit (reflex) maintained in the mid-brain and as it does so makes manifest in ease of effort a balance and poise which give to the body strength and beauty. Good posture is then assumed naturally whenever movement ceases and gives repose without producing fatigue.

It may almost be said that given good posture and good carriage (gait) all other things shall be added unto you for these are the conditions which enable the body to grow up symmetrical and flexible, pursuing its activities with ease and graceful effort and allowing the possessor to hold his head erect and go through life with confident step. Thus do body and mind move together.

To maintain good posture muscles and nerves must be well nourished and adequately rested. This means food adequate in quantity and quality, sufficient hours of sleep—often lacking—fresh air and recreation which gives the body exercise and the mind diversion. And side by side with the muscle tone of good posture is needed the aptitude for muscle relaxation which is precedent to repose of mind. So often muscles and mind remain taut after work has finished—a frequent cause of strain and exhaustion. For a study of good posture standing or sitting or again of complete relaxation witness a well-bred sporting dog.

#### Physiological Foundations

No system of physical training so far put forward has rested or could rest wholly on physiological data; rather have the methods been evolved from observation and experience from the days of Ling onwards. The time has come for them to be surveyed and where necessary modified in the light of firmly set physiological knowledge. Though it is right there should be a lag between the conclusions of experiment and practice the lag here is too long.

Research into various aspects of educative and recreative training increases each year; in particular the field of knowledge has been enriched by a study of athletes—for instance in the spheres of metabolism, circulation and breathing. I will put forward certain illustrative examples for the purposes of discussion. It is known that sugar given to soldiers on long marches enables them to carry on longer without fatigue. Hansen has found in experiments on athletes that to obtain the maximum output there should be two days rest before the effort so as to raise glycogen reserves to their highest point. Sugar given at the time of the effort is not so effective. Next the period of rest needed after a big effort. Boigevy gives the results as follows:

After a 100 metre race the rest required varies from half an hour to two hours. After a 3 000 metre race lasting nine to eleven minutes it ranges from three to fifteen hours according to the training. On the other hand results of observations on blood pressure before and after athletic efforts are varied and discordant and some of the figures do not agree with the experience of clinical practice.

There seems to be agreement that during training the basal metabolic rate increases. As training reaches its completion does the rate decrease? It should do so as the machine runs in—that is works more efficiently.

#### Metabolism of Muscle

Passing to the metabolism of muscle may I recall that glycogen hydrolyses into glucose, glucose combines with phosphoric acid to form lactacidogen which in breaking

up into lactic acid and phosphoric acid releases the energy for contraction. After contraction oxygen comes into the picture and breaks down the lactic acid into carbon dioxide and water (though only to the extent of 20 per cent with a full oxygen supply). Unless for example there is an adequate supply of oxygen the lactic acid content increases till sooner or later it reaches the fatigue reading. After the start of an exercise (for example gentle running) if the lactic acid content of the muscles is not to increase to the point of fatigue there must be a larger supply of oxygen from the blood and therefore from the air. Soon this supply reaches its limit and then the supply and expenditure of oxygen are balanced. But the body can incur an oxygen debt by delayed payment and exercise can continue. The limit of debt will vary from a few cubic centimetres to 12 or more litres according to the subject and his degree of training. Thus (to quote Griffin) a man's ability to take in oxygen from the air and to accumulate an oxygen debt determines how much strenuous work he can do without exhaustion. Here then thanks to A. V. Hill and his collaborators there comes into view a scientific basis for physical training.

The supply of oxygen to the muscles depends (a) on the power of the blood to load and unload oxygen—a power which is increased by fresh air and exercise; (b) on the output of the heart and blood vessels; (c) on the efficiency of respiration measured in part by the vital capacity. This last depends more on the flexibility of expansion than on size of chest, on the thorax moving not as a whole but by its individual parts, on the intercostal muscles and diaphragm being strong and well co-ordinated. These circulatory and respiratory processes belong to the sphere of basic physical training, which will condition success in games and sports.

#### Training of Teachers

I have endeavoured by the foregoing illustrations to show the importance of the newer knowledge with which physical education needs to be brought in contact and it will be agreed that education and research should go hand in hand. If this is to be a nation-wide movement there must be not only more but the best provision for the training of teachers and others concerned in educative and recreative training. Our existing services of physical education and their leaders and teachers, and high in reputation but these services have not been accepted as of prime national concern in the way that Sweden and Denmark have accepted theirs for generations past and with great benefit to the well-being of their people.

It is public knowledge that our Government has decided to establish a national school of educative and recreative training and that the Board of Education is actively concerned with the realization of that project. Here teachers of anatomy and physiology will work side by side with teachers of physical training—science and art harnessed to the same chariot. Here will be studied the total functional value of the individual having regard to his make-up and environment. And more—physical education will concern itself with the whole man in the words of Montaigne.

I would have his outward behaviour and manner and the disposition of his limbs formed at the same time as his mind. It is not a soul it is not a body that we are training up; it is a man and we ought not to divide him into two parts nor fashion one without the other.

Physical education if it is to go aright will need the responsible guidance of trained doctors. In the future those who aspire to be medical officers of schools will require to include in their training a knowledge of physical education and would profit by a course of instruction in the National College.

To my younger colleagues at the outset of their careers there is opening a new sphere of action. Whether viewed

as a specialty within general practice or as a part of those sociological aspects of medicine which are certain to come into increasing prominence year by year, it will be work of interest and usefulness, and from a scientific point of view the physiology of toil and leisure presents an attractive field of investigation.\*

And, lastly, the knowledge gained by trained observation and research at the college will also be available for those problems of work and recreation which arise with the development of modern industry. And may I repeat that physical education must never lose contact with the cognate subjects of right feeding and adequate repose, for the study of which the college will afford opportunities

### The Why and the Wherefore of Physical Education

It may be said—why this concern about physical education? Every man endowed with health, strength, and endurance is not only a life enriched in capacity for efficiency and happiness but *ceteris paribus* a citizen of greater value to the State. From the racial point of view the fact that civilization tends to preserve the weaklings and does not conform to the laws of sound breeding makes it the more important to train and multiply the fit and push them to the forefront, in fact 'planning' to this end must be the policy of a modern State.

Thus nurture and education both of body and mind, have a big task before them, and that task is heavier for certain sociological reasons—for instance (a) Increasing urbanization, with its limitations of space air, sunshine, and the greater tensiveness of its life (b) Increasing specialization in industry which leads to the over-exercise of a part of a man and the under-exercise of the whole man. Machinery so often demands concentration of attention in a limited and even monotonous sphere of action, while leaving the creative, thinking part of the mind barren—and with this a cramped body. Speed encourages the ready-made rather than the self-made in thought and action. And, in general, man's power of adaptation lags behind the rapid changes in material civilization. In 1933 Sir George Newman laid down five conditions fundamental for the success of physical training and the first of these was 'The Child Must be of Good Stock'. In this country we are ignoring the implications of this tyrannical fact, just as years ago we ignored physical training when Scandinavia was up and doing

### Measures we Might Take

Measures within our reach are pushed to the forefront the best of the youth—youth leaders would create a standard for their own generation, consider the granting of loans (already working in Germany) to medically approved marriages the obligation to repay being reduced with the birth of each child, institute motherhood clinics to give the light and leading of knowledge. In short, plan for quality of stock—a quality which would preserve the attributes of individuality and initiative.

Again, where posts and positions are filled through competitive examination such an examination should be a test not only of the mind but also of the body. Take entry into the Civil Service. It is part of the Government programme supported by all parties to promote physical education and national fitness. What an opportunity to put this programme into practice, and thereby bring fit and clever youth to the forefront, to the advantage of the service and nation. What an impetus this recognition of physical education would give! The world would go and do likewise.

Present medical examinations for entry into the civil services set out to ensure the absence of diseases and

defects. Rather should a physical examination answer the question "Which of these bodies are sound in structure and so well grown and so well trained as to carry out efficiently and well the mind's behests and in which order of priority would I place them?" We want no standard type of body. We need to recognize that there is an individuality of body just as there is of mind, we must think of quality, proportion, and effectiveness, not merely of size. A young man's body—his body—if sound well grown, and well educated, will not grow under effort but will enjoy it and be more likely to house a mind free, forthcoming and strong.

### TUBERCULOSIS SCHOLARSHIPS IN ROME

The Italian Fascist National Federation against Tuberculosis places at the disposal of the International Union against Tuberculosis six scholarships at the Carlo Forlanini Institute in Rome. The conditions are as follows.

These competitive scholarships, of a value of 2000 lire each plus board and lodging are intended to enable foreign medical practitioners to stay at the Carlo Forlanini Institute for the purpose of following a course of studies. This stage of eight months will correspond with the academic year (from November 15 to July 15) including the usual holiday periods. The scholars reside at the Institute.

The scholarships are preferably awarded to young physicians already familiar with tuberculosis problems who wish to improve their knowledge of this branch of medicine. The kind of work undertaken at the Institute will be subject to an agreement between the Director of the Institute and the candidate. Papers resulting from this work must be submitted for publication in the first instance to the editor of the *Bulletin of the International Union against Tuberculosis*.

The six scholarships will be awarded at the next session of the Executive Committee on July 11, 1938. The names of candidates, accompanied by particulars as to their age, qualifications, and professional experience, must be forwarded to the Secretariat of the Union, 66, Boulevard Saint Michel, Paris, not later than July 1. No candidature will be taken into consideration unless it has been forwarded to the Executive Committee by a Government or an Association belonging to the International Union. The address of the British National Association for the Prevention of Tuberculosis is Tavistock House North, Tavistock Square, W.C.1.

E. Burack and H. M. Zimmermann (*J. Nutrit.*, December 1937, p. 535) have investigated the effects of prolonged feeding of large amounts of cod-liver oil to rats and mice fed on controlled diets. Rats taking 27 per cent and 18 per cent of cod-liver oil in their food did not grow so well as those on a comparable diet in which the cod liver oil was replaced by peanut oil and vitamin concentrate. The adverse effect of the cod-liver-oil-containing diet was not countered by liberal intakes of yeast and was directly related to the amount of food consumed. Similar results were obtained in mice, but there was no correlation between body weights and food consumption. Of fifty-two mice fed for at least 150 days on diets containing 20 per cent of cod liver oil, some showed pathological changes—necrosis, fibrosis, or accumulations of phagocytosed fat or pigment—in heart, liver, and spleen, and slight changes in skeletal muscle, but there was no renal calcification. These changes were absent in the thirty-four control mice. The results in a small group of rats were similar but some control rats showed myocardial fibrosis. The authors incline to the view that the effects produced by cod liver oil are to be related to the irritant nature of the oil rather than to the production of hypervitaminosis, and conclude that the claims that cod-liver oil in therapeutic doses can do harm are not substantiated.

\* In this connexion I would point to the excellent work which has been done by the British Medical Association through its Physical Education Committee under the Chairmanship of Sir Kaye Le Fleming.

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## PSITTACOSIS AGAIN

It is perhaps not generally realized that since the epidemic of 1930 died down cases of psittacosis have been occurring in this country. It is true that the number of cases has not been great but it is significant that there should have been any at all in some European countries less fortunate than our own—for example Germany—cases of psittacosis have been numerous. In view of the recent articles in the lay press concerning a suspected outbreak of psittacosis in the London Zoological Gardens it might be of interest to consider the mode of spread and control of this disease in the light of present day knowledge. The epidemic eight years ago was the result of the introduction into this country of diseased birds from South America. The investigations made possible by that epidemic showed that psittacosis was due to infection with a filterable virus which was excreted by the diseased birds in their droppings and the epidemiological data together with the fact that in the human disease the respiratory system was principally involved pointed to the respiratory tract as the portal of infection in man. From what was known then it was thought that this country could be kept free of psittacosis by strictly controlling the immigration of birds of the parrot family and in this conclusion we were not alone for other countries also placed an embargo on the importation of parrots and parakeets. This policy has failed and its failure is due to the fact that it was based on two assumptions both of which have proved false. The first was that the home bred birds were free from infection. Whether they were free from infection before the 1930 epidemic it is difficult to say probably they were not but they are certainly not free from psittacosis now. The second assumption was that a bird which appeared healthy and remained in good health during a period of quarantine was not infected and could safely be admitted to this country. This overlooked the possibility that healthy carriers of psittacosis might exist. Already in 1930 there was evidence that such a carrier state could exist in birds of the

parrot family for one of the cases investigated at the London Hospital was shown to have arisen from contact with an apparently healthy bird. Although the virus was not isolated from this particular bird and although it was thought that intimate contact between man and a healthy carrier bird would be necessary for infection to take place subsequent work has shown that the danger of infection from carriers is a very real one. The budgerigar in particular when exposed to infection tends to suffer from a subclinical rather than a frank attack of the disease. A carrier state is readily set up in these birds and it is from such apparently healthy carriers that many of the human cases have arisen during the last few years. There is perhaps a danger that the importance of this disease as a public health problem may be exaggerated. For some reason or other parrot fever has considerable news value and thus attracts a publicity which is hardly warranted by the number of cases that occur. All the same it is a serious disease with a high mortality rate and all possible preventive measures should be taken against it.

What then can we do effectively to control psittacosis? It is obvious that strict control of parrots and parakeets coming into this country with an adequate period of quarantine of those birds admitted is by itself inadequate. All this can do is to safeguard us against a repetition of the happenings of 1930. Possibly the periodic inspection of the stock possessed by bird dealers and the laboratory investigation of all deaths in birds of the parrot family with destruction of the contacts in aviaries or bird shops where there have been cases of psittacosis would in time materially reduce the incidence of the disease. But the public should know that the matter rests very largely with them. Those who do not wish to run the risk of this disease should not keep these birds in their homes and in this respect it should be pointed out that other species of birds such as canaries and various finches though not subject to psittacosis in the wild state are susceptible to this virus and will contract the disease when brought into contact with infected psittacines so that any such birds coming from dealers who possess a mixed stock which includes parrots and parakeets are suspect. What should be done to safeguard the public who visit the parrot houses in zoological gardens is another matter. There is no evidence that any visitor to the parrot house in the London Zoo has ever contracted psittacosis but in theory at any rate the danger exists. And in order to minimize or exclude this risk it might be advisable to take further measures than those hitherto in use.

## SHELLFISH AND THE PUBLIC HEALTH

The description by Lewis Carroll (C L Dodgson) of the young oysters—"Their coats were brushed, their faces washed, their shoes were clean and neat"—came to mind on hearing Dr R W Dodgson's account given at a meeting of the Epidemiological Section of the Royal Society of Medicine on March 25 of how shellfish have been persuaded to perform their own toilets in readiness for the human market<sup>1</sup>. It has long been known that if oysters are grown in estuaries they easily become infected with typhoid bacilli derived from sewage and it was found by artificial inoculation that the germs thus introduced survive in the body of the mollusc for several days. Dr Dodgson, who was lately director of shellfish services in the Ministry of Agriculture and Fisheries and is now consultant in that department said that without doubt shellfish from polluted beds are potential vectors of enteric fever and other diseases, and large numbers of people are suspicious of all shellfish on that account—a prejudice which sometimes becomes accentuated, as during the recent outbreak at Croydon. Some thirty, or forty years ago Conway mussels had an evil reputation, so much so that the fishery was closed in 1911. Experiments in artificial purification were then started, resulting in a satisfactory system which has been in continuous operation at Conway for twenty-three years, and elsewhere for shorter periods, and during the whole of that time no complaint of illness attributable to the purified shellfish has been received.

Dr Dodgson described the process of purification of mussels and oysters premising that the shellfish did not undergo any deterioration in taste or keeping quality in the process. The mussels are spread by the fishermen on wooden grids in large concrete tanks, and after hosing to remove mud are given a bath overnight in sea-water sterilized by chlorine and dechlorinated with sodium thio-sulphate and again hosed to remove dejecta. The procedure is repeated over another night, including a third hosing, and a final bath is given in treated sea-water to sterilize the outsides of the shells, after which the shellfish are transferred to sealed sterilized bags. The purification of oysters is just the same except that a multiple-jet hose is used to scour under the flat shells but in winter the purification of oysters is carried out in covered tanks, oysters failing to open, function, and eliminate satisfactorily at lower temperatures at which mussels are quite happy. The principle of the purification is merely that the shellfish are given baths of clean salt water in which they con-

duct unaided their own process. It is said that a single mussel can filter ten gallons of water in twenty-four hours. The secret of the efficiency of the purification process lies in the fact that the bacteria are discharged—imprisoned in the mucous material of the faeces and pseudo-faeces, which is practically insoluble in water. Several other methods of artificial purification have been devised, but most of them abandoned as failures or carried on only in a desultory fashion, owing to a failure to realize the physiological principles involved.

Coming to bacteriological considerations, Dr Dodgson put forward the view that the real criterion in judging the suitability of shellfish for human consumption was the pollutability of layings, bacteriological examinations being merely complementary and sometimes misleading. A standard of purity for purified mussels had been set up (namely not more than 5 lactose factors per 1 c cm of minced shellfish incubated at 37° C for twenty-four hours). Oyster purification judged by even this stringent standard had approached perfection, but with regard to mussels there had on three occasions been encountered anomalous periods during which the counts became fantastically high. No fault was to be found in the purification operations, and the mussels themselves were functioning vigorously and normally. All colonies tested during these periods belonged either to the cloacae or aerogenes types, and it was found that organisms of these types might at times multiply enormously in mussels, barnacles and raw sea water. Dr Dodgson's opinion was that these anomalous periods were not important in the public health aspect, and in any case, as there was no clue to the nature of the conditions determining them, it was impossible even to begin to legislate for them. Oysters had never shown any anomalous results, the fact that they carried no barnacles might be significant or might not. The possibility of the multiplication, or even bare survival, of organisms of the typhoid group has again been explored. Several strains have been used including the *Salmonella typhi* isolated in the Croydon outbreak. Neither in raw nor in autoclaved sea water has any multiplication been observed nor has survival beyond two or three days been noted.

Dr Dodgson considered that in view of recent findings there could be no legitimate standard of purity for purified shellfish based on tests carried out at a temperature of 37° C, in his view a satisfactory test could be found in incubation at 44° C, at which temperature all the citrate positives derived from shellfish—that is to say, the group comprising the "multipliers" responsible for the anomalous results—are eliminated. He mentioned the resolution passed in the Section of Public Medi-

<sup>1</sup> See also R W Dodgson *British Medical Journal* 1936 2, 169

cine at the Oxford Meeting of the British Medical Association in 1936, subsequently passed on to the Ministry of Health, urging the adoption of measures designed, in the interests of public health to grapple with the present unsatisfactory shellfish position. He submitted that failing a better method he had described which was approved by the Ministry of Health and the Ministry of Agriculture and Fisheries offered a ready means of putting such a resolution into effect. The method he said was simple and practically foolproof in operation and economically sound and experience over nearly a quarter of a century had afforded strong cumulative evidence that it was an adequate safeguard of the public health.

### EPHEDRINE

In his Sidney Ringer Memorial Lecture which appears in our opening pages this week Professor J. H. Gaddum propounds a new theory of the action of ephedrine. Ephedrine we may remember is built very like adrenaline and in a general way its effects are qualitatively similar. Professor Gaddum's theory is most rapidly grasped by considering the recent evidence that the parasympathetic nerves act by liberating acetylcholine the chemical transmitter of the nervous impulse when it has transmitted the impulse it is rapidly destroyed by an esterase. Now physostigmine or eserine has the property of inhibiting the action of this esterase so that after the injection of eserine impulses proceeding along parasympathetic nerves have a greater effect than before because the acetylcholine which they liberate is not destroyed so quickly. Nerves to striated muscle also act by liberating acetylcholine and physostigmine or the allied substance prostigmine is for the same reason beneficial in myasthenia gravis. In the sympathetic system the chemical transmitter is adrenaline or a very similar substance. Having transmitted an impulse adrenaline is then destroyed by an enzyme known as amine oxidase. Gaddum's theory is that ephedrine inhibits the action of amine oxidase so that after the injection of ephedrine sympathetic impulses exert a greater effect than before because the adrenaline they liberate is not destroyed so quickly. Hence Gaddum's suggestion is that the relation of ephedrine to the sympathetic system or more correctly to adrenergic nerves is like that of physostigmine to cholinergic nerves. The evidence for this view comes in the first place from the work of Blaschko, Richter and Schlossmann at Cambridge who have shown that amine oxidase destroys adrenaline but not ephedrine and further that in the presence of ephedrine amine oxidase does not destroy adrenaline. (It is however at present an assumption that amine oxidase is the principal enzyme which destroys adrenaline in the tissues.) Subsequently Gaddum and Kwiatkowski experimenting with rabbits ears perfused with Ringer's solution stimulated the sympathetic nerves and observed that during stimulation the venous outflow contained an adrenaline-like substance detectable by

a sensitive colorimetric test devised in Gaddum's laboratory by Shaw. When the nerves were stimulated in the presence of ephedrine the venous outflow contained a much higher concentration of the adrenaline-like substance. Gaddum and Kwiatkowski have also shown that ephedrine augments the effect of sympathetic impulses to the frog's heart to the rabbit's ear and to the cat's nictitating membrane. For the additional evidence for Gaddum's view the lecturer should be studied.

### THE SPAN OF LIFE

In the *United States Public Health Reports* of December 3 1937 there is an interesting summary of life tables constructed during the last 130 years from data collected in America. The early tables being based upon scanty material and constructed on unsound lines are merely suggestive but since the beginning of the century much has been done. The general results—a considerable increase of expectation of life at birth a lessening superiority of rural over urban districts—are similar to those of European experience. A point is however made which suggests some interesting reflections. The authors distinguish between the average number of years lived and the span of life—the maximum length of life attainable. So far as is known they remark there has been no increase in the span of life persons living to advanced ages do not live a greater number of years now than formerly. The exact length of the span of life is unknown. It is somewhat more than 100 years but how much more cannot be said. This subject has been recently discussed by the eminent mathematical statistician Dr E. J. Gumbel.<sup>1</sup> Dr Gumbel's work is mathematical and his definition of the extreme age involves the increase of this limiting age as the population increases (there are good reasons for this definition but they are of too technical a character to be discussed here). Like most mathematical students of the problem he dares not believe that there is any finite limit to age and the adoption of widely different hypotheses as to the relation between age and rate of mortality makes very little difference to the arithmetical results. None of his calculations brings one within sight of the traditional age of Thomas Parr perhaps the one person who secured admission to the *Dictionary of National Biography* solely by reason of longevity while from the reliable Swedish data his *dernier age* is found to be 104 years for males and 106 for females. A certain paradox of the method is that other things equal the worse the life table the greater the *dernier age*. A reason is that the better the mortality experience the less the scatter of deaths around the maximum. We seem to be tending towards the ideal humorously attributed by Mr Max Beerbohm to the Socialist State in which all men should live exactly the same length of time. But we are approaching this ideal without the need for living in a municipal lethal chamber. The approximation is however not very close and the theory might perhaps be improved. The obvious difficulty of any method is

<sup>1</sup> *Life, Death, Extremes and the Life Human*, P. L. H. Gumbel, C. 1937.

tion is the fact that data of mortality rates at ages over, say, 90 are scanty and inaccurate. Indeed most population life tables are at the oldest ages works of art rather than nature. Biologically speaking, our knowledge of the processes of senescence is very incomplete. It seems, on the whole, probable that the increase of the rate of mortality with age slackens, but the "law" of this is unknown. One has here a problem the statistical solution of which must depend upon increase of biological knowledge. As its practical importance, whether from a commercial or national point of view, is small, though its intellectual interest is great, no very striking progress can be expected.

### JUNGLE YELLOW FEVER

In 1932 a new factor of interest and importance came into the epidemiology of yellow fever. Before then it was held that this disease was typically urban and that *Aedes aegypti* was the only vector that need be taken into account, although since 1928 it had been known that other mosquitos, under experimental conditions, could transmit yellow fever by biting. Such transmissions were, however, thought to play no practical part in the natural spread of the disease. It was the outbreak of yellow fever in 1932 in the Valle do Chanaan in the State of Espirito Santo, Brazil, which first clearly demonstrated that some vector other than *Aedes aegypti* is capable of spreading the disease. This outbreak of "rural yellow fever without *Aedes aegypti*," and similar epidemics arising later in various parts of Brazil, Bolivia, and Colombia, commonly referred to as "jungle yellow fever," modified the opinion expressed by Carter,<sup>1</sup> that "owing to the invariable disappearance of yellow fever when this species [*Aedes aegypti*]-and this species alone-is sufficiently controlled, it seems quite certain that in the Americas no other mosquito associated closely with man is vector." These outbreaks of jungle yellow fever presented certain special features. For example, infection appeared in or near to areas where clearing of the forest had been incomplete and was limited to those whose work took them into the fields or near the jungle. Thus the original outbreak was almost exclusively among male adults and existing immunity in the same valley was likewise found to be limited almost entirely to the same population group, whereas in Brazilian towns where transmission of infection was through *Aedes aegypti*, immunity was more frequent and more uniformly distributed throughout all age-groups of both sexes. The demonstration of naturally acquired immunity in wild monkeys suggests the possibility of animal reservoirs from which man may derive his infection. But so far the origin and mode of transmission of jungle yellow fever have not been determined precisely. As Soper<sup>2</sup> wrote in 1936 "We have been forced to stand by and observe active jungle outbreaks during the past year with the same sense of futility which must have oppressed our predecessors in regard to urban yellow fever before the discovery of the transmission of yellow

fever by the *Aedes aegypti* mosquito." The experiments of Antunes and Whitman<sup>3</sup> with forest culicidae of the genus *haemagogus* are therefore of interest. These mosquitos attack man with avidity, on several occasions have been seen entering native houses near the edge of the forest, and have been captured feeding on the inhabitants, they have also been shown capable of becoming established in the towns. Because of these facts the authors carefully studied the capacity of this genus to transmit yellow fever. Unfortunately it was not possible to keep these mosquitos alive for long in captivity, and although it was clear from injection experiments that they could harbour the yellow fever virus, in only one of six attempts was it possible to transmit the virus by bite. Certain mosquitos require prolonged periods for the development of infectivity by biting, and it is not impossible this applies to some species of *haemagogus*, although they die prematurely in captivity, they may survive in the wild state long enough to be able to transmit the virus by biting. Whether this genus be implicated or not, the unravelling of the problems of jungle yellow fever will be of great scientific interest and practical importance.

### TABULATION OF POST-MORTEM RESULTS

For some years now a method of tabulation of post mortem results has been in progress in South Australia. These results have been published in the *Medical and Scientific Archives of the Adelaide Hospital*. This publication appears once a year and copies are forwarded to the various medical libraries throughout the world, so that the information contained therein is more or less accessible. The system adopted has been the following. At the end of each post-mortem examination a summary of the lesions is given, either in order of importance or in order of sequence. Trivialities are omitted. A number of copies of each summary are then typed and are pasted on cards corresponding to the lesions mentioned in the summary. If, for instance, gall-stones are present or a duodenal ulcer, one copy of the summary will be pasted under each of these lesions. When a thousand necropsies have been tabulated in this way, the results are arranged in order and are then published in the *Archives of the Adelaide Hospital*. This work has been arranged by Professor J. B. Cleland, who is the honorary pathologist at the Adelaide Hospital. Most of the necropsies have been done by him or if not actually done by him they have been carefully revised by him. The results are consequently uniform in type. What can be achieved under the supervision and direction of one person might not, however, be so successful in the hands of a number of different persons whose ideas might not quite agree. Three thousand post-mortem examinations have now been tabulated in this way, and a fourth thousand is nearing completion. Were similar results published from some of the hospitals in Great Britain, important information might be available as to the incidence of disease and the association between different lesions. For instance, in this way the association of cirrhosis of the liver with lenticular degeneration

<sup>1</sup> *Yellow Fever: An Epidemiological and Historical Study of its Place of Origin*, 1931. Williams and Wilkins Company, Baltimore.  
<sup>2</sup> *Quart. Bull. Hlth. Org. L. O. N.* 1936 5 19.

<sup>3</sup> *Amer. J. trop. Med.* 1937, 17, 825.

might have been revealed if Kinner Wilson had not already recognized this association. Fibrosis of Lungs has a heading to itself apart from silicosis and organized pneumonic exudates. Seven cases all in men appear under this heading in the records of the third thousand necropsies and three of these each had one atrophied testis. Thus the finding of a shrunken testis in a patient with some obscure condition in the lungs would suggest the possibility of this being a diffuse fibrosis. The frequency of a syphilitic history in fibrosis of the testis is well known. The information thus published is available to anyone who is seeking data as to the prevalence of pathological lesions present at death with the sexes and ages of such persons and the association of other lesions.

### PHENOMENON OF REFLECTION

The puzzling phenomenon of reflection was first described by Professor Fridericia in 1926: briefly it is the ability observed in a certain proportion of rats to develop the capacity to grow normally on a vitamin B free diet. This acclimatization may last for a long while so that affected rats can reproduce. But sooner or later it generally disappears and the rat dies with the usual symptoms of vitamin B deficiency. Reflection is accompanied by the passage of pale bulky stools and these have been shown to contain vitamin B<sub>1</sub>. For some time the explanation given of the phenomenon was that conditions developed in the intestines of certain rats which enabled a micro organism to flourish and synthesize vitamin B<sub>1</sub>. It has been satisfactorily demonstrated that certain bacteria have the capacity to synthesize the vitamin but the actual organism responsible for the phenomenon in rats has not been identified. Nathan<sup>1</sup> working in the laboratory of Professor Fridericia at Copenhagen believes that it is probably a Gram negative vibron. Reflection was originally described in rats on a diet consisting largely of rice starch but it has since been shown that potato starch is a better substrate. Nathan has demonstrated that faeces of "reflected" rats contain a large percentage of undigested starch and that the digestibility of this starch by the amylase of saliva is much decreased. He has also shown that although the reflected rats have large quantities of starch in their stools the actual amount of carbohydrate assimilated is no less than in the non reflected rats on the same diet. This eliminates one alternative interpretation which had been proposed—namely that reflected rats assimilated much less carbohydrate than non reflected rats and that their requirement for vitamin B<sub>1</sub> was therefore much less. From these observations he concludes that the cause of reflection is an amylodyspepsia resulting in an environment in the caecum favourable to the growth of bacteria which synthesize vitamin B<sub>1</sub> and therefore supply the animal with what is lacking in the diet. The favourable environment appears to be a high percentage of undigested starch. So far the interpretation appears to be satisfactory but Harris<sup>2</sup> has recently described reflection in rats on bread diets and actually found that

it occurred more easily on a bread diet than on a diet of the flour from which the bread was made. All previous observations had shown that reflection did not happen if the starch in the diet had been cooked or heated. The last word has evidently not yet been said upon the subject. So far no clinical examples of reflection have been described and it would naturally be difficult to do so. Nathan points out that amyloid dyspepsia is not uncommon clinically particularly in children.

### CHRYSOTHERAPY IN PULMONARY TUBERCULOSIS

Little progress has been made in recent years in standardizing the details of administration of gold preparations in the treatment of pulmonary tuberculosis or in determining their efficacy because of the difficulty of obtaining reliable statistical evidence based on comparable groups of patients. In two papers just published on evidence stated to be irrefutable dogmatic claims are made that chrysamine has a favourable influence on the course of pulmonary tuberculosis so that it should be administered in small weekly doses—the maximum being 0.1 gramme—up to a total of 3 to 4 grammes over a period of seven to ten months and that its administration should be stopped on the slightest evidence of intolerance. Courmont, Gardere and Rivollier<sup>1</sup> gave chrysamine only to patients whose condition remained stationary after routine sanatorium treatment. Cases which were hyperacute or too extensive were thought to be unsuitable as were those presenting the well known contraindications—renal, hepatic or intestinal disease. The patients were all males and thirty four of them (Group 1) received a complete course. The administration of gold was stopped in all patients who appeared to be getting worse and in those who developed any accident attributable to the gold. In twenty nine patients (Group 2) it was necessary after 0.1 to 0.5 gramme of chrysamine had been given. In fifty four other patients (Group 3) there appeared to the authors to be no indication for gold therapy. They regard the results of these groups as statistically comparable and have tabulated in percentages thus:

	Group 1	Group 2	Group 3
Disappearance of tuberculous	40%	75%	—
Complete clinical cure	5%	6%	6%
Mild symptoms	52%	25%	—
Intolerance	6%	7%	—
Survivors (improved or cured)	51%	41%	6%

\* Mild symptoms attributable to the chrysamine occurred in 41.1 per cent of the patients and included about six times rashes or localized dermatitis, eight times diarrhoea, six times stomatitis, twice prostration, two weight five times haematemesis, once and profuse haematuria once. Since no patient developed nephritis

<sup>1</sup> Acta path. microbiol. scand. 1937, 14, 43.  
<sup>2</sup> Biochem. J. 1937, 31, 799.



hepatitis, purpura, or severe stomatitis or dermatitis, the authors conclude that small doses prevent serious complications. They believe that the slightest "accident" indicates an unfavourable prognosis and calls for immediate cessation of the administration of gold. In a second paper Courmont and Gardere<sup>2</sup> discuss at length, but unconvincingly, their experimental work on the action of gold and on the causation of symptoms during its therapeutic use.

### FOULING OF THE ATMOSPHERE

The eighth annual report of the National Smoke Abatement Society records the removal of the Society's headquarters from Manchester to London, where offices have been secured at Chandos House, Buckingham Gate, Westminster. The claim is made that the smoke abatement movement has had a real effect in diminishing atmospheric pollution during the last twenty years. Reviewing a longer period, dating from 1881, it appears that since that time the percentage of winter sunshine in London compared with that at Kew has risen from 20 to 55. The report alludes with satisfaction to the increasing interest shown in this important question by Government departments, citing the Report of the Commissioner for the Special Areas, which stressed the desirability of using Welsh or other smokeless coal or fuel in open hearths. Inspectors of alkali works are now directly in touch with smoke abatement matters, and it has been arranged that they should advise the Minister of Health on developments. The total amount of subscriptions and donations to the society for the year under review is again only a little over a thousand pounds, an insignificant figure in view of the scope and importance of the Society's work. Medical practitioners in urban or industrial areas suffer more severely than most classes of the community from the incidence of fogs through the dislocation of their transport, the burden of a heavy increase in the number of cases of respiratory diseases on their visiting lists and the greater risk to their own health. It is to their direct interest to support the society for they will derive special benefit from the results of its activities.

The latest figures of atmospheric pollution show a tendency in the right direction according to the twenty-third annual report on the investigation of atmospheric pollution, just issued by the Department of Scientific and Industrial Research (H M Stationery Office 7s 6d). The report contains a warning however that while a definite improvement in the condition of our atmosphere may be beginning, no far-reaching conclusions should be drawn. Compared with the figures for the general average for the five years ended 1932 which is taken as a basis of comparison in this report, fewer observing stations than last year show a marked reduction in tar deposit. On the other hand fewer stations show an increase. There is an indication of improvement however, in the deposits of fine particles of fuel escaping up the chimney and organic dust of various kinds. Ash deposits also show an improvement and there is a

reduction in sulphate deposits. This latter is of importance in view of the damage caused by sulphur compounds to buildings and vegetation.

### ARCHIVES OF DISEASE IN CHILDHOOD

The first issue of the *Archives of Disease in Childhood* for this year has just been published by the British Medical Association in a revised format. Like this *Journal*, it is now printed in Times New Roman type: the general result is pleasing to the eye and the now familiar type face should encourage new readers to acquaint themselves with what is happening in the world of pediatrics. The editors of the journal are to be congratulated on producing a most interesting and stimulating number, and on the excellence of the illustrations. The first article is by Dr George Graham and Dr W G Oakley, on "The Treatment of Renal Rickets," in which they describe the results obtained in two cases by administering alkali and large doses of vitamins A and D with considerable improvement. This is followed by articles by Dr C Wilfred Vining on "A Case of Periarteritis Nodosa", by Dr Margaret Harper, on "Congenital Steatorrhoea due to Pancreatic Defect", by Dr Alan Moncrieff, on "The Administration of Thyroid Gland to Premature Babies", by Dr D H Paterson and Dr C Hardwick, on "Undulant Fever in Children" by Dr Theodore Crawford, on "A Standard Intravenous Glucose Tolerance Test", and, to conclude, there are case reports on "Paraplegia and Mongolism in Twins" by Dr R G Gordon and Dr J A Fraser Roberts and on "A Foreign Body in the Kidney," by Dr Norman B Capon.

### THE HASTINGS LECTURE

The Sir Charles Hastings Lecture for 1938 will be delivered, under the auspices of the British Medical Association, by Dr H Crichton-Miller in the Great Hall of B M A House Tavistock Square, W C, on Thursday April 7 at 8 p.m. His subject is "Mental Health as a National Problem". The chair will be taken by Mr Ernest Bevin, general secretary of the Transport and General Workers Union. Relevant questions, in writing are invited at the close of the lecture. Admission is free by ticket obtainable from the secretary of the British Medical Association. The doors will open at 7.30 p.m. and seats not occupied by ticket holders by 7.50 p.m. will be available for others.

The *Canadian Medical Association Journal* for March gives preliminary information about the sixty-ninth Annual Meeting of the Canadian Medical Association to be held at Halifax, June 20 to 24 conjointly with the Nova Scotia Medical Society. The presidential address will be given by Dr T H Leggett of Ottawa and the Osler Lecture on "Osler the Last Phase and His Influence on Medicine" by Sir Humphry Rolleston. Drs M R MacCharles of Winnipeg and William Boyd of Toronto will conduct a surgical clinic on cancer. Dr J C Meakins of Montreal a medical clinic, and there will be a symposium on poliomyelitis.

<sup>2</sup> *J. Med. Lyon* 1937, 18, 559



# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## CONCUSSION AND COMPRESSION

By

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In the article published last week at page 685 attention was directed to the damage caused by violence to the scalp and the skull but while these lesions may in themselves be very important and have far reaching consequences stress must be laid upon the fact that one of the foremost considerations in all head injuries must be the condition of the brain itself. Our treatment must have as its object not only the preservation of the life of the patient but his protection from untoward after-effects of cerebral injury in the form of headaches, fits, impaired concentration, and other unpleasant sequelae. Increase in motor traffic has caused a corresponding increase in the number of head injuries and the majority of these are of such a character that some damage to the brain is produced. It is important for us to visualize the nature of this damage, the way in which the brain reacts to it and the processes involved in recovery when such takes place.

When confronted with a patient who has been rendered unconscious by a head injury we have to decide on three points: (1) whether he has merely been concussed or whether the brain has been extensively damaged; (2) whether surgical intervention is called for immediately or if the condition is such as not to permit this at the moment whether operation is likely to be required at a later stage; and (3) how we are to manage the case in order to prevent subsequent interference with cerebral function.

### Cerebral Concussion

Professor Wilfred Trotter (1924) has defined concussion as "an essentially transient state due to head injury which is of instantaneous onset, manifests widespread symptoms of a purely paralytic kind, does not as such comprise any evidence of structural cerebral injury, and is always followed by amnesia for the actual moment of the accident." Avoiding discussion relating to the nature of cerebral concussion except to state that it is probably of vascular origin and in the nature of an acute and unsustained compressive anaemia, one need only say that this definition accurately describes the condition which is of everyday occurrence and that it is well supported by clinical experience. From the definition it will be apparent that the subject of a head injury who is unconscious for half an hour or longer is not suffering from concussion. In such cases we must postulate cerebral damage such as contusion or laceration. It also follows that the patient who can accurately relate the details of the accident and remembers the precise impact which caused his head injury has not been concussed and the medico-legal significance of this will be obvious.

It would appear that there is a latent interval in the registration of cerebral impressions and that a sudden interference with the registering mechanism such as is conceivably produced by a severe head injury, cuts off impressions which have been streaming into the brain for some time beforehand. Thus the cyclist who is concussed may remember riding along a road and seeing a motor-car coming round a corner and then all is cut off

until he finds himself being attended to on the roadside. This period of amnesia appears to be a kindly provision on the part of Nature since severe psychic shock might ensue if the precise details of the accident were to remain clear in the mind of the person who was injured. The period of amnesia which is characteristic of both concussion and gross damage to the brain must be regarded as a great saving factor.

### Contusion and Laceration

The next group of cases we have to consider consists of those patients who following a head injury are unconscious for a variable interval, the unconsciousness may last for minutes, hours or days or it may even be of weeks' duration. In these cases there is gross cerebral damage, the brain being extensively bruised and possibly lacerated as well. Bleeding into the cerebrospinal fluid may be shown by its intimate admixture with blood when obtained by lumbar puncture. From the very first also there may be evidence of local damage to the brain in the form of focal signs such as a monoplegia, hemiplegia or ophthalmoplegia.

It is important to examine the nervous system soon after the accident as possible because focal signs then present have been produced by primary injury of the brain. These signs have a different significance from those which appear later while the case is under treatment when they may arise through compression of the brain by oedema or by blood clot, and may call for relief by decompression. There is much to be said for the American practice of having medical officers on ambulances because apart altogether from the importance of first aid treatment particularly in cases of haemorrhage and in facial and other injuries, an early expert examination in a case of head injury is of value in determining the subsequent management of the case.

### Surgical Intervention

**Indications for Immediate Operation.**—Compound fractures of the vault of the skull, if compound fractures elsewhere in the body, require urgent surgery to protect the patient from infection (see article in last week's issue). With this great exception very few cases of head injury require immediate operation. At this early stage operation is practically never required to deal with intracranial haemorrhage—not because haemorrhage does not occur in these early phases of head injury, but because when it occurs they are rapid widespread and associated with extensive damage to the brain and are so quickly fatal as to be beyond the art of surgery even if this be at once available.

**Indications for Delayed Operation.**—In some degrees of fractures elevation should be undertaken when the patient's condition permits and only after adequate preparation. The indications for operation during the course of treatment are discussed later.

### Management of Cases of Brain Injury

After examining the patient to ascertain whether there is a scalp wound, depressed fracture or clinical evidence of a fracture of the base of the skull (see previous article) we should note whether there are any signs of local damage to the brain such as focal or limb palsies or ophthalmoplegia.

plegia The significance of such signs at this stage has already been discussed They must be regarded as the result of local damage produced by the injury, and constitute as it were the primary or basal clinical picture, for changes in which we must be on the alert

The patient is put to bed in quiet and darkened surroundings, with the head elevated to reduce intracranial venous congestion, and fluids by the mouth are allowed in only very limited amounts or are withheld altogether He is given six ounces of magnesium sulphate solution (30 per cent) by the rectal route The solution must be slowly and gently introduced and its administration continued regularly at six-hourly intervals The reason for this dehydration (by withholding fluids by the mouth and giving rectal magnesium sulphate) is gradually but persistently to reduce the quantity of cerebrospinal fluid within the skull and so give the bruised and torn brain space in which to expand as it reacts to the injury The watery fluid is incompressible, and so only by its withdrawal or by the opening of the skull can the necessary room for this expansion be obtained If the damaged brain is allowed to swell and expand the chances of its recovery are very much greater We obtain evidence of this when we compare the reaction to injury shown by organs such as the kidney and the testis If the kidney is bruised it swells (its capsule being readily distensible) and although there may be haematuria for a time the organ gradually returns to its normal size and function The testis, on the other hand, is prevented from swelling because of the inelastic tunica albuginea, which in this sense resembles the cranium, and following a blow such as a kick there is subsequent shrinkage and withering up of the organ, the parenchyma of which undergoes a pressure atrophy because of the restraining and strangling influence of the inexpandable capsule So it is with the brain if we carry out persistent dehydration we both check the inevitable reactionary oedema and permit the injured brain to swell within the skull and make such a recovery of function that the patient is free from unpleasant after-effects This dehydration treatment must be continued for at least ten days and longer in severe cases (for example in a case where the patient was unconscious for three weeks it was maintained for over a month), and may then be gradually replaced by giving by the mouth each morning doses of from one to four drachms of sodium sulphate while continuing to limit fluid intake

**Restlessness**—Traumatic delirium or cerebral irritation is sometimes a distressing feature of head injuries and is probably the result of frontal polar contusion and widespread oedema Since instituting routine dehydration however I have seen it less often and in a less intense form The best drugs for the restlessness are the bromides chloral and its allies such as chloralamide (20 grains twice daily) and hyoscine (1/100 grain) given hypodermically In most cases of brain injury morphine is better avoided because of its depressive effect upon respiration The gently continued dehydration must be persevered with even if the restlessness of the patient makes it difficult

**Lumbar Puncture**—As a routine this is neither necessary nor advisable It is occasionally useful in indicating the state of the intracranial pressure and in showing whether bleeding into the subarachnoid spaces has occurred As a means of withdrawing fluid from the skull and reducing the intracranial tension it is too drastic and the sudden pressure readjustments made upon the damaged brain are probably harmful It should therefore not replace the gradual and continued dehydration treatment already advocated As a means of ridding the cerebrospinal fluid

pathways of blood which tends to set up reactions in the leptomeninges it may be practised with advantage every two to three days in those cases in which the cerebrospinal fluid is intimately mixed with blood Not more than 15 c cm should be removed at a time, and this only slowly—that is with the patient's head low, and through a needle of small bore

### Operation during Treatment Course

If dehydration has been steadily carried out reactionary oedema, should it occur at all, will be minimal in amount and in its effects, and if focal signs arise during the course of the dehydration treatment we must infer that these are due to clot compression—that is a steadily accumulating intracranial haemorrhage It is therefore very important to obtain a neurological clinical picture at the earliest possible moment, and, as previously pointed out, this forms a basal clinical pattern A monoplegia which is present immediately after a head injury must be regarded as due to damage in the motor area of the cortex or along the course of the pyramidal fibres caused by the initial tearing or bruising of the brain On the other hand, a monoplegia arising during the course of dehydration treatment is due to accumulating haemorrhage and usually gradually increases in degree and extent, so that before long it becomes a hemiplegia Such a focal sign of compression appearing in these circumstances is an indication for craniotomy to evacuate the clot and relieve the pressure These signs of local compression which arise subsequently to the primary injury have been aptly termed epiphenomena by Geoffrey Jefferson (1933)

### Traumatic Intracranial Haemorrhage

Intracranial haemorrhage following head injury may occur either within or outside the meninges, and very occasionally takes place within the substance of the brain itself The clinical features are those of focal or general compression of the brain—for example, the presence of paralytic phenomena (a monoplegia becoming a hemiplegia) slowing of the pulse rate or the onset of stupor which may deepen into coma Respiratory failure may occur, particularly if the haemorrhage is in the posterior fossa and the heart may continue beating after respiration has ceased In such circumstances artificial respiration and an emergency posterior fossa decompression are indicated (Rogers, 1933)

Operation in intracranial haemorrhage is done to relieve the brain of the ill-effects of the steady accumulation of blood clot When signs of compression appear craniotomy must not be delayed and efforts to determine the site of the clot compression must be made The site of compression is frequently revealed by the presence of contralateral weakness or paralysis of an arm or leg or of both limbs or by a paralysed pupil on the same side as the clot Progressive drowsiness in such cases is a warning that craniotomy is needed because if the patient is allowed to sink into coma from clot compression the results of operation are not nearly so good as if this is performed when the patient is still conscious or merely drowsy The classical signs of middle meningeal haemorrhage—namely unconsciousness following a blow, a period of return of consciousness (the lucid interval) drowsiness and loss of consciousness again—are by no means always present but this form of intracranial haemorrhage will not be overlooked if when managing the case along the lines here laid down we are on the alert for signs of compression We must be on the watch for epiphenomena

## Treatment of Intracranial Haemorrhage

Details of operative treatment are beyond the scope of this article. Blood clot may be removed through burr or trephine openings or through an osteoplastic flap cut for this purpose. If burr openings are used several may be necessary and small scoops for removing clot and a stream of hot saline are useful accessories.

## Illustrative Cases

The following cases illustrate the application of the principles of treatment which have been considered.

**Case 1**—A farm labourer aged 37 was admitted to hospital semiconscious and restless. In a brawl he had received a blow over the left temple from a part of a steel plough. While he was undergoing dehydration treatment cerebral irritation was a prominent feature. Three days after admission while still semiconscious he developed a right monoplegia which soon progressed to a hemiplegia. Intracranial haemorrhage was diagnosed and a left osteoplastic craniotomy carried out. A large amount of extradural blood clot (185 grammes) from a ruptured middle meningeal artery was removed and the bone flap replaced. He made a complete recovery.

**Case 2**—A schoolboy aged 12 when playing at school one morning was struck over the left parietal bone by a small stone which had been thrown by another boy. He was only slightly dazed and did not lose consciousness. That night he had a headache but was otherwise well. During the following week his parents noticed that he was becoming more and more drowsy and five days after he had been struck he was semicomatose. He was seen by his doctor who sent him to hospital. Craniotomy was performed at the site of the blow and outside the dura mater a large mass of blood-clot from a torn middle meningeal artery was found and removed. He regained consciousness shortly afterwards and recovered completely.

**Case 3**—A contractor aged 32 received a blow on the head during a fight. He walked to his home. The next morning he suffered from headache and vomited. A week later because of persistent headache he was sent to hospital by his doctor. A lumbar puncture revealed lemon coloured cerebrospinal fluid the pressure of which was normal. He was kept in bed and placed on dehydration treatment but was inclined to be anxious and irritable. Fifteen days after his admission he became drowsy and developed left hemiplegia and examination showed choking of both optic disks. During the day he steadily became more drowsy. Intracranial haemorrhage probably subdural was diagnosed and operation was performed forthwith. The dura was tense and bluish and when opened a large collection of old blood clot was revealed. This was removed and the subdural space washed out with saline. He made a complete recovery.

**Case 4**—A consulting physician aged 53 who had sustained a head injury in a motor accident was admitted to hospital comatose and cyanosed with stertorous breathing and a right monoplegia. He remained unconscious for three weeks. His cerebrospinal fluid was intimately mixed with blood and a diagnosis was made of extensive cerebral contusion and laceration. A ray examination showed a fracture through the squamous temporal bone of the right side running into the base. He was given the dehydration treatment to which reference has been made and was kept quietly in bed. Although in consultation craniotomy was urged by colleagues because of the focal sign (monoplegia) it was not carried out since it was concluded that as the sign had been present from the first it was caused by the primary contusion. He remained unconscious for three weeks but made a complete recovery and is now back in consulting practice. There were no indications of an accumulating intracranial haemorrhage in this case. Dehydration was all that was necessary.

## REFERENCES

- Jefferson G (1923) *British Medical Journal* 2 807  
Rogers Lambert (1921) *Ibid* 2 100  
Trotter W (1922) *Ibid* 1 816

## INTERNATIONAL CONGRESS ON RHEUMATISM AND HYDROLOGY

## OPENING OF OXFORD MEETING

The International Congress on Rheumatism and Hydrology was held at Oxford from March 28 to 30 and is being followed by the International Congress on Rheumatic Diseases at Bath from March 31 to April 3. The Oxford meeting which was the fifteenth anniversary of the International Society of Medical Hydrology and the tenth of the International League against Rheumatism was attended by about 200 representatives. Only one of the several delegates expected from Austria was present and none from Czechoslovakia and other countries in Central Europe and it was stated that an announced delegate from Soviet Russia was a political prisoner. But German and French were heard as frequent as English in the discussions. The first words uttered indeed were in German when at the ceremonial opening at the Sheldonian Theatre Professor H. VOGT of Berlin proposed the election of Sir Farquhar Buzzard as President.

## President's Address

SIR FARQUHAR BUZZARD devoted much of his brief address to describing the part played by Oxford men in promoting the study of hydrology. His first example was Dr Walter Bailey of New College Regius Professor of Medicine who in 1587 described the medical properties of the springs of Worcestershire. After congratulating the editorial committee responsible for the volume entitled *A Survey of Chronic Rheumatic Diseases* published in commemoration of the bicentenary of the Bath Royal National Hospital which he said was a challenge to the medical profession to spend yet more of its time and energy in attempting to overcome some of the most distressing and disabling scourges of all civilized race Sir Farquhar Buzzard continued.

The problem is one—and there are several others in medicine—in which the clinician the pathologist the bacteriologist and the biochemist need all the help and information they can obtain from the student of preventive and industrial medicine from the statistician and from the social worker. Some help from all these sources is already available but insufficient attempts have as yet been made to correlate the contributions and control the results with scientific accuracy. Is it too much to hope that sufficient money might be forthcoming from Government or other sources to establish centres for the studies where the social worker the statistician the clinician and the pathologist might work together under the guidance of experts in preventive medicine and social hygiene?

He also touched on the timely significance of the fact that experts were present from Germany France Belgium and other countries conferring in an atmosphere of earnest friendliness seeking only truth and assured of good will and understanding. Would that matters of far less importance than health could be discussed in a similar spirit.

## Climate in the Causation of Disease

The first discussion held at the University Museum was on Wet and dry climates and weather in the causation of disease. Dr E. P. POULTON of Guy's Hospital in an opening paper said that he had found that to plot absolute humidity against temperature provided a measure of climate which was easier to assess than the more complicated relative humidity. On this basis he had plotted average monthly values for humidity against temperature and he showed curves for Calcutta and other places in India and for Kew and various meteorological stations in Great Britain. Each station had its characteristic curve and could be classified into types according to geographical influences. A hot summer day in England

was always humid. Mountain climates had low humidities and low temperatures. Complaint said Dr Poulton was often made of the variable climate of the British Isles. The average monthly figures, however, showed a dull uniformity when compared with possibilities in other countries, but probably it was the day-to-day changes which counted for most in the feelings of the patient, and these were not shown by the average monthly figures.

While rainfall in this country had but a small effect on the average monthly figures for temperature and humidity it was only necessary to look at the daily weather report to see that a shower of rain had usually an immediate effect almost completely saturating the air with moisture, or the high saturation might precede the shower. Although the lessening of evaporation by the skin, with perhaps added circulatory changes, would not be enough to produce general effects, it might quite well cause local disturbances in parts already inflamed, such as subcutaneous tissues, fasciae, and joints, which were well known in rheumatic patients to be sensitive indicators of damp associated with cold. But one of his patients had informed him that hot weather also caused pain, and that was not an unfamiliar experience.

During the last two years he had been struck by the possibility that dryness of climate was an agent against pulmonary tuberculosis. Open-air and mountain treatment of this disease might depend on atmospheric dryness. He pointed to the serious tuberculosis problem in India with its high humidities in all but certain of the hill stations. In the open-air treatment of phthisis in this country dryness of the air might perhaps be a factor. He had thus been led to try the effect of artificially dry air in the treatment of tuberculous patients. The patient lay in a bed tent kept at room temperature by ice. The Guy's model oxygen tent was used and supplied with air passed over silica gel. It was too early as yet to quote clinical results.

#### Effect of Variability of Climate

Professor GUNNAR EDSTROM of Lund, Sweden, followed with some interesting observations on the good and evil effects of a variable climate. Such a climate was trying to the organism, but it kept it in better trim and vigour. It created a heavy incidence of disease in many areas, but on the other hand it promoted longevity. In the United States the three regions marked by greatest variability of climate had the highest frequency of valvular disease of the heart, endocarditis, diabetes mellitus, and functional psychosis. On the other hand, in the same areas there were the greatest number of old people and the lowest number of mental defectives. In Europe the highest proportion of people above 80 years of age was to be found in Sweden, Norway, Eire, and the Faroe Islands, countries which had the most variable and biologically oppressive climate. The countries bordering the North Sea with their variable climate, also exhibited, on the whole, the highest frequency of rheumatic diseases in Europe, and here valvular disease of the heart and endocarditis attained their greatest incidence. The speaker showed many charts illustrating the conditions in his own country of Sweden and brought out the parallelism between the high percentage frequency of rheumatic fever among medical admissions to hospitals in districts where the climate was unstable and the high percentage frequency in these same districts of great longevity. No parallelism between these conditions and absolute or relative humidity of air, rainfall, or cloudiness could be discovered. A wet or dry climate solely as such had no significance with regard to the frequency of rheumatic fever; the feature of greatest importance was climatic lability, abundance of cyclones and anticyclones, it was the weather changes that produced the biological effects.

#### "Change of Weather" as an Exciting Cause

Professor DE RUDDER of Berlin also discussed the effect of alternations of cyclones and anticyclones as an exciting

factor in various disorders. Where the relation between the weather conditions and the incidence of disease was not observable beyond all ambiguity, a true and not adventitious coincidence could often be established by the keeping of statistical records. He gave a table of the groups of disorders more or less clearly shown to be 'meteorotropic' in character—that is to be excited or worsened by what is commonly described as "change of weather," but which he called "lines of aerosol interface between weather systems or air masses of different kinds." He pointed out that many of the methods in use in physical medicine generally and in medical hydrology in particular were directed towards reducing this peculiar sensitivity.

An investigation into the muscular irritability of forty-three working people day by day over a period of six months with special reference to change of weather, was described by Dr ODON SCHULHOF of Budapest. He had estimated the reactions of these persons to small electrical current intensities, and showed the characteristic curves with fluctuations corresponding to warm and cold periods. Dr TRAUNER of Belgrade gave a description of the incidence, varieties, and treatment of rheumatic conditions in Yugoslavia, with special reference to climate, and representatives of France and Belgium continued the discussion.

#### Juvenile Rheumatism

The subject of juvenile rheumatism was discussed, in successive sessions, from the pathological, clinical, therapeutic, and social aspects. In introducing the subject Dr A. G. GIBSON of Oxford said that juvenile rheumatism in its typical features with carditis was only seen in the young; it was a disease of school age. The peak incidence was 7–10 years in London. It was associated with damp, was prevalent in some families, and in its incidence it followed acute infections, especially those due to the streptococcus. The primary streptococcal infection was most commonly in the upper respiratory tract. Many workers had shown the intimate relation of some form of streptococcus in cases of rheumatism to several different lesions, such as pericarditis, arthritis, and even chorea, but the large number of negative findings threw doubt on the observations. Treatment by streptococcal vaccines, protein shock, and intravenous flavine seemed to produce no great benefit, though anti-streptococcal serum had been used with good results. Professor F. KLINGE of Germany said that rheumatic fever (acute polyarthritis) in children as in people of later years, was a generalized disease, but attacking principally the locomotor apparatus and the internal organs. A progressive form of rheumatic disease typical in the early years of life was visceral rheumatism, characterized by serious and widespread tissue damage to the internal organs without affecting the organs of locomotion. Its great medical importance derived from the fact that it brought about acute, subacute, and relapsing disorders of the heart and blood vessels.

#### Clinical Aspects of Rheumatic Infection

The clinical aspect was opened by Dr LEONARD FINDLAY who said that no definite statement could be made regarding the manifestations of rheumatic infection until the true cause was discovered and some specific test made available. Hence the search for the aetiological factor was a matter of primary importance in the further study of the disease which, in the first instance, it seemed wise to limit to those manifestations about which there was general agreement and probability of relationship. At present the only conditions which could be accepted as probable manifestations of rheumatic infection were in order of importance arthritis, carditis, chorea, the subcutaneous nodule, and erythema circinata, but not one of these conditions was pathognomonic of the disease and each of them could be and was with varying frequency caused by some other infection. The diagnosis of the rheumatic infection depended on the combination and association of various manifestations.

Certain other manifestations from time to time ascribed to the rheumatic person such as inflammations of the pleura, meninges, peritonaeum and lungs were in Dr Findlay's opinion not justifiably to be considered as rheumatic in nature, but the ultimate decision must wait the discovery of the cause and the development of some specific test. The subject was also opened by Dr H. GRENET of Paris whose paper covered almost the entire field from aetiology to prognosis. Statistics of his own cases showed that 72 per cent of rheumatic children had at some stage a heart lesion. This always occurred after either the first or the second attack and in 65 per cent the damage was permanent. He insisted on the gravity of the cardiac condition and out of 184 cases recorded in the last ten years reported forty-four deaths. He admitted no analogy in kind between the slow malignant endocarditis and the progressive rheumatic carditis. The prognosis of juvenile rheumatism was generally unfavourable. Among all cases observed in hospital over ten years the total mortality was 17.39 per cent.

The discussion on juvenile rheumatism which occupied two days and for which over thirty speakers were on the programme will be more fully reported in the next issue. Between sessions the delegates managed to see something of Oxford and its environs and the hospitality of the University was extended at a reception given by the Vice-Chancellor at the Ashmolean Museum on Tuesday evening. On the Saturday preceding the Congress the Royal College of Physicians of London gave an evening reception.

## Nova et Vetera

### WHAT DID BALZAC DIE OF?

J. G. E. Guerin has devoted his inaugural thesis (*Thèse de Paris* 1938 No 57) to an interesting inquiry as to the nature of the disease which carried off the great French novelist Honoré de Balzac at the relatively early age of 50. His father and mother died at 82 and 76 respectively and he would therefore have seemed likely to enjoy a long life. There is no history of his having had any severe illness in childhood or early life and his contemporaries described him as the picture of health and gaiety.

During his period of literary activity Balzac observed a special mode of life. He slept only five or six hours, ate very little chiefly fruit, drank very strong coffee and a little Vouvray wine and took a bath daily of an hour's duration. Although there is no doubt that he was overworked and took too much coffee these factors are not sufficient to have caused his early death. After 1832 when Balzac was 33 years of age his correspondence shows that he suffered frequently from headache and vertigo and it was obvious that his principal symptom was hypertension. As regards the cause of this hypertension although overwork, excess of coffee and plethora in a subject inclined to obesity as Balzac was were important factors they were not enough to give rise to severe hypertension in a relatively young and vigorous man. A few years before death he developed symptoms of dilatation of the aorta which in the absence of a history of infective endocarditis or acute rheumatism can only be attributed to syphilis. The cerebral excitement associated with his prodigious literary activity and the arterial involvement were responsible for Balzac's premature death. The aortitis gave rise to hypertrophy of the heart and the subsequent cardiac failure was accompanied by pulmonary symptoms such as dyspnoea and acute oedema of the lung, congestion of the liver, oedema of the lower limbs and albuminuria.

## Reports of Societies

### PHYSICAL EDUCATION

At a meeting of the Section of Physical Medicine of the Royal Society of Medicine on March 18 with Dr F. D. HOWITT in the chair a discussion on physical education was opened by Viscount Dawson of Penn. The full text of whose address appears at page 734.

#### Physical Education in Europe

Professor B. A. McSWINEY described a tour which he had undertaken at the invitation of the Health Committee of the League of Nations of certain European countries to ascertain international co-operation would assist the development of this subject. The countries visited included Denmark, Sweden, Holland, France, Italy, Austria, Czechoslovakia, Poland (one of the most interesting institutes of physical training was centred at Warsaw) and Germany. The outlook was widely different in many of these countries. In Denmark, for example, the object was to encourage uniform bodily development of the child. In Italy it was to reorganize the State on a new basis. In most European countries games at present did not form an important part of physical education. His opinion and that of his colleagues who accompanied him was that it would be difficult perhaps almost impossible to establish an international system and indeed such a system might be desirable for the plans which produced excellent results for one type of population were not necessarily suitable for another type. In nearly all the Swedish schools even the small country ones a space had been set aside for gymnasia. In most European countries—Germany was an exception—no special provision had been made for the physical education of boys and girls after leaving school or of adults or unemployed persons unless they were able to join private clubs. It was also observed that in most of the countries scant attention was paid to children who were below normal. Little knowledge seemed to be available as to the effects of physical exercise on the functions of the body. There was scanty co-operation between school medical officers and physical instructors. The latter in many of these European countries had too much responsibility and the danger of physical education being regarded merely as a matter of school routine.

#### Physical Training in the Army

Major W. CAMPBELL, hygiene specialist of the Army Physical Training School at Aldershot, gave an account of that establishment. The appointment of the first whole-time officer at the school was made in 1922. It was realized that the construction of correct, balanced and progressive physical training tables required a knowledge of some of the main principles of anatomy and physiology and that therefore the presence in the school of a specially trained medical officer would be of considerable value to the teaching staff. The function of a hygiene specialist corresponded closely to those of a medical officer of health in civil life and embraced preventive medicine. He took a three months course of physical training for himself which gave him the atmosphere of the school and taught him to sympathize with the men who were doing these things. In addition he did what is called a post-graduate course in the physiology of muscular exercise. He was required in the school to be able to deal with questions arising out of physical training in men who although they were not medically qualified had undergone physical training for years and knew a good deal

of anatomy and physiology. No new exercise was introduced into the tables without a discussion between the medical officer and the teaching staff. Indeed, no exercise could be modified to any degree without such consultation.

The duties of the medical officer were generally the duties of a regimental medical officer, such advisory duties as he had indicated, the giving of instruction the performance of routine observations and tests, and research. It was the policy of the school to base physical training on medically sound lines, and therefore considerable importance was attached to the teaching of elementary anatomy and physiology to the students. This knowledge placed the future instructor in a better position to teach his own subject, encourage the backward, and restrain those enthusiasts who would go too fast and too far. Lectures on anatomy and physiology were given by the medical officer. The various systems of the body were taught, with special emphasis on the correlation of the respiratory and cardiovascular systems. He gave an account of the routine tests and observations. The tests were designed not to assess the physical fitness—because it was assumed that these men were physically fit already—but to ensure that they were not unduly fatigued. Researches had been made on the grading of groups of exercises, the effect of smoking on endurance (it had been definitely shown that in the great majority of cases smoking militated against endurance, though there were exceptions), and on rhythmical breathing in accordance with the steps in walking.

SIR ARTHUR MACNALT said that active steps had been taken to set up the national college of physical training. Without trained teachers and leaders the fullest use could not be made of opportunities provided, and one of the functions of the college would be to assist in supplying these teachers. It was also contemplated that the college would investigate some of the many outstanding problems connected with the physiology of this subject. In the mental and physical training of youth it was important that full use should be made of the services of preventive medicine, or zeal for either form of culture might outrun discretion. The Greek aim was a balanced rhythm. Socrates observed that runners often had overdeveloped legs and weak trunks while boxers were too heavy in the upper part of the body.

MR PHILIP WILES commented that the audience had been dragged from Lord Dawson's eloquent description of life at its best to a description of how physical training was being abused in the Fascist countries, where men were trained with the declared objective of destroying their fellow human beings. The developments in Europe should place us on our guard in this country against a similar degradation here. The rapidity with which the Government scheme of physical training was introduced gave rise to certain doubts among the profession, but Lord Dawson had gone a long way to allay them. It was essential that physical training of some sort should come into being but he did not think that any individual should be encouraged to participate unless there was evidence that he was getting enough to eat. In Moscow everybody who participated was required to be examined by a specially trained medical man in order to make sure that he was fit.

SIR ROBERT STANTON WOODS said that it was the inescapable duty of every medical man to afford help in this great effort to the utmost of his capacity and opportunity. He also warned against easy discouragement owing to the nature of early results.

LORD DAWSON said that he was all for studying nutrition side by side with physical training but he hoped there would be no alarmist note on this subject. One had only to watch a gathering of elementary school children to be sure that on the whole they were very well fed. Malnutrition did exist but only in patches, it was not universally spread.

## PAINFUL FEET

At a meeting of the Hunterian Society on March 25 the subject under discussion was "Painful Feet." By way of introduction Dr D. C. NORRIS the President drew attention to two beautifully recorded "case histories" many centuries old. One was the case of ASA (2 Chron. vi), who was "diseased in his feet, yet in his distress he sought not to the Lord, but to the physicians. And ASA slept with his fathers." From the fact that the apothecaries brought into his bed sweet odours and divers kinds of spices it seemed like a case of senile gangrene. The other was the case of Mephibosheth (2 Samuel ix), who "did eat continually at the King's table, and was lame on both his feet."

### Evolutionary Causes

MR NORMAN LAKE said that the foot was a part of the body which was undergoing not evolutionary advancement but evolutionary regression. The feet of the ancestors of the human race must have been capable of a much wider range of movement, being designed to carry out many of the things which man did with his hands. The modern human foot had become a stereotyped structure, apparently restricted to the performance of one simple task. Not only were the feet of modern man encased but in all civilized countries the ground was levelled so that in ordinary progression the foot was never called upon to carry out more than a narrow range of movement. The evolution of the modern foot could be traced to some extent in the various types of gorilla where the great toe became more and more incorporated with the rest of the foot, instead of being as it was originally a separate and opposing structure, like the thumb of the hand. The incorporation of the great toe was, from the evolutionary point of view, a thing of yesterday and anything of recent happening in evolution was likely to be unstable. As the great toe became incorporated so its size increased. In the chimpanzee it fell short of the length of the other toes, in human beings it commonly equalled the second toe. In the anthropoid apes the second and third metatarsal bones were fairly stout, capable of carrying the stress put upon them, while the first was relatively weak, but in man the length of the first metatarsal bone was increased considerably and the leverage axis of the foot had been altered, with consequent redistribution of pressures.

The solution to the problem of many cases of painful feet, which could not be pigeon-holed as hallux valgus or ingrowing toe-nail, or hammer-toe was to be sought in the fact that the foot was not yet entirely suited to the environment thrust upon it. The outlook from the point of view of treatment was not very promising. The aim should be to bring back some of the strain of locomotion on to the first metatarsal, relieving to some extent the second and third. But it was not easy to redistribute strains in the foot. A well-known plan was to fit a metatarsal pad immediately behind the head of the bone raising it out of the position of strain or, conversely, the shoe might be built up underneath the head of the first metatarsal. There was a tendency when confronted with a painful foot for which there was no obvious cause to blame the shoemaker. Mr Lake was not prepared to incriminate the shoe, always excepting the high heeled shoes of women. The real trouble in very many instances was an evolutionary misfit.

### The Chiropodist's Methods

MR J. H. HANBY, Fellow of the Incorporated Society of Chiropodists, gave a demonstration of the way in which felt pads were applied for the equalization or relief of pressure and to bring into alignment such deformed structures as were sufficiently supple and amenable to be so treated. He pointed out that the application of felt to the foot in unskilled hands might do much harm. Great

skill was required in the shaping and tapering of the felt so as to avoid bruising. He showed in particular how the pad was applied to even out the pressure over the five metatarsal bones. He also touched upon the many painful conditions associated with the nails. A large number of thickened malformed nails could be reduced to almost normal by means of an electric nail drill, a painless procedure in the hands of a competent chiropodist and of great benefit to elderly patients by whom operation was not acceptable. Mr Hanby concluded with some remarks on footwear. In his view socks and stockings particularly in children were a very important factor in the welfare or otherwise of the feet. He had examined 300 children at a school and had found 65 per cent of them below the age of six to have signs of some foot trouble in a large number the first stage of hallux valgus. It was not caused by the shoes but in a large number of cases by ill fitting hose. Women also often wore their stockings too short for the reason that if the stockings were long enough they were usually too large around the ankle but the consequence was foot trouble. He warmly supported the remarks in the letter by Dr Margaret Emslie in the *Journal* of March 5 (p 544).

Mr C LAMBRINUDI remarked that his hospital (Guv's) was the first to appoint a chiropodist to work in co-operation with the orthopaedic surgeon. He regarded the assistance of a chiropodist as being as important to the orthopaedic department as that of a masseuse. Indeed they were complementary to each other. Mr Lake had expounded the evolutionary cause of pain but he did not suppose he regarded imperfect evolution as the sole cause. There were other causes of an acquired nature. In his own view the tips of the toes were every bit as important as the metatarsal heads. He entered into a discussion of the function of the toes in walking and the action of the flexor longus hallucis muscle.

Dr J B COOK said that the question of the recognition of chiropodists had again recently received consideration by a committee of the British Medical Association (the Hospitals Committee) of which he was a member. Certain regulations had been drawn up restricting the domain of the chiropodist as a condition on which recognition could be given but after witnessing Mr Hanby's convincing demonstration that evening he felt that some of these regulations were ridiculous—for example the one which required chiropodists to limit their activities to structures no deeper than the true skin. He for his part would do his utmost to further the interests of chiropodists in the future in this matter of recognition and also to get a chiropodist appointed to his own hospital.

#### Other Causes of Painful Feet

Dr FORESTIER mentioned some deeper troubles. He did not think that Morton's metatarsalgia was due to a mechanical fault; it had some cause connected with the circulation. In the hope of discovering the nervous stimulus involved in these obscure pains he had made local injections of lipiodol between the third and fourth metatarsal heads and sometimes between the fourth and fifth and after these injections the trouble had cleared up in a quite remarkable manner. Another cause of pain in the foot was papillomas on the sole. He had found these yield to x-ray treatment.

Mr S L HIGGS mentioned the condition of plantar warts. These very often appeared in a moist and soft skin and might be due to some extent to abnormal pressures. It was rare to find a plantar wart on a dry hard skin. Plantar warts appeared quite commonly in young girls especially the type of girl who was taking rather too much exercise. X-ray treatment was useful but it was important to keep the skin dry and to apply some fungicidal preparation for a short time.

Mr F MCG LOUGHANE said that after all Mr Hanby's treatment for the removal of pain was merely

palliative. Unless the patient was within reach of the expert people who applied and renewed these pads, his case was not permanently benefited and the speaker thought it was for the orthopaedic surgeon to develop operations and exercises which would have a permanent curative value. If the fault was one of anatomy, surgery and physiology could always overcome it.

Mr MORTIMER WOOLF said that his own feeling was that many of the painful feet which one saw were due to overmuch pressure on the first metatarsal bone more especially when the first metatarsal was maintained in a position which was mechanically unfitted to support the pressure. When a child was born its foot was held in a position of varus but from the moment it began to assume the erect attitude its nurse mother and teacher made it turn out its feet at an angle of about 35 degrees. This was a relic of military barbarism dating from the time when armies marching in close formation were required to have the feet at that angle otherwise the men kicked the heels of the row in front. When the toes were turned at that angle the whole weight of the foot came on the sesamoid bones which were apt to become displaced and then the weight came on the head of the first metatarsal. On the other hand athletes had their feet slightly inverted. Relief from foot strain could always be secured by turning the feet in.

Dr P B SPURGIN and Dr ERNEST YOUNG gave some personal experiences with special shapes of shoes which accommodated the natural contour of the foot. Dr GERALD SLOT referred to certain hitherto unmentioned causes of pain in the foot notably sciatica. Very often a sciatica was found in which the pain was referred entirely to the foot. Dr J G JOHNSTONE (consulting orthopaedic surgeon LCC) said that he agreed with Mr Lake's reference to congenital abnormalities but he was surprised that so little had been said as to other causes of painful feet. Many acquired deformities were to be seen. The possibility of an infective focus also should not be disregarded. Mr REGINALD HILTON referred to some work which had been done in Massachusetts upon the barefooted African negro from which it appeared—rather opposing Mr Lake's contention—that few foot deformities were found among these people thus suggesting that footwear was a common cause of foot pain in the shod European.

Dr PHILIP ELLMAN in proposing a vote of thanks to the speakers said that he could add still other causes of painful feet. One not mentioned that evening was the occurrence of obesity more particularly in women at the menopause the foot pain being due probably to disturbance of the body equilibrium. Another interesting cause was unilateral Raynaud's disease and still another coccal rheumatism.

#### INTRACRANIAL HAEMORRHAGE

At a pathological meeting of the Liverpool Medical Institution on March 10 with the president, Dr E GILBERT BARK in the chair, Dr A J McCALL and Dr T W WADSWORTH opened a discussion on intracranial haemorrhage.

Dr McCall said that the principal mechanism of cerebral haemorrhage could be summarized as (1) rupture of an atheromatous artery without previous damage to the brain parenchyma (2) rupture of a vessel passing through the site of an antecedent thrombosis and (3) haemorrhage by diapedesis due to cerebral angioma. Cerebral haemorrhage was usually but not invariably fatal. Subarachnoid haemorrhage commonly followed the rupture of a congenital aneurysm and it was generally agreed that syphilis was rarely responsible. Syphilitic aneurysms however were occasionally encountered in the larger vessels such as the basilar or vertebral arteries. In gummatous meningitis a diffuse oozing of blood might occur from the pial vessels, but was rarely sufficient to cause



a clinically evident subarachnoid haemorrhage Dr Wadsworth analysed cases of intracranial haemorrhage from the last 3 000 necropsies at Walton Hospital. In seventy-six adults a diagnosis of cerebral haemorrhage had been made before death; in forty-five of these cases the diagnosis was confirmed post mortem. There were eighty-eight cases of cerebral thrombosis (forty-eight females and forty males); there were twenty-eight cases of meningeal haemorrhage occurring in the first week of life or in still-born children.

Dr ROBERT KEMP, discussing the aetiology of basal aneurysm, said that the average age at which this condition was seen was in the forties. Cerebral haemorrhage was commonest in the fifties, so that although the basal aneurysm was grafted on a congenital weakness other factors in later life would seem to determine its growth or at any rate its rupture. It was noticeable, too, that bleeding sometimes took place when the patient was at rest or often after the mild exertions of everyday routine. At other times an appreciable haemorrhage was preceded by several days of slow leaking—again suggesting that even though the sac might have been there for some time its actual rupture was determined by a transient and unexplained weakness of its wall. Dr T. F. HEWER, who considered syphilis rarely if ever a cause of subarachnoid haemorrhage, referred to Turnbull's suggestion that although syphilis generally caused an obliterating periarthritis there was a possibility that a very acute syphilitic reaction might be haemorrhagic. He had examined the cerebrospinal fluid in many cases of severe acute syphilitic meningo-encephalitis including some cases of neuro-recurrence after insufficient treatment with arsenicals in African natives but there was never any indication of haemorrhage.

### A PHILOSOPHER ON PSYCHOLOGY

At a meeting of the Medical Society of Individual Psychology on March 10, with Dr H. C. SQUIRES in the chair, Professor JOHN MACMURRAY read a paper entitled, 'A Philosopher's View of Modern Psychology'.

Professor MacMurray began by saying that the function of the philosopher was to relate the field of the expert to the more general field in which it was included. Looking at medical science he noticed that the relation of doctor and patient from which medical science and practice arose was a particular type of relation between persons. It conditioned everything within the held of medicine and was itself conditioned by the nature of human relations in general. The patient was a person who was anxious about himself who asked another person to help him. The fact that the doctor-patient relation was a relation of persons provided certain principles in itself. Just as a teacher who taught his subject and not his pupils was a bad teacher so a doctor who set out to heal diseases instead of people would not be a good doctor. The patient as a person requiring help was the focus of all problems in medicine. If medicine treated diseases then a classification of diseases into bodily and mental would arise in which the unity of the person was lost sight of. Physicians and psychotherapists would have different objects to treat and the necessity for co-operation in treating a patient who was always suffering in mind, whether or not he was suffering organically would be lost sight of.

Every case which a doctor dealt with arose because of the patient's anxiety about himself. His anxiety which brought him to the doctor was his sense that something was the matter with him. The task of the physician was to discover what was the matter. If some mal-functioning of the organism could be discovered then it could be correlated with the anxiety of the patient about himself. If this was correct then the restoration of proper bodily functioning would remove this anxiety and bring the relation of doctor and patient to an end. But if the doctor could assure himself that there was no organic failure

sufficient to account for the anxiety of the patient, what was to be done? The physician might feel inclined to say that there was nothing the matter with him. But there must be something the matter with a man who came to a doctor when there was nothing the matter with him. The anxiety must have a cause. As it was an anxiety about himself the cause must lie in himself. If it had no observable bodily correlate the anxiety itself was a disease, and expressed the patient's sense that something was the matter with his functioning as a human being. The task of finding what was the matter and curing it was then the task of the psychotherapist.

Professor MacMurray devoted the rest of his address to a determination of some of the general characteristics of fear as exhibited in human behaviour. He emphasized the need for distinguishing fear and its derivatives as negative motives with an inhibitory effect from the positive motives which determined the positive life processes. He distinguished human fear from 'animal fear' by the presence of anticipatory fantasy. He pointed out that in all the development of consciousness, and especially in all rational reflection, fear was always present. Reflection itself involved the inhibition of action. In action fear expressed itself as caution, the recognition of the possibility of mistaken behaviour, and so in the distinction between right and wrong. Thus it was a mistake to maintain that fear was neurotic in itself. Nevertheless, anxiety as a pervasive fear which determined an egocentric and self-defensive attitude to life was in expression of human mal-functioning. The rhythm of human life involved both fear to provide the motive for withdrawal into reflection and the triumph over fear to provide the return to positive activity enriched by reflection. This general diagnosis of human mal-functioning he added, could not be complete without reference to love in relation to fear, because of the inherent mutuality or reciprocity between persons which was the characteristic feature of human life. The environment for any person was primarily other persons. For this reason love negated by fear was the all but universal source of neurosis.

Professor MacMurray concluded by saying that these general considerations of the wider situation which conditioned psychological medicine suggested to him that he would expect that in psychotherapeutic practice the nature of the relation established between doctor and patient would play a major part in success or failure and also that the truth of the psychological theory held by the doctor would prove of less importance in the achievement of a cure than might at first sight be expected.

### PROPHYLAXIS OF INFLUENZA

At a meeting of the Pathological Society of Manchester on March 9, with the president, Professor DANIEL DOUGLAS in the chair, Dr WILSON SMITH read a paper on the search for an influenza prophylactic.

Dr Smith said that a virus was first isolated in 1933 by the intranasal inoculation of ferrets with throat washings obtained from cases of influenza, since then many strains had been isolated by a similar technique all over the world. The ferret disease closely resembled human influenza in its symptomatology and the ease with which it was transmitted by contact. The entry of the virus into the respiratory tract was, however, necessary for infection. Virus inoculated by other routes was innocuous. A lung-adapted strain of virus obtained by serial passage under anaesthesia caused a much more severe illness accompanied by pulmonary consolidation. Ferrets which had recovered from influenza were completely immune to reinfection for a few months, then the immunity waned slowly so that for some time experimental inoculation of the virus was followed by a mild disease of short duration without any lung involvement. The resistant state was characterized by the presence of virus neutralizing antibodies in the blood.



The virus was later adapted to mice in which animal it produced a virus pneumonia. By grading the dose of mouse adapted virus it was possible to obtain all degrees of lung involvement from small root lesions to complete consolidation of all lobes. Other ways of propagating the virus were by growth on the chorio-allantoic membrane of the developing chick embryo and by growth in a medium consisting of minced chick embryo and Tyrode's solution. Ferrets, mice and eggs had all been used in the search for a prophylactic. The tests employed to gauge the effect of vaccination upon resistance fell into two main groups—tests in which the animal was exposed to infection and tests designed to measure the antibody level of the animals' serum. Antibodies might be measured by virus neutralization tests in ferrets, mice and eggs or by the *in vitro* complement fixation reaction. Unfortunately the results obtained by these different tests showed puzzling discrepancies with some sera and it was not yet known which test gave the truest measure of active immunity.

### Virus Vaccines

Vaccination of normal ferrets conferred a degree of resistance sufficient to protect against contact infection but insufficient to protect completely against large doses of virus inoculated intranasally. The induced partial immunity however saved the lungs from involvement when the lung adapted strain of virus was used for the immunity test. Vaccination of ferrets which possessed some residual immunity as a legacy from a past attack of influenza restored the solid immunity which they enjoyed immediately after recovery. Vaccination of mice resulted in the complete protection of a high proportion of animals, a reduction of mortality rate and a decrease of the extent of lung involvement in those not completely protected. Experiments with mice had been particularly useful for comparing the efficacies of different vaccines with a view to obtaining the most suitable product for use in man.

Prophylactic experiments in human volunteers had been carried out in England with killed virus vaccines and in America with living virus inoculated by non-infective routes. Vaccination in all the experiments recorded resulted in a striking increase of serum antibodies. In America the reduction of the incidence of febrile respiratory disease in vaccinated groups as compared with control groups during subsequent epidemics augured well for the possibility of controlling epidemic influenza in the future. In England an epidemic broke out too soon after vaccination for the results to be of much value. The problem of efficient prophylaxis was complicated by the fact that antigenically different virus strains existed. The differences could be demonstrated either by cross-neutralization tests with virus strains and their homologous antisera, or by cross-vaccination experiments in mice. Such experiments showed however that different strains possessed some antigenic components in common. It was hoped that an efficient prophylactic might be obtained eventually by the inclusion of several strains.

At a meeting of the Midland Mental Pathological Society held in the Anatomy Department of the University of Birmingham on March 24 Mr W. GREY WALTER (Research Fellow at the Central Pathological Laboratory of the London County Mental Hospitals) gave a lecture on the electropathology of the brain. He described in detail the apparatus employed and discussed the findings with the aid of a considerable number of illustrations. He also gave a practical demonstration on a case in which rhythmic disturbances characteristic of epilepsy were well shown. The lecturer's able exposition made the simplicity of the apparatus and the ease of its application a pleasant surprise to the members and the discussion which followed showed the interest that had been taken and the possible practical usefulness of the apparatus in mental hospitals.

## Local News

### SCOTLAND

#### Population of Scotland

An address dealing with the maintenance of population was given by Mr J. G. Kyd, Registrar General for Scotland at a meeting of the Edinburgh City Business Club on March 8. He said that the rate of increase had been diminishing steadily during the last seven years although the population of Scotland was not yet decreasing. There was a probability that the number of deaths would go up owing to the gradual ageing of the population notwithstanding that there might be an actual improvement in the mortality age by age. Overseas emigration on a large scale had ceased although the outflow of people southwards across the border had shown an increase during the last eight years. The average early loss by emigration in the first thirty years of the century was much greater than the yearly loss by death among Scottish soldiers in the war and the total loss in these thirty years had been more than ten times as great as the number of Scottish soldiers who died in the war. The birth rate for Scotland was higher than that for England and the fertility of Scottish women was about one-third greater than among English women. The death rate in Scotland was however slightly higher than it was in England but the rate of natural increase—that is the difference between birth rate and death rate—was about 50 per cent higher in Scotland than in England. England however gained by immigration while there was a loss to Scotland from emigration.

#### Scottish Chiropodists

At the recent annual dinner in Glasgow of the Scottish Branches of the Incorporated Society of Chiropodists Mr John Bruce said he was glad to have an opportunity of paying a surgeon's tribute to the contribution that chiropody was making to the health and well-being of the community. This was not an absurd cult orfad of fashion but was an application of skill which brought to one of the most disturbing of human ailments. Recognition of this work had been tardy but chiropodists enjoyed the confidence of those medical men with whom they had come in contact. It was an impressive fact that last year 50,000 people received help from the various institutions controlled by the Incorporated Society of Scottish branches. Edinburgh had provided the greatest number with 20,000 but even these figures represented merely the fringe of the problem which faced chiropodists. In the not far distant future inspection of school children and adolescents entering factories would probably be a routine part of industrial supervision and the prospects of chiropody as a career would be increased.

#### Child Welfare

Speaking at a meeting of the Edinburgh Women Citizens Association Professor Charles McNeil of the chair of child life and health at Edinburgh University said that in the last twenty-five years the death rate in Scotland during the first year of life had fallen from 100 to 82 per 1,000 births but in England the rate was only 69 and in New Zealand 51. To reduce the Scottish figure it would be necessary to improve the machinery for protection of child life chiefly by improving existing social arrangements for maintenance of health. It would be well to entrust the trained health nurse with more responsibility and to give her better training as had been done in New Zealand. The guardian of the young

child was the mother and if she was given the necessary knowledge much could be done to preserve child life. Many years ago an institute had been established in Paris where child ailments were studied and mothers instructed how to deal with them, and this had resulted in a substantial reduction in the death rate of infants. Twenty years ago in Edinburgh a similar idea had been advocated by Sir Leslie Mackenzie and the speaker would like to revive this, because in the new maternity hospital which was being built there was a centre where students and maternity nurses could be trained in the treatment of young children. This could be made a centre of national education for the training of health nurses.

## IRELAND

### Ulster Medical Society Annual Dinner

The recent annual dinner of the Ulster Medical Society, which was held in the Whitla Medical Institute, Belfast, was memorable for the presentation to the Society of two magnificent portraits, one of Sir William Whitla painted by Mr F McKelvey, and the other of Sir Hans Sloane, painted by Mr Clifford Hall. These were the generous gift of the president, Professor W W D Thomson, who presided at the dinner. Sir Thomas Houston unveiled the portrait of Sir William Whitla and Sir Humphry Rolleston that of Sir Hans Sloane. It is particularly appropriate that a portrait of Sir William should occupy a place in the Institute which bears his name, and which was his gift to the profession of Ulster during his lifetime. The Society is proud of the possession of these gifts, and they can be assured of a permanent place in its collection. The dinner was also the occasion of the presentation of Honorary Fellowships of the Society to Sir Humphry Rolleston, Sir Robert Johnstone, President of the British Medical Association, and Colonel A B Mitchell. The scrolls of the Fellowship, hand-painted and bound in morocco leather, were handed over by the president, who referred in felicitous terms to the outstanding services each recipient had rendered to medicine. Sir Robert Johnstone's Fellowship was conferred *in absentia* the scroll being given to him at a subsequent meeting of the Society. The toast of the new Honorary Fellows was proposed in very happy terms by Dr Robert Marshall and was responded to by Sir Humphry Rolleston. Professor P T Crymble proposed the toast of the guests and this was responded to by the Right Hon J H Robb and Professor W B Morton.

### The Belfast Hospital for Sick Children

The annual report of this hospital refers to the loss sustained in the death of Dr Malcolm B Smyth, a son of one of its joint founders. Reference is also made to the Clark benefaction whereby the hospital receives the sum of £15,000 for the erection and equipment of a block to be used for paying patients. Plans for this extension are at present being considered and there seems to be no doubt that this will prove a welcome addition to the services this hospital renders to the public of Northern Ireland. The total expenditure for the year amounted to over £8,900 there being a deficit on the year's working of almost £1,000 which had to be met from capital. The hospital continues to extend its usefulness as shown by the figures in the medical report of 61,582 out-patients in the extern department, 1,468 admissions to the intern department and a total of 2,500 operations. The extent to which ancillary services are used is indicated by the fact that 2,447 patients were examined in the x-ray department. The hospital is also an important teaching centre, the number of students attending for practical instruction having been ninety-four.

## Correspondence

### Classification of Adventitious Sounds

SIR—I am glad Dr W C D Walmsley (March 26 p 702) has drawn attention to the need for simplification and more uniformity in the nomenclature of pulmonary adventitious sounds. I was taught by the late Professor Wyllie, than whom I have known no better teacher of physical signs, that all these adventitious sounds fall under one of three heads: (1) dry sounds, (2) moist sounds, (3) friction sounds. That dry sounds (rhonchi) were either high or low in pitch depending upon the size of the tube in which they arose; that moist sounds were either fine (crepitations), medium, or coarse, again depending upon their site of origin, and that friction sounds were either fine or coarse.

I still believe this classification to be adequate for all practical purposes and I should have liked to use it in the book on *Clinical Methods* to which Dr Walmsley refers but found that so many teachers were using much more elaborate classifications that some compromise was necessary. Perhaps I should have had more of the courage of my convictions—I am, etc.,

London, W 1 March 28

ROBERT HUTCHISON

### Familial Clubbing of Fingers and Toes

SIR—Readers of Dr D R Seaton's instructive article on the above subject in this week's issue of the *British Medical Journal* would, I am sure, be interested to learn from Dr Seaton himself or any other of your correspondents, what he or they believe to be the exact Mendelian dominant which is inherited in these cases. It surely cannot be the clubbing itself, but rather some functional circulatory defect which for mechanical reasons determines the vascular congestion of the extremities on which the clubbing probably depends. I raised this question on page 606 in my recently published book, *The Infant*, in a passage which I may perhaps be allowed to quote in the hope that it may stimulate one of your readers to put the explanation of the pathogenesis of this anomalous condition therein suggested to the practical and easy test of a few blood volume estimations. The quotation reads as follows:

Whatever may be the cause of this condition [clubbing of the fingers] it must be one which will explain its occurrence in both pulmonary and circulatory disabilities as well as in septic conditions. Most of the explanations which have so far been given do not appear to fulfil these conditions. There is reason to doubt that it is due to the effect of toxins acting on the soft tissues of the finger ends—a view commonly held—or that it is due to the mechanical effects of cardiac insufficiency. Dr Jean Smith has made the ingenious suggestion which is supported by some independent evidence that clubbing, especially in cases of congenital heart disease, is caused by an excessive volume of blood in the body, a condition which may well cause a vascular congestion in terminal parts which are not well supported and when the local circulation is carried on under disadvantageous circumstances.

In cases of familial clubbing it may be that for some reason not at present understood there is an inherited tendency for a plethora of blood to be maintained in the circulation—I am, etc.

London, W 1 March 19

ERIC PRITCHARD

## Use and Abuse of Antiseptics

SIR—Mr A C F Hallford's reference (*Journal* March 26 p 702) to my recommendation of biniodol in spirit as a means of sterilizing the hands in my introductory article to the *Surgery in General Practice* series has aroused in me a sense of guilt not in having made the recommendation but for failing to vindicate it when in the following article (December 18 1937) Professor L P Garrod and Mr G L Keynes condemned it in no uncertain way. I was very tempted to reply at the time but as the articles in question were both in the same series a feeling of propriety possibly combined with that of good will appropriate to the season then at hand withheld me. This series of articles is designed to provide the practitioner with simple practical instruction on the conduct of minor surgical procedures so that abstruse discussions as to the laboratory characteristics of antiseptics are rather out of place. It is a fact that hundreds of thousands of operations some of the most delicate nature from the point of view of infection (arthrotomies bone grafts, etc.) have been performed with very successful results when the skin was sterilized with the solution I recommended.

The word sterilized is placed in inverted commas advisedly for everyone knows that absolute sterilization of the skin is impossible even with the most modern antiseptics. It is a relative question which does not arise when dealing with instruments cutgut etc and practical experience shows that such antiseptics prove to be very satisfactory. The controlled experiments of the laboratory fail by reason of the very control which is so often extolled. The only legitimate interest which surgery can possibly have in antiseptics is in their behaviour when applied to the uncontrolled human tissues and here experience will be the only guide. One example of this—and probably an important one from the practical point of view—is the fact that laboratory experiments almost always ignore any detergent effect which an antiseptic may have. This I conceive to be a more valuable effect than that of killing organisms when the skin is under consideration. Wiping over with a fat solvent such as ether abolishes more organisms than the application of the most efficient antiseptic. But there are other very valuable properties which some substances possess (spirit among them) giving them a kind of physical as opposed to chemical bacteriostatic effect to which again the laboratory worker apparently pays little heed.

In a letter I cannot enter further into these effects but their mention will be sufficient to indicate to those searching for the truth that we cannot yet afford to ignore the results of practical experience in favour of the more theoretical knowledge the laboratory provides. There was a time, not long ago when a standard laboratory coefficient was regarded as a good indication of the efficiency of an antiseptic in surgery the modern laboratory worker knows better and takes many other factors into consideration before he expresses an opinion but even so it is my contention that there are still many more factors which he ignores particularly on the physical side of the problem.

While this is so I prefer to be guided by clinical experience despite the criticism that clinical observations are but pseudo scientific. To my mind science is a far greater thing than the mere conduct of experiments in laboratories—I am etc

London W 1 March 27

NORLAN C LAKE

## Safe Milk and Safe Butter

SIR—Dr Emrys Jones's letter in the *Journal* of March 19 (p 68) is a useful reminder that tubercle bacilli may be found in milk products as well as in raw milk. In appealing to the public however we must keep things in perspective. While it is true that farm butter prepared from milk which is not pasteurized may contain tubercle bacilli the point is not very important from the practical aspect since it would appear that 80 to 90 per cent of the butter consumed in this country is imported and almost of it is made from pasteurized cream. Pulhridge writing in the *Lancet* of June 8 1935 records the results of examinations of cream butter and cheese. Of thirty-one samples of raw cream sixteen contained tubercle bacilli and eleven *Br abortus* whereas thirty-five samples of pasteurized cream were free from both contaminants. He examined thirty-nine samples of butter of which twenty came from factories ten from farmhouses and nine were definitely identified as imported. Neither the tubercle bacillus nor *Br abortus* was found in any of these. Samples of cheese to the number of sixty-three were examined thirteen of these were soft cheese in the fresh state or two days old but rather surprisingly none of them contained tubercle bacilli or *Br abortus*. Among twenty-nine samples of hard cheese seven days old or more only four which were seven days old contained tubercle bacilli and of these three also contained *Br abortus*. He points out that autosterilization occurs during the ripening period and one would therefore expect to find contaminants more frequently in soft cheese.

The following passage therefore from the League of Nations Report on the Milk Problem contained in the *Bulletin of the Health Organization* for June 1937 appears to be justified.

In this connexion we may point out that neither butter nor cheese appears to be of any considerable importance in the causation of tuberculosis or undulant fever. Except on farms butter is almost invariably made from pasteurized cream while in hard cheese both the tubercle bacillus and *Br abortus* are usually dead once considerable time has elapsed since the ripening process is complete. Only in farm-made cheese and in soft cheese are there organisms likely to be found alive. The vast majority of milk borne tuberculosis and undulant fever is undoubtedly due to the consumption of raw milk or cream.

In these circumstances while in areas where much farm butter is consumed there may be a case for urging the public to consume butter prepared from pasteurized cream so far as the whole country is concerned the problem is a small one compared with that of milk used as a beverage in the raw state—I am etc

Cardiff March 2

RALPH M F PICKEN

## Pasteurization of Milk

SIR—Dr Halliday Swineland's reference (March 26 p 704) to the report of the Economic Advisory Council's Committee on Cattle Diseases is so limited as to be misleading at least to those who have no ready access to itself. It is true the report recognizes that pasteurization produces in milk some deficiency in vitamin C and D. It adds however certain qualifying propositions. Thus on page 7 the committee writes that it is possible only in relation with infant feeding that these deficiencies can possess significance. On the other side of the coin on milk alone for the supply of the vitamin C and D and the benefits of a milk ration when added to the diets consumed, say by children in the home.

would seem to be exerted by pasteurized no less than by raw milk. And again (p 57) "innumerable healthy children are to-day reared on a diet containing no unpasteurized milk."

Dealing in particular with infants fed entirely on milk, the committee states that any vitamin deficiency can be easily corrected by the addition of certain fruit juices, and adds that such addition "is almost as necessary in the case of raw milk, with its variable vitamin content, as in that of pasteurized (p 38), while the general conclusion of the committee reads "that any recognizable changes of quality induced in milk by pasteurization rightly conducted are as a whole too small to outweigh the great advantages inherent in the protection from infection which the treatment secures and in the public confidence which it inspires (p 38). No one who reads the report can doubt the committee's conviction of the risks attached to the consumption of raw milk and its endorsement of the protective value of pasteurization."

Dr Sutherland's bacteriological inquiries are not within my personal range, but he will no doubt have noted with interest that a recent elaborate series of comparative and controlled experiments on calves conducted under typical commercial conditions led *inter alia* to the conclusion that 'the work failed to show any significant difference in the nutritive value of raw and pasteurized milk,' while 'the use of pasteurized milk however, had a clear advantage in that it preserved the animals from infection through drinking milk containing living tubercle bacilli' (J Wilkie and others *Journal of Dairy Research* Vol VIII, No 3, October, 1937)—I am, etc.,

London W 1 March 28

C O HAWTHORNE

SIR—I desire to correct any erroneous impression I may inadvertently have conveyed to Dr Halliday Sutherland's or anyone else's mind regarding manurial *B coli* in milk. Before milk is pasteurized it is invariably examined bacteriologically at any rate so far as the company with which I am connected is concerned. It is in this raw milk subsequently pasteurized that manurial *B coli* is so seldom found the bulk of the *B coli* found being of non faecal type. If Dr Sutherland had read the whole of my letter carefully he would have seen that I assert that 'milk that has been pasteurized is entirely free from potential pathogenic germs', naturally this includes *B coli* of all types. How can a process that ensures germ-free milk give anyone a sense of false security in face of the fact that unpasteurized milk cannot be said to be free from pathogenic germs of a deadly type? Surely such an assertion of false security is straining at the gnat and swallowing the camel. In the *Journal of Dairy Research* Vol VIII No 3, 1937 this idea of a false security is entirely negated. The passage was quoted in full by Dr Bernard Myers in his letter published in your issue of March 5 1938, p 537.

These are not mythical ideas they are proven facts the result of intensive research by men of high standing searching keenly after the truth and should convince any one capable of logical deduction that the only safe milk we have at present at our disposal for human consumption must be pasteurized. We hear a lot about the terrible results of the destruction of vitamins by pasteurization mostly exaggerated but what is the ratio of value to human life between a slight deterioration (if any) of the nutrient quality of milk by pasteurization—a deterioration easily replaced—and the presence of death-

dealing germs that cannot be removed from raw milk except by pasteurization? That is the question that advocates of raw milk must answer satisfactorily or they must give up the fight—I am, etc.,

Streatham, March, 1938

JAMES KIRKLAND, M B

SIR,—Dr Halliday Sutherland mentions an outbreak of typhoid in Montreal which was traced to a typhoid carrier working in a pasteurizing plant. In this country we have many more carriers of tuberculosis than of typhoid. Here are two instances which suggest that few, if any precautions are being taken to avoid contamination of our milk supplies by such carriers of tuberculosis.

(1) Some months ago a man suffering from advanced phthisis was admitted to a sanatorium in Fife. When asked his occupation he replied 'I am the dairyman in charge of a T T herd of cows'. Such a carrier could easily infect the cows as well as their milk.

(2) A few weeks ago I operated on a young dairymaid for tuberculous cervical glands. For six weeks before operation she had had a discharging sinus in the neck. Incidentally no notification as to her condition had been sent to the public health authorities.

Veterinary inspection of dairy cows alone is not enough. Until the dairy workers also are periodically inspected and "vetted" can we regard any milk as safe unless effectively pasteurized?—I am etc.

Dundee, March 27

F R BROWN

SIR—Having great respect for Dr H Sutherland's experience and attainments I was surprised to read his letter in the *Journal* of March 26. Surely pasteurization cannot be held to remove the stimulus towards the production of clean milk when so many pasteurizing concerns have found, often through bitter experience the necessity for a clean milk to start with, as the heat-resisting bacteria so often present in unclean milk may not only prevent the finished product from reaching the necessary standard but may also foul the plant in such a way as to interfere seriously with work for some time.

Of course milk can be contaminated after it has been pasteurized as I believe, was the case in the Montreal typhoid epidemic, but surely this possibility, which plant managers should always have in mind would hardly have been a suitable part of the now famous advertisement? It amounts to this necessity for care in handling milk is not removed by pasteurization but I do not think this was expected of it. Also there are more reasons for the attempts to eliminate tuberculosis among cattle other than that of producing T T milk. Once farmers realize the possibility of preventing disease, I do not suppose they will tolerate its ravages, quite apart from its effects on milk.

By all means consider the effects on the fertility vitamins of milk but let us also think of the toll bovine tuberculosis takes of infants and potential mothers. If we have to choose which represents the greater menace towards the maintenance of the population level? In these days when even bad causes can muster united fronts let there be no dissension in the ranks of those striving to prevent this other slaughter of the innocents. In this campaign the B M A should represent not only its 37 000 members but also every worker who has ever given a thought to the subject—I am etc.

London W C 1 March 29

EMANUEL AGES

## Cancer of the Lung

SIR—With reference to the recent annotation (*Journal* of March 26 p 652) on this subject some further information may be of interest. In some respects it is possible to bring the Joachimstal (and presumably Schneeberg) miners lung cancers into line with those observed in metal grinders and in the mice exposed to road dust. In all cases besides silica in some form iron is present in the dust. Some of the inorganic contents of the Joachimstal dust resemble very closely those of the road dust which produce lung cancer in mice (see Table). The presence of some form of iron and silica in these dusts is suggestive and further experimental work is in hand dealing with this aspect of the problem.

Some Inorganic Constituents of Dust

	Road Dust	Metal Grinders Dust	Joachimstal Pictet's Dust	Nickel D (old matter)
$\text{SiO}_2$	40 per cent	—	64 per cent	0.7 per cent
$\text{Fe}_2\text{O}_3$	4.5 per cent	—	6 per cent	50 per cent
$\text{Al}_2\text{O}_3$	12.0 per cent	—	17.7 per cent	—
$\text{MgO}$	2.5 per cent	—	2 per cent	—
$\text{CaO}$	14.0 per cent	—	7.7 per cent	—

I am indebted to the Joachimstal mining authorities for the sample of the dust taken from the vicinity of their mines. The analysis was made by the London Government Analyst Drs C J Amor (Mond Nickel Co) and J C Bridges (of the Home Office) have drawn attention to the frequency of lung and nasal cancer in nickel workers. I am indebted to the former for a sample of the dust and the analysis of the old matter. This also contains iron with some silica in addition to large quantities of nickel cobalt copper and arsenic and some lead and sulphur. Of course nickel workers like everyone else come into contact also with road dust. Animal experiments are being conducted with this nickel dust iron and other metals may play some catalytic part in development of lung cancer. Concerning the histology of the mouse primary lung cancers there is now no very great difference between these and human lung cancers. At one time the former were regarded as non metastatic but in the last year or two I have obtained metastases from lung cancers in seven mice. The squamous celled carcinoma is a main type of human lung cancer and is regarded as primary. There is a possibility that such squamous cancers are really secondary to warts on the skin which have become malignant and then regressed or have been removed by cautery or other means. In my mice dusted with dust from tarred roads 70 per cent showed typical squamous-celled tar cancers of the skin and several of these had metastases of similar cells in the lung. It would be interesting in the case of human lung cancer to know more of the history of warts on the skin—I am, etc.

National Institute for Medical Research N W 3 March 26 J ARGYLL CAMPBELL

## "Gonococcus Antitoxin" for Gonorrhoea

SIR—We ask leave to deal with certain points raised by Dr Anwyl Davies in his letter in your issue of March 26 (p 701) in which he refers to our experiences in the treatment of gonorrhoea with so-called gonococcus antitoxin. He states that he cases described in the article apparently received no other treatment than the

antitoxin. Our report indicates quite clearly that this was not so. In most of our cases local treatment in the form of urethral irrigations was withheld only during the period of administration of antitoxin—that is to say for not more than one to three weeks in the very large majority. We would remind Dr Davies that the practice of withholding local treatment during the initial stages is one which has been used very successfully by some highly competent venereologists. We do not consider it possible that the extraordinary discrepancy between our results and his could be due to this possible difference in procedure. In this same connexion we quote the concluding paragraph of a letter written by Dr Davies in your issue of March 6 1937 (p 325) in reply to a criticism of the fact that in his report mention of irrigation and other adjuvant treatment had been omitted.

The question asked by one of your correspondents as to whether adjuvant treatment was employed can be read answered. Some of the cases quoted had no other treatment others were treated along routine lines. After all one does not rely on antitoxin in treating a case of diphtheria or the exclusion of throat sprays cardiac stimulants and allied nursing.

This estimate of the importance of local treatment in gonorrhoea seems to have undergone a change during the past twelve months. Obviously such lack of detail makes it quite impossible to assess the relative parts played by the two forms of treatment in Dr Davies's original series of cases. There would perhaps be some basis for comparison between our results and those recently obtained in the St Thomas's Hospital Clinic if Dr Davies would give us precise details as to the general and local treatment which he is using in addition to the injection of antitoxin and would also state the age duration of the signs and symptoms of the aetiology in these cases and the proportion of them which were found subsequently to have evidence of latent infection.

Dr Davies writes that a number of his patients who have received daily doses of 1 ccm of the antitoxin have been free from serious reactions. As we have said it was also our experience that some of these reactions could be avoided by radical reduction of dosage. At the same time there was no evidence that our patients benefited and in fact ultimate prostration and sepsis was the rule. It would be interesting to know reasons which prompted Dr Davies to use a dosage so much smaller than that which he recommended.

—We are etc

E T BURKE A H HARRIS  
J GABE A J KING

London W 1 March 29

## Somatic Pain

SIR—I was much impressed by Sir Thomas Lewis's article on somatic pain in the *Journal* of February 12 (p 21) but I share Dr James Mennell's surprise (March 12 p 592) that Mr J H Kellgren should have omitted mention of the age old practice of relieving rheumatic excellent article on referred pain in muscle (February 12 p 225). I have used paracenes in cases of chronic muscle pain—lumbago sciatica tennis elbow and the like—for many years and have found it in suitable cases almost invariably successful in a properly performed.

It is well known that muscle tissue is insensitive to pain unless the touch sends it to some degree of spasm, thus providing the adequate stimulus for painful sensation. In performing paracenes for example no pain is felt after the initial prick (sartorial pain) of the needle as it enters

the skin until it strikes that part of the muscle which is affected by the fibrosis, when a pain of the "web" type is momentarily experienced.

The pathology of these painful areas in muscle would seem to fall into two main types

(1) Where the fibres are bound together by fibrous adhesions and their unequal contractile powers cause tension in the sarcolemma, which sets up the local spasm causing pain. This puts the muscle group as a whole on its guard to prevent this happening with subsequent 'protective' limitation of movement. It is this type of fibrosis which does not benefit by paracentesis but is readily cured by manipulation which snapping down the interfibrillar adhesions permits the muscle to act according to the decrees of the nervous stimulation of its group without interference from stimuli arising from tension in the sarcolemma.

(2) Where a number of fibres are sealed up in one or more areas of lymph organized at the periphery to form an encapsulated sac any increase of tension on the wall of this sac 'hydraulically' causing tension on the sarcolemma spasm and pain. It is the momentarily increased tension in the sac as the needle pierces it during paracentesis which causes the pain referred to above. This is the type which, if the area be found is immediately and dramatically cured by paracentesis which allows the escape and absorption of the enclosed lymph and permits free working of the muscle once more.

I consider the injection of novocain (save for the purpose of completely abolishing the slight pain of the process in hypersensitive patients) to be superfluous in this type of case, which is immediately eased by the mere rupture of the sac wall by the needle. In the treatment of the first class of case, however, it is unquestionably a great forward step in technique, as by blocking the painful stimuli it inhibits the local reflex protecting the fibrotic muscle, and allows the opposing healthy muscles to pull the fibrotic ones through their full range of movement, thus painlessly permitting the patient to break down his own intermuscular adhesions. I am no advocate of heavy massage, as by the 'mallet'. If it succeeds in rupturing the encapsulated areas all is well, but if the walls are too tough and it fails, the dull ache that follows would have been unhesitatingly described by Mr Mantalini as 'most demnable'. This subcutaneous surgery is well within the province of the general practitioner, and suffering humanity demands that more attention should be paid to it. But I would warn the practitioner that it needs some training of the tactile sense and a certain degree of experience, and that while "the Colonel's lady and Susie O'Grady are sisters under the skin" he would be wise to tackle the younger sister first!—I am, etc.,

Ashton in Makerfield March 21

GERALD LATHAM

### Treatment of Hay Fever

SIR—During the last two years we have had a hay fever clinic at the Royal Waterloo Hospital and it might be of interest at the present season to give you some of the results that have been achieved. The treatment is as follows

In the first place all cases are investigated and tested out against pollens of various kinds—trees, grasses, flowers, dust, etc. Where a positive reaction occurs—that is to say an urticarial wheal of at least half an inch—the patient is immunized. Usually 0.1 ccm of the appropriate allergen working up by 0.1 ccm a week to 1 ccm is used. We have been using mostly the pollens made by either Allen and Himbury or Duncan Flockhart. In cases in which this treatment has been tried before and little improvement has followed zinc ionization has been used. This usually consists

of three treatments at weekly intervals. The period of ionization varies from three or five to eight minutes and the amperage used is between 3 and 8 according to what the patient can stand. The nose of course is previously anesthetized by applying a solution of novocain 5 per cent. In a further group of cases of vasomotor rhinitis which do not react to either of the above methods and which have exacerbations during the hay fever seasons we have found ten injections of calcium Sandoz associated with ten injections of the patient's blood given intramuscularly of great value. Many of the cases that have a catarrhal bronchitis associated with the condition have benefited by inhalations of oxygen passed over a solution of essential oils through a Collison apparatus.

For the irritability of the eyes we have found the following solution of great help

R. Cocaine 2 per cent	m j
Liquor adrenalin hydrochlor	m xx
Liquor aq rosae	ad 3 ss

In more obstinate cases we have also used ephedrine and merthiolate jelly applied locally.

It will be seen, therefore that a variety of methods have to be used, and in my experience, even when using proved antigens the specific vaccination with pollens alone is not enough. The majority of our cases have been of many years standing, and have had previous therapy along these lines without the desired result being achieved.

To a questionnaire we have sent out to some eighty-four patients we have received fifty replies. Two patients were completely cured for the season, thirty were greatly improved, twelve remained stationary, and in five the condition had become worse. In the last five cases ionization had been used. Hence from our figures improvement occurred in over 60 per cent of cases, cure in 4 per cent, and failure in 34 per cent. We feel that it is necessary to start treatment early in order to obtain the best results, thus relief and immunity treatment should start within the next two or three weeks.

I am grateful to Dr P. M. Deville for helping with the questionnaire and statistical results—I am, etc.,

London W 1, March 17

GERALD SLOT

### Problems of Vitamin B Deficiency

SIR—Regarding the annotation on problems of vitamin B deficiency in the *Journal* of March 19 (p. 630), in the course of which reference is made to the recently published work of M. W. Poole I should like to point out a slight inaccuracy in the last sentence, which reads "and if the more or less negative results are accepted as final it would appear that no supplements of vitamin B to children's diets are really necessary." The word "children" should, of course, be "infants," for the note on Poole's work refers to the latter only. I recently reviewed the subject of vitamin B<sub>1</sub> in the diet of infants and young children, and published the results of a small-scale investigation conducted among babies and toddlers attending welfare centres (*Medical Officer* 1938, 59, 107). Among the findings one of the most striking was that although symptoms of probable B<sub>1</sub> deficiency were negligible in infants under 9 months old—for example anorexia not attributable to other causes was present in only 0.9 per cent, and constipation in 1.9 per cent of 212 infants—such symptoms were quite common in children over 9 months old after which age the diet consists chiefly of solid food instead of mainly milk. Thus anorexia probably due to a vitamin B<sub>1</sub> deficiency was found in 25.6 per cent of 176 children aged 9 months to 4 years, most of them being between 1 and 3 years. Favourable results were obtained by supple-

menting the diet of these children with foods rich in vitamin B<sub>1</sub>. I am almost convinced that when discussing the desirability of supplementing existing diets with vitamin B at any rate as regards that factor known as aneurin or B<sub>1</sub> we should distinguish between the needs of toddlers or older children and those of milk-fed infants—I am etc

Oxford March 22

F J G LISHMAN

### After-effects of Modern Treatment of Carcinoma

SIR—I consider that Mr Percy Furnivall has done good service in drawing attention to the unoward results of the radium and x-ray treatment of malignant disease (*Journal* February 26 p 480). My experience of irradiation therapy in the group of cancers of the lateral fauces to which Mr Furnivall specifically refers closely corresponds with his own. For three years all my cases of faucial cancer were sent for radiation treatment by recognized experts. The results were distressing. Though in some there was initial notable improvement in the malignant condition all relapsed all suffered severely with pain—some intensely requiring large and frequent doses of morphine—all had necrosis of soft and bony tissue and all died within a year except two. Of these two one patient a very early case died within fifteen months from the date of starting the radiation treatment with extensive necrosis and with a large fistula measuring approximately 2 inches by 3-inch from the neck into the pharynx the other died at the end of a little over two years from the time when first seen with widespread ulceration showing no tendency to heal and with necrosis of about a third of the inner surface of one side of the lower jaw.

In these cases it is usually impossible to determine what is the condition with regard to the malignant disease—the inability to open the mouth the sloughy ulcerated surfaces the necrosis of bone and the induration of the soft tissues rendering a distinction between the disease and the effects of the treatment almost impossible and again making it impossible to estimate the prospects of ultimate cure of the cancer if the patient can be carried through the long drawn out misery of radionecrosis. I know nothing of the results of the treatment of these lesions with the radium bomb. It is to be hoped that they will be vastly better than those which have been achieved in the past by radiation therapy—I am etc

Middlesbrough March 20

WM S DICKIE

### Sulphonamide for Prophylaxis in Midwifery

SIR—In a recent article (*Journal* March 12 p 562) Professor R W Johnstone reviewed the results of a trial of sulphonamide for prophylaxis in midwifery. We have been using B W and Co sulphonamide P 0.5 gramme tablets four times a day for four days and as the unit admits patients in labour some may be under treatment for twenty-four to thirty-six hours before actual confinement.

Our results—taking morbidly as a temperature of 100.4 F on two successive occasions within twenty-four hours in the first twenty-one days of the puerperium—when compared with a corresponding period of last year have been quite promising. The morbidity rate of the control series (574 cases) was 25 per cent and of these (twenty cases) one developed breast abscess and only one had streptococcal septicaemia. In the sulphonamide group (581 cases) the morbidity rate was 17 per cent and of these (ten cases) one had breast abscess and one had signs of acute lobar pneumonia on the third day. Of

the ten three had had haemorrhagic streptococcal pneumonia while none had streptococcal or staphylococcal pneumonia.

	Morbidity Rate	Percentage of Morbidity
Control Series	25	100
Sulphonamide Series	17	68

While it must be admitted that comparison for a period one year before is not of great value since during the time that the infecting organisms were common virulence the results suggest a continuance of the treatment. I wish to express my thanks to Mr T S F FPCSC FCOG for permission to publish them—am etc.

Belfast March 19 J H MacLACHLAN M.B. B.Ch.  
F.R.C.O. Junior Member F.R.C.S.

### Coupons for the Sherman Bigg Fund

SIR—Four months ago you kindly allowed me to appeal to the profession to help in collecting coupons for the *Daily Mirror* and *Daily Star* in behalf of the Sherman Bigg Fund administered by the Postal Medical Foundation of Epsom College. As his memorial on March 1 you may be willing to allow me to report the results.

First, may I give you a brief resume of the work of the Sherman Bigg Fund for 1937. The income from Mr Bigg's bequest was £155 and special donations augment it raised the total to £275. For the last three years working of the Fund may be regarded as remarkably satisfactory. From the thirty-two educational grants were made to girls and boys and eight maintenance grants for widows or orphans.

Next, as to the coupon collection. From my friends whose help had been enlisted before I wrote to you more than 20,000 coupons have been secured value over £10. The great bulk of these have come from the medical superintendents of the Earl Lonsdale County Hospitals whose kindness I desire to acknowledge most thankfully. Amongst my correspondents whom I desire also to thank here are about 1,200 coupons 1,000 of these have been received from one of the hospital doctors and if that is so the total essence of the medical profession to my letter has been of the value of no less than three shillings. Any comment of mine about this would be expressed in language more than I could probably use to print so I would not say more than is desirable perhaps you would be so good as to say it yourself. I am, however, still hoping for you to do it to reach me at the end of the month—I am etc.

HENRY PUGH

By Beckett &amp; Sons W.C.I. March 19

\*\* We could trim or comment as to the value of Dr Robinson's contribution and the paper can be done enough—but it may be better to leave it as it is, saying that the profession has done a good deal more in this matter and we hope there will be more to pay off from—ED. B.M.J.

### Corporal Punishment

SIR—I do not propose to discuss the merits of corporal punishment should or should not be abolished but clear that considerable consideration may be given to the merits of the use of punishment in the treatment of the individual as well as the community. The law is not free and it is not free to pay for it—ED. B.M.J.



followed, both accounts must be balanced. Justice between the assaulter and the assaultee is logically effected by inflicting on the former the same amount of pain, distress, incapacity, and expense as was inflicted on the latter. The account between the individuals being thus balanced, justice between the assaulter and the State must be effected by a suitable penalty.

At the present time there seems to be a general disposition to regard justice as a matter solely between the State whose law is broken and the assaulter who breaks it, and if this restricted conception is adopted corporal punishment as a means of justice is obviously illogical, for the State has suffered neither pain, distress, nor incapacity. The crime being impersonal so far as the State is concerned, it may quite legitimately discard the balancing of the account between itself and the assaulter and concentrate its endeavour on trying to prevent him breaking its laws again. Whether this attitude is desirable or not may be debated, but if it is adopted justice is not the word which should be applied to it. If a person who has been laid up for a month with a broken head and other injuries retains any sense of humour, the news that the State is redressing his affliction by an earnest endeavour to dissuade the person who assaulted him from committing a like crime again must surely make him laugh—I am, etc.,

London W1, March 25

VICTOR BONNEY

## Universities and Colleges

### UNIVERSITY OF CAMBRIDGE

Sir Patrick Laidlaw, FRS, will give the Rede Lecture in the Regent House on Friday May 20, at 5.30 p.m. His subject is Virus Diseases and Viruses.

E. T. C. Spooner, M.A., M.R.C.S., has been reappointed University Lecturer in Pathology, and R. I. N. Greaves, M.A., M.B., and G. P. McCullagh, M.A., M.D., have been reappointed University Demonstrators in Pathology. G. C. Grindley, M.A., has been appointed University Lecturer in Experimental Psychology.

The Managers of the Frank Edward Elmore Fund have appointed J. C. Sinclair, M.D., Toronto, to a studentship from April 1, 1938.

On February 4 the University accepted the offer of the Rockefeller Foundation to provide £8,000 towards the support of research in the Department of Medicine over the five year period January 1, 1938 to December 31, 1942 the amount available in any one year of the grant not to exceed £1,600. The Faculty Board of Medicine now recommends that this grant be used for the establishment of three posts of Assistant in Research in Medicine with a tenure limited to the period of the grant. The General Board concurring with the Faculty Board recommends that these three posts be established from July 1, 1938 and that appointments to them be made by the Appointments Committee of the Faculty of Medicine with the approval of the General Board each for a period not exceeding five years or for so long as the Rockefeller Foundation continues the grant to the University for this purpose whichever period is the shorter.

### UNIVERSITY OF LONDON

At a meeting of the Senate held on March 23 with the Vice-Chancellor in the chair, R. V. Christie, M.D., M.Sc., McGill, was appointed from April 1 to the University Chair of Medicine tenable at St. Bartholomew's Hospital Medical College.

F. R. Winton, M.D., Camb., has been appointed as from October 1 to the University Chair of Pharmacology tenable at University College. Since 1932 he has been Reader in Physiology in the University of Cambridge.

### UNIVERSITY OF BRISTOL

The University of Bristol has invited Sir William Savage, formerly medical officer of health for the County of Somerset, to receive the honorary degree of M.D. in July.

### UNIVERSITY OF LEEDS

The following candidates have been approved at the examinations indicated:

M.D.—Doris B. Brown, D. Heap, E. James, E. J. Wayne  
CH.M.—M. B. Khan  
FINAL M.B., CH.B.—*Part I*: A. N. T. Aikman, T. Akroyd, J. B. Ashmore, C. E. Astley, P. D. Bedford, C. H. Boyd, A. Colbert, J. B. Coltman, E. Cope, Patricia M. Dobinson, Ruth Edmonds, G. Farrer, J. M. Fitton, M. M. Frus, M. Goldberg, H. Goldstone, Mary E. Goodson, F. Gouldsbrough, A. Green, G. Higgins, J. Hirst, H. J. M. Holland, Adelaide J. G. James, F. Jennings, R. E. Johnson, D. E. Mitchell, L. H. Moss, C. Pickard, J. D. Pickup, T. B. Purdy, P. Rapaport, G. N. Reed, L. Rosenthal, F. Sandy, J. F. Scannell, J. V. Schofield, F. N. Shuttleworth, Ida M. Shuttleworth, S. A. Smith, S. A. Swanson, E. S. Tan, P. E. R. Tattersall, A. L. Taylor, P. J. Waddleton, R. P. Warin, K. D. Wood, I. Young. *Parts II and III*: W. M. H. Shaw, J. K. Drucquer, E. W. Jackson, J. W. Jackson, R. R. Orton, G. R. Bedford, D. Benson, J. Braham, W. A. Bridgwood, W. L. Carruthers, D. B. Feather, Dorothy Hough, R. A. S. Keighley, E. S. Levy, S. Madden, W. Maude, R. B. Ray, G. F. Reid, Phyllis M. Richards, J. F. Robinson, J. W. Scholey, S. H. Segerman, A. P. B. Wain, A. J. Ward, T. I. Watkins, D. C. Williams, Kathleen Wilson.  
DIPLOMA IN PSYCHOLOGICAL MEDICINE—W. Sharp  
DIPLOMA IN PUBLIC HEALTH—J. W. Hobson, R. S. Illingworth, T. W. Smailes

\* With first class honours † With second class honours  
‡ With distinction

The following medals and prizes have been awarded:

Hardwick Prize: J. K. Drucquer, E. W. Jackson. Hillman Prize in Clinical Medicine: I. R. Gray. McGill Prize and Edward Ward Prize: W. M. H. Shaw. Infirmary Scholarships: D. L. Richardson and R. I. T. Lloyd. Essay Prize in Anatomy and Physiology (Obstetrics and Gynaecology): I. B. Gartside, commended: R. E. Shaw.

### UNIVERSITY OF SHEFFIELD

The following candidates have been approved at the examination indicated:

FINAL M.B., CH.B.—*Parts II and III*: G. E. Wright (with second class honours), A. K. Beardshaw, R. B. Davies, H. D. Elliott, W. L. Rose, J. W. Wier.

### ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At the monthly meeting of the Royal Faculty of Physicians and Surgeons of Glasgow with Dr. John Henderson in the chair, Samuel Lazarus, M.D., M.R.C.P., was admitted a Fellow of the Faculty.

## The Services

### EFFICIENCY DECORATION

The King has conferred the Efficiency Decoration of the Territorial Army on Colonel G. J. Linklater, O.B.E., Major C. B. Jones, Major D. R. Jones, Major J. Rigby, and Major D. Ross.

### DEATHS IN THE SERVICES

Colonel THOMAS EDWARD DYSON, Bombay Medical Service (ret.), died at Monte Carlo on March 22, aged 77. He was born on November 26, 1860, the son of the Rev. Simeon Dyson of Idle, Yorkshire, and was educated at Edinburgh where he graduated M.B., Ch.B. in 1883. He entered the Indian Medical Service as surgeon on September 30, 1886, attained the rank of colonel on January 12, 1914, and retired on January 10, 1919. He received the Kaisar-i-Hind medal (first class) on November 9, 1901. He had been a member of the British Medical Association for thirty-four years.

Lieutenant Colonel JAMES DANIEL CROWE, R.A.M.C. (ret.), died at Hove on March 23, aged 93. He was born on November 7, 1844, and was educated in Dublin where he took the L.R.C.P. and S.I. in 1867. He entered the Army as assistant surgeon on October 1, 1867, became surgeon major after twelve years' service, and retired on December 31, 1887, with the honorary rank of brigade surgeon. Subsequently he changed to lieutenant colonel under the notification of August 9, 1898. In the old regimental days he served in the 21st Foot, the Royal Scots Fusiliers, and in the Royal Artillery. There must be few men still living on the retired list of the Royal Army Medical Corps who served as regimental officers. After retirement he was employed at Weymouth. He had been granted the bronze medal of the Royal Humane Society.



## Medical Notes in Parliament

The House of Lords this week discussed foreign affairs and made progress in Bills. The House of Commons spent a day on Scottish business and also considered the Cinematograph Films Bill and the Coal Bill.

The Hairdressers (Registration) Bill was rejected by the House of Lords on second reading on March 2. In the House of Lords on March 29 the Royal Sheffield Infirmary and Hospital Bill was read the third time and passed. Later that day the Bill was read a first time in the House of Commons. The Housing (Financial Provisions) Bill was read the third time in the House of Lords on March 29 and passed.

The committee stage of Viscount Dawson of Penn's Infanticide Bill is set down for Thursday April 7 in the House of Lords.

The Divorce and Nullity of Marriage (Scotland) Bill and the Marriage Bill were each read a second time without debate by the House of Commons on March 22. On March 29 Sir Kingsley Wood presented the Housing (Rural Workers) Amendment Bill which amends the Housing (Rural Workers) Acts 1926 and 1931. On the same day the Housing (Agricultural Population) (Scotland) Bill passed through report stage and was read the third time. The Criminal Procedure (Scotland) Bill was read the second time.

### Morale of Air Force Officers

In the House of Commons on March 21 the Air Estimates were considered on report.

Mr GARRO JONES referred to the morale of officers in the Royal Air Force and the consumption of alcoholic liquor. He said that unless that source of weakness was carefully watched and kept under control it would affect the efficiency and nerve of pilots in the Force.

Mr CHURCHILL said that all he had been able to learn supported the view that there was no ground for any general stigmatization of the habits which prevailed in the Air Force.

Colonel MURHEAD said that the question of officers drinking had been raised with him privately by a number of people. They were very anxious to know whether every check was kept on the physical and with it the mental capacity of pilots and whether every step was taken to ensure that any deterioration in morale or capacity was noted. It was necessary for the medical officers to have constant contact with the pilots not only in their work but in their ordinary life and games so that any deterioration in morale or efficiency would be noticed at an early stage. He was sure members would like to be reassured on that point.

The Vote was agreed to.

### Admission of Austrians to Britain

On March 22 Sir SAMUEL HOARE said that the policy to be adopted as regards the admission of Austrians to this country had received the careful and sympathetic consideration of the Government. He was anxious that admission should not be refused to suitable applicants including persons whose work in the world of science or arts or business and industry might be advantageous to this country. It must be remembered that even in the professions the danger of overcrowding could not be overlooked while in the sphere of business and industry the social and economic difficulties must be taken into account.

Replying to Mr BEVAN Sir SAMUEL HOARE said that whether an individual should practise his profession in this country was a question for the professional organizations.

Mr MANDER asked if any special machinery was going to be set up to help and guide these professional and other people on their chances of coming in. Sir SAMUEL HOARE

said it would be necessary to have some further organization. He was informed that discussions would be needed between the Foreign Office and other authorities and perceiving those discussions he could not add to the announcement he had made.

### Treatment of Rheumatism

Sir KINGSLEY WOOD was asked on March 24 whether he would set up a committee to consider the best methods of the treatment of rheumatism and the provision of facilities for the treatment. He replied that work in this connection was already undertaken by the Empire Rheumatism Council in co-operation with a special committee of the Royal College of Physicians. The Medical Research Council also carried out and assisted research in the various aspects of this disease.

### Food and Drugs Bill

The second reading of the Food and Drugs Bill was moved in the House of Lords on March 24 by Lord GAGE. He said this was the third Bill dealing with local government and public health based on the work of a Departmental Committee appointed in 1929 originally under the chairmanship of Lord Chelmsford and subsequently under Lord Addison. The Bill dealt in the main with the law of food and drugs but included provisions relating to markets, slaughter houses and cold air stores. The Bill did not deal with matters of weight and measures. As the law relating to adulteration of food was the same in London as elsewhere the present Bill covered the County of London. It consisted of 102 clauses and four schedules. Part I contained general provisions as to food and drugs and re-enacted the major part of the Adulteration of Food Act of 1928 together with provisions from the Public Health Act 1875 dealing with the seizure and condemnation of unsound food. It also included power for the Minister of Health to make regulations on the importation, preparation, storage, sale and delivery of food. Part II dealt with milk, dairies and artificial cream and in the main reproduced provisions from the Milk Acts of 1915 and 1922 and the Artificial Cream Act of 1927. Part III dealt with certain other kinds of food the most important being bread and flour. There were also Part IV on importation offences, Part V on markets and slaughter houses and Part VI on enforcement of legal proceeding. The Bill combined consideration with a limited amount of amendment. The Government proposed to invite the two Houses to appoint a Joint Select Committee on it.

Lord MARCROFT said the Bill should provide that when bread or any food was delivered at the consumer's house it should be protected against insanitary handling. He also referred in the Bill about delivery of milk. Although trouble was taken to produce pasteurized milk and clean milk yet the milk had to be poured out of a bottle that had been left in a cold house and there defiled. The public was trusting to pasteurization but was swallowing filth. The Bill should empower local authorities to prevent the exposure of foodstuffs for sale at ground level where they might be defiled by dogs.

Lord ADDINGTON, as chairman of the Departmental Committee which drafted the Bill, said they had been unable to include all the regulations regarding cleanliness of food when they would have liked to bring in. But the Minister might make Milk and Dairy Regulations dealing with the distribution of milk, the scalding or closing of churns and other vessels and the abstraction of fats. They had gone as far as they could consistently with the present law in this direction. Another clause allowed regulations to be made for preventing danger to health in the exposure for sale and delivery of bread or flour. The regulations would largely cover the points Lord Marcroft had raised.

Lord STRAPOLSKI asked for prohibition of the practice of refilling dirty milk bottles by milk round men.

The Bill was read a second time without a division and on the motion of Lord GAGE the House agreed to refer it to a Joint Committee of both Houses.

On March 28 the House of Commons agreed to participate in the Joint Select Committee on the Bill.

**Air Raid Precautions for Hospitals**—Mr GEOFFREY LLOYD announced on March 17 that a handbook would be available shortly on such structural precautions as were possible for the protection of hospital patients staff and buildings against injury in air raids. A survey of the position of the hospitals in London was being made by the Ministry of Health and the medical authorities. Pending the issue of the handbook the Home Office would be glad to advise any hospital. Mr W. T. KELLY asked that the survey should include mental hospitals.

**Medical Relief for Spain**—Miss RATHBONE on March 21 asked the Prime Minister whether in view of the casualties caused by the bombardment of the civilian population of Barcelona and the resultant shortage of medical and nursing personnel medical supplies and anaesthetics the Government would make a grant for these purposes. Mr CHAMBERLAIN said the Government had already made a contribution to the International Red Cross Society for the provision of medical and other forms of relief in Spain and were considering the desirability of a further contribution.

## EPIDEMIOLOGICAL NOTES

### Diphtheria and Scarlet Fever

Diphtheria appears to be on the increase in England and Wales. During the week under review 1,556 cases were notified with 41 deaths as against 1,492 cases in the previous week and 40 deaths. London did not share in this increase, there being 159 cases compared with 170 in the previous week, while 5 deaths were reported in both weeks. Slight increases in notifications were noticed in Eire and Northern Ireland, while in Scotland notifications decreased from 267 to 261.

Scarlet fever continues to decrease in England and Wales—2,307 compared with 2,515—but the number of deaths showed an increase of 2 over the previous week. Notifications decreased in London from 196 to 189, but there were 3 deaths, compared with none in the previous week. Fewer notifications were reported from Scotland, Eire and Northern Ireland, but the deaths were the same as in the previous week—1 each for Scotland and Eire and none for Northern Ireland. The notifications of diphtheria and scarlet fever in England and Wales as a whole remain greatly in excess of the median value for the corresponding weeks of the last nine years while in London diphtheria figures are slightly less and the scarlet fever figures considerably less.

### Measles

In the 125 Great Towns there were 66 deaths from measles compared with 55 in the previous week, of these, 18 (13) occurred in London, 3 (7) in Liverpool, 6 (3) in Manchester, 6 (2) in Plymouth, 2 (4) in Sheffield. The figures in parentheses denote the number of cases in the previous week. The London epidemic appears to have reached its peak, the number of cases reported from the LCC elementary schools having dropped from 2,521 in the previous week to 2,456 in the week under review, while the average daily admissions to the LCC fever hospitals were 94. The number of cases of measles under treatment in the LCC fever hospitals on Friday, March 18 was 2,079 compared with 1,892 in the previous week. On the same day there were under treatment in these hospitals 1,211 (1,275) cases of diphtheria, 830 (840) of scarlet fever, and 271 (271) of whooping cough. The figures in parentheses refer to the numbers in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notifiable for the week ended March 19 were 1,317 (1,214) distributed in the different boroughs thus: Battersea 142 (143), Bermondsey 60 (54), Finsbury 30 (27), Fulham 81 (51), Greenwich 111 (68), Hampstead 68 (69), Lambeth 377 (355), St. Pancras 143 (172), Shore-ditch 31 (17), Southwark 204 (207), Stepney 70 (51). The figures in parentheses denote the numbers for the previous

week. It may be inferred from these figures that the decrease among the older children in the schools is more than offset by an increase in incidence among children under school age although no information is available from the boroughs in which measles is not notifiable. There were 18 deaths—an increase of 5 over the previous week. In Scotland 1,547 cases were notified, compared with 1,718 in the previous week, the figures for Glasgow were 1,037 (1,188), Edinburgh 90 (105), Paisley 55 (79), Dundee 115 (140), Aberdeen 107 (51). The figures in parentheses refer to the notifications in the previous week. During the week there were 24 deaths from measles of which 19 occurred in Glasgow, compared with 16 and 11 respectively in the previous week. In Northern Ireland there were 106 cases, of which 98 occurred in Belfast compared with 171 and 168 respectively in the previous week, while the deaths were 8, of which 6 were in Belfast compared with 18, all occurring in Belfast in the previous week. During the week under review no deaths from measles were reported from Dublin.

### Psittacosis

According to reports in the Press an outbreak of sickness in the Parrot House of the London Zoo is suspected to have been one of psittacosis. A commissionaire who had been in contact with the birds has died in hospital "of a fever resembling psittacosis." Three keepers from the Parrot House are also reported to be ill. A leading article on the control of psittacosis appears in this issue at page 737.

### Cerebrospinal Fever

In the *Weekly Epidemiological Record* of the Health Section of the Secretariat of the League of Nations of March 24 a map of the world is included showing the distribution of cerebrospinal fever in the different countries for the years 1935-6-7. No figures were available from India, South America, and U.S.S.R. The figures show that the seasonal increase in the incidence of cerebrospinal fever, greater than in 1936, was reported in England and Wales, Germany, Greece, France, Italy, Poland, Scotland and Yugoslavia, while there was a decrease in Japan and Korea. In Africa the disease, advancing from the east and south, was encountered in epidemic form in French Equatorial Africa in 1936, and in the northern provinces of Nigeria in the beginning of 1937. It appears to have reached the Niger Territory towards the end of 1937 when during the week ending February 28, there were 273 cases with 178 deaths, bringing the total during the epidemic to 1,084 cases and 572 deaths. In the United States of America 377 cases were reported for the four week period ended January 29, compared with 542 in the corresponding period of 1937 and 670 in 1936.

### Small-pox

The P and O liner *Strathaird* was put in quarantine on its arrival at Adelaide on March 26 because of the death from small-pox of a woman passenger, aged 35 who had joined the ship at Bombay. On March 25 the ship surgeons spent five hours vaccinating unvaccinated passengers and members of the crew.

In the week ended March 19 there were 236 cases of small-pox reported in Hong Kong with 192 deaths, compared with 214 cases and 128 deaths reported in the previous week. During the same week in British India there were reported in Bombay 212 (234) cases of small-pox, in Calcutta 261 (185) in Madras 69 (64). The figures in parentheses refer to cases reported in the previous week.

### Typhus

In the week ended March 12 there were 411 cases of typhus in Morocco of which 70 were at Casablanca, 56 at Marrakesh, 47 at Rabat, 19 at Agadir. In the same week in Tunisia incidence of typhus fell from 100 to 41, in Egypt there were 68 cases, compared with 36 in the previous week.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended March 19 1938

Figures of Principal Notifiable Diseases for the week and the corresponding week last year for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths and of Deaths recorded under each infectious disease are for (a) The 125 great towns (b) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 15 principal towns in Eire (e) The 10 principal towns (b) in Northern Ireland

A dash — denotes no cases a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Week)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	41	5	11	1	—	25	4	12	1	—		
Diphtheria Deaths	1 556	159	261	61	4	1 068	122	181	2	26	1 111	166
Dysentery Deaths	125	20	50	—	1	20	6	15	—	—		
Encephalitis lethargica acute Deaths	4	1	1	—	—	8	1	—	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	17	—	7	—	—	24	6	—	—	1	25	—
Erysipelas Deaths	—	2	84	10	5	—	—	7	6	—		
Infective enteritis or diarrhoea under 2 years Deaths	50	15	10	—	—	45	1	8	8	5		
Measles Deaths	66	18	547	—	106*	19	1	176	1	—		
Ophthalmia neonatorum Deaths	118	15	—	1	1	90	—	0	—	1		
Pneumonia influenzal ‡ Deaths (from influenza)	1 409	110	9	—	20	1 288	99	29	19	6	1 6	151
Pneumonia primary Deaths	—	26	279	10	16	—	1	228	15	19		
Polio-encephalitis acute Deaths	1	—	—	—	—	1	—	—	—	—		
Poliomyelitis, acute Deaths	5	1	1	—	—	3	2	2	—	—		
Puerperal fever Deaths	7†	7	17	5	1	37	2	11	—	—		
Puerperal pyrexia Deaths	193	14	17	—	2	115	11	26	—	—		
Relapsing fever Deaths	—	—	—	—	—	—	—	—	—	—		
Scarlet fever Deaths	2 307	189	40	61	80	1 791	199	296	78	—	19 0	271
Small pox Deaths	—	—	—	—	—	1	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping-cough Deaths	16	3	92	3	15	21	3	720	25	6	—	—
Deaths (0-1 year)	408	89	88	2	21	461	89	96	45	25		
Infant mortality rate (per 1 000 live births)	68	75	—	—	—	74	77	—	—	—		
Deaths (excluding stillbirths)	5 225	1 042	719	222	161	5 952	1 201	868	26	199		
Annual death rate (per 1 000 persons living)	12.9	12.1	12.1	15.0	14.3	14.9	15.0	16.0	18.0	19.0		
Live births	7 022	1 764	961	20	24	6 556	1 269	96	212	26		
Annual rate per 1 000 persons living	17.2	17.2	19.6	20.2	21.5	16.4	15.8	19.7	21.2	25		
Stillbirths	29	25	—	—	—	25	51	—	—	—		
Rate per 1 000 total births (including stillborn)	34	25	—	—	—	41	9	—	—	—		

(†) 122 great towns in 1937

(b) 9 " "

\* Cases in Belfast alone  
† At October 1 1937 present fever  
‡ Not made notifiable in the  
Admiralty Court of London

Includes deaths from typhus fever in  
Wales, London, administrative county and  
Northern Ireland

## Obituary

### R COZENS BAILEY, MS, FRCS

Consulting Surgeon to St Bartholomew's Hospital

Many St Bartholomew's men in various parts of the world will learn with regret of the death of Mr Robert Cozens Bailey, who before his comparatively early retirement from hospital and private practice was well known as an operating surgeon and teacher of surgery. He died at East Cowes, Isle of Wight on March 18, aged 70.

At St Bartholomew's Hospital Mr Bailey had a brilliant student career. In 1890, the year in which he qualified with the English Conjoint diplomas, he won the Bickenbury surgical scholarship and graduated MB and BS Lond with honours in medicine. In 1891 he obtained the MS degree, with gold medal, and in 1893 he became FRCS. Three years later he won the Jacksonian Prize of the Royal College of Surgeons of England for his essay on the pathology, diagnosis, and treatment of diseases of the prostate gland. At the close of 1903, after years of successful teaching in the Medical School, he was elected assistant surgeon to St Bartholomew's and was promoted full surgeon in January 1913.

In the company of his house surgeons and dressers Bailey was always direct and to the point and excelled at bringing out the practical aspects of the matter under discussion. Something definite and clear always stuck in the minds of those who attended his lectures or whom he taught in the wards or the operative surgery room. He was kindly and sympathetic to the individual needs of the student, and his former work in the dissecting rooms gave an anatomical background to his surgical teaching which proved most helpful to pupils after they had gone into practice. With his composed manner, sprucely dressed square figure, abundant locks and moustache, and unfading smile Bailey was a familiar personality in the hospital square and his resignation from the senior staff long before reaching the age limit deprived Bart's of a very able surgeon.

Dr JAMES LOUIS EDGEWORTH SOMERS who has been described as the pioneer doctor of the Mornington Peninsula, Australia, died at his home in Mornington early in February at the age of 74. Born in Roscrea, Ireland, he was educated at Stonyhurst College, England, Dublin and Cambridge Universities and St Mary's Hospital. In 1883 he obtained the diplomas LRCSI and LAH Dublin when he was only 19. While a student in Dublin he was called upon to identify the body of Lord Frederick Cavendish who was murdered in Phoenix Park. In his early years he travelled extensively and practised in South America and Spain. While serving as a surgeon at Fort Juby in West Africa he was seriously wounded in a skirmish and was rescued by a friendly tribe of Arabs with whom he lived for two or three years before returning to civilization. Always very active he regularly rode his horse round Mornington until the day before his death. In the early nineties he went out to Australia and toured Queensland on foot. He then settled in Mornington and built up a large practice extending over outlying districts. Dr Somers held the commission of surgeon captain on the Army Medical Staff of Victoria retiring eventually with the rank of major. At the time of his death he was health officer of the Mornington Council. He had been a member of the British Medical Association for thirty years. He was an intimate friend of the late Sir Roger Casement whom he had known in Africa. On the day before he died he rode on horseback to the local police court, where he presided

over the cases list, after the closing of the court he completed his round of professional visits. Until about two years ago he never missed in winter or summer a daily swim at the Mornington Baths, he was always an enthusiast for open-air recreation, and had been president of the Mornington Racing Club. He was actively associated with the erection of a fine war memorial in Mornington.

Dr ARTHUR DONALD ROBERTS, who died on February 7 at his home in Hampstead, had been a member of the British Medical Association for many years. He studied medicine in Edinburgh and qualified LRCP Ed, LRCS Ed, LRFPS Glas in 1906. He had a long and varied experience. He practised for some time as ship's doctor, and also worked in the Tropics. Later he was engaged in North Wales and South Wales. In 1924 he began practice in Dalston Lane, Hackney, and remained there until last year, when his health gave way. Dr Roberts (writes a correspondent) was one of the kindest of men, and in his daily living was always ready to help all with whom he was in contact. He showed consideration for everybody except himself, and bore his sufferings with fortitude and cheerfulness. To all who knew him—relatives, friends and patients—there remains the memory of a life of good will and of the true spirit of service.

Dr HENRY ERNEST KING FRETTS (formerly Fretz), assistant surgeon to the Weymouth and District Hospital, died at Parkstone, Dorset, on March 14 while on a journey to France. He had been in poor health for the last year or two. Born in the West Indies, he received his medical education in Edinburgh, where he took the triple Scottish qualification in 1910 and proceeded FRCS Ed in 1914. His first hospital appointments were those of senior house-surgeon to the Norfolk and Norwich Hospital and resident surgical officer to the Sunderland Infirmary. During the war he held a commission as surgeon in the Navy, and subsequently returned to the West Indies and practised at Trinidad for about six years. In 1925 he started practice in Weymouth, where he became widely popular. He joined the British Medical Association in 1923, and contributed articles to the *British Medical Journal* in the two following years. He held the certificate of the London School of Tropical Medicine and the second of these articles was on "Transient Glycosuria in Scorpion Stings".

Dr FREDERIC ARCHIBALD HOPE MICHOD died suddenly at Brisbane, Australia, on March 19, aged 65. He received his medical education at St Mary's Hospital, obtaining the diplomas MRCS, LRCP in 1897, and graduating MB Lond in 1898. He went out to Australia and practised in Brisbane, where he was surgeon gynaecologist to out-patients at the General Hospital and physician to the ante-natal clinic at the Lady Bowen Hospital. He received the diploma MCOG in 1929. Dr Michod contributed articles on obstetrical and gynaecological subjects to the *Australian Medical Journal* in 1923 and 1929. He became a member of the British Medical Association in 1910 and was president of the Queensland Branch in the year 1931-2.

A veteran member of the medical profession Dr JOHN FOOT CHURCHILL JP, died on March 24 at West Malvern, aged 95. He was a student of Charing Cross Hospital and qualified MRCS, LRCP, and LSA in 1864. Most of his professional life was spent at Chesham in Buckinghamshire where he held many public appointments and was honorary medical officer to the local hospital. He had long retired from active work, and gave up membership of the British Medical Association at the age of 80.

Dr SANFORD M WITHERS, director of the Denver Cancer Clinic, Colorado, USA, died on March 8 from aplastic anaemia following exposure to x-rays. He was in his forty-seventh year.

McM" writes I am rather interested in Dr. Lore G. Smith's query in the *Journal* of March 12 in 1961. In my area owing to there having been lead in the water some thirty years ago there is a marked renal failure. A cause of death in a large number of the older people. I have noticed as a corollary symptom that they have a dislike of sweet foods and in some instances a corollary sweet taste in the mouth though in 10 or 15 years experience as a physician in Dr. Smith's case I would suggest that Dr. Smith investigates the renal function of her patient when he might find early signs of a uremia. etc

## LETTERS, NOTES, ETC.

**Haematocolpos**

Dr R. L. SONI (Burma) writes: The cases described by Dr A. L. Craddock in the *Journal* of December 25 1937 (p. 1304) are evidently of partial haematocolpos with haematometra. Haematometra in such cases is secondary and follows the non recognition of the haematocolpos. The condition seems to be rare in general practice. I encountered only one case during the last nine years and that was recorded in the *Indian Medical Gazette* (1937, 72, 93). This was in a Burmese girl aged 15, in whom the presenting symptoms simulated dysentery. There was history of amenorrhoea and of two attacks of abdominal colic each lasting three days three and eight weeks earlier. The labia minora in their lower halves were found fused together to form a bulging pouch which contained foul smelling phosphatic deposits, probably derived from the ammoniacal decomposition of urine. The Mullerian duct for an inch or more in its lower part had failed to canalize. A regular dissection had to be carried out to arrive at the blind lower end of the vagina. The final result was good.

**Treatment of Erysipelas**

R. E. N. writes: In his article on this subject (*Journal*, February 12 p. 346) Mr. John Hosford states that sulphanilamide has a profound sometimes dramatic effect: the temperature drops to normal in forty-eight hours or less. There is a much more dramatic treatment which is safer and cheaper. In some twelve cases of erysipelas I have found that an injection of 10 ccm of boiled milk intramuscularly promotes a cure within twelve hours. In one case only I gave a second injection because the temperature had not entirely settled. It would seem that this treatment is too simple to be generally adopted.

**Correct Footwear**

Dr FREDERIC SANDERS (Chingford) writes: Mr. S. T. Irwin (*Journal*, March 19 p. 649) is in error in stating that hallux valgus would not exist if the great toe were allowed freedom until the age of 10. In all children's shoes such freedom exists to-day but the moment the child reaches adult size the shoe trade has nothing to offer except shoes costing thirty to forty shillings usually stamped with some bone-setter's name! One of these days a Minister of Defence will call for statistics of recruits turned down for feet. He will then say to the Minister of Health: 'In future in addition to giving raw milk you will provide for boys shoes of a proper shape and continue to provide them in increasing sizes for any old boy who needs them at half the market value.' This will raise a howl of abuse from the manufacturers who will then be told: 'Very well you provide shoes for the public at a reasonable price made on our lasts and we go out of business. Until you do we stay in it.' The whole problem of men's shoes would be settled in a fortnight. Women's shoes may safely be left to the lady doctors and to Mr. Bernard Roth whose pious horror of a first class actress in sensible brogues doubtless finds in echo in many an orthopaedic heart!

**Supply of Trypsinamide**

Messrs MAY AND BAKER LIMITED (Dagenham, London) write: The references in the technical and lay press to the report of the Medical Research Council have been dealt with in a general way by a statement from the Association of British Chemical Manufacturers. We therefore wish to limit ourselves to the misunderstanding which has arisen owing to the ambiguous wording of the Medical Research Council's report in regard to the origin of trypsinamide. It is true that trypsinamide was discovered in America in the laboratories of the Rockefeller Foundation but it is entirely incorrect to suggest that the trypsinamide used in the Empire since 1925 has been of American origin. Since that date we have supplied all the trypsinamide used here and in the Empire and this has been completely manufactured in our factory. We are able to continue to supply all the trypsinamide required for use here and in the Empire.

**Medical Aid for Barcelona**

Dr H. B. MORRIS, Chairman, Spanish Medical Aid Committee, 24 New Oxford Street, W.C.1, writes: The official casualty list published in Barcelona gives 1,300 dead and 2,000 wounded as a result of the terrible and continuous

air raids last week. In addition over 10,000 people are homeless. We have decided at an emergency meeting to send help to the medical services in Barcelona. Apart from military casualties which have inevitably been severe in the recent Aragon offensive the Spanish Government is now called on to care for thousands of civilians wounded during intensive air raids on Barcelona and other cities. Bombs have been dropped on the most densely populated quarters and the population fleeing into the hills are systematically attacked from the air by machine gun fire. We have ordered ambulances, surgical instruments and medical supplies which will be sent out at once. This is of course, in addition to the already heavy commitments of our established hospitals. Send us anything you can, however small but send it at once.

**Demonstrations of Physical Therapy Equipment**

With the object of stimulating interest in physical medicine a special series of demonstrations of physical therapy equipment were given last week at the showrooms of Stanley Cox Limited at 11 Gerrard Street, W.1. Although the demonstrations were given under commercial auspices no sales talk was introduced and an effort was made with a physiologist in attendance to interest medical visitors in the physical factors underlying this branch of treatment. The principal attention was directed to an apparatus named the 'Indolor', a painless stimulator for muscles and nerves deriving its power from the alternating current mains, and designed to replace the Bristow coil. The cathode ray oscillogram of the 'Indolor' revealed a beautiful wave-form with no after waves of the stimulus so that the natural stimulating impulse of the nerve and that only is artificially reproduced. This was shown in contrast to the cathode ray oscillogram of the Bristow coil which is made up of a damped train of sine waves each of which must cause a corresponding nerve impulse to be set up and the impulses of each group other than the first can produce no further contraction of the muscle but may be a cause of pain to the patient and account for the inconvenience often experienced in treatment by the Bristow coil. Ultra-short wave diathermy was also demonstrated and the characteristics of the energy generated by various systems were well shown.

**Vicissitudes of a Leper**

On February 28 death ended the astonishing career of John Ruskin Earle, a North Carolina mountaineer who contracting leprosy some thirty years ago spent the remainder of his life alternately being confined as a leper, escaping, or being released as apparently cured. The diagnosis was confirmed by Hansen, discoverer of the leprosy bacillus, and in 1917 a special 'leprosarium' was built for him at Carville, Louisiana.

**Dominion Dairy Products**

During the present century science and the organization of modern transport have combined to bring to this country plentiful supplies of dairy products: meat, fruit, and other foodstuffs from all parts of the world. Nowhere has greater progress been made than in the provision of an expensive yet high quality dairy products by the overseas Dominions which are to-day according to the Imperial Economic Committee responsible for half our supplies of butter and three quarters of our requirements of cheese. Concurrently with the post-war increase in Dominion butter supplies Britain's butter consumption has risen by more than 50 per cent, the average during 1937 being 24.7 lb a head (or nearly half a pound weekly). The high and uniform vitamin potency of Dominion butter has been a subject of frequent comment. Typical of such observations is the statement made by the Ministry of Health's Advisory Committee on Nutrition in its report *The Criticism and Improvement of Diets* (p. 5). There is the possibility that butter may be devoid of vitamin D in winter and consequently if butter is being relied upon as a protective food it would be best to specify butter such as New Zealand which is fairly constant in its vitamin D content.

**Correction**

In the sketch of Alexander Skene published on February 12 (p. 349) Long Island Cottage Hospital should read Long Island College Hospital. This institution recently celebrated the fiftieth anniversary of the founding of its Hospital Laboratory when Dr Oswald T. Avery of the Rockefeller Institute for Medical Research spoke on 'The State of Bacteriology Fifty Years Ago and To-day'.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 267 Chronic Hepatitis in Young Persons

E. POLACK (*Acta med. scand.* 1938 93 6 614) during the past twelve years has systematically employed the following tests in cases of jaundice treated in a hospital in Copenhagen: Ehrlich's benzaldehyde test for the demonstration of urobilinogen in the urine; Hays's sulphur test for the demonstration of bile acids in the urine; Meulengracht's icterus index determination in serum; Bauer's galactose tolerance test; and Ronas's test for quinone resistant lipases in the blood. The eight patients between the ages of 24 and 29 included two doctors, three medical students and one nurse. In every case an attack of acute hepatitis with jaundice was followed by a more or less chronic hepatitis. All these patients were kept under observation for three to eight years during which time they continued to work although they suffered from lassitude, malaise, a sense of fullness in the right side of the abdomen, and tenderness under the right costal arch. They were subject to exacerbations of their hepatitis for which in some cases no cause was demonstrable but as a rule it could be traced to some slight infection such as a coryza or sore throat. The author points out that an apparently mild attack of acute hepatitis with jaundice may if inadequately treated from the outset develop into a chronic condition with exacerbations of the hepatitis on slight provocation from time to time. He believes that the condition he describes is the primary stage of cirrhosis of the liver. Although he is an advocate of strict and prolonged dietary treatment with plenty of carbohydrates and strict rationing of proteins in the early acute stage of hepatitis he admits that it is not always possible to avert the onset of chronic hepatitis.

### 268 Angina Pectoris and Coronary Disease

I. HOLMGREN (*Hygien. Stockh.* December 15 1937 p 865) reviews his experiences of angina pectoris and allied diseases at the Serafimer Hospital in Stockholm from his appointment as professor in 1913 until 1926. Dividing this time into three eight year periods he notes that in the first period there were only two patients with angina pectoris, in the second thirty-three and in the third seventy. This remarkable rise cannot be dismissed as due solely to improved methods of diagnosis as angina pectoris was as easily and surely diagnosed at the beginning as at the end of the period under review. In the same period thrombosis, infarction or embolism of the heart was diagnosed only once in the first eight years whereas in the second eight years five such cases were diagnosed and in the last eight years as many as thirty-four cases. In this group however, the increased frequency may reflect to a certain extent improvement in diagnosis. This reasoning is confirmed by the observation that all the first twelve cases proved fatal while the mortality was only 26 per cent among the twenty-seven patients treated in the five year period 1932-6. No great advance having been made in treatment the striking improvement in the recovery rate must be traced to the recognition of these conditions at a comparatively early stage. Professor Holmgren calculates that when thrombosis of the coronary vessels is not immediately fatal the patient has a good chance of recovery after a protracted convalescence of three months or more. Approximately half of his cases were within the age group of 56 to 65 years. He is convinced that the striking numerical preponderance of male over female cases of thrombosis, infarction or embolism of the heart is in large part to be explained in terms of alcohol and nicotine.

## Surgery

### 269 Javle's Incision for Appendicectomy

A. CHARBONNIER (*Presse med.* December 25 1937 p 1871) describes the advantages of using a suprapubic transverse incision for appendicectomy or for removal of the right adnexa in young women. This incision leaves a more visible scar and allows of easy access both to the appendix and to the right adnexa, and sometimes the left. The technique described is considered to be superior to that of McBurney in females in whom the caecum is usually in a low position. Other advantages are that the incision can easily be extended in either direction if necessary, allows of satisfactory drainage and avoids the risk of post-operative hernia. The incision is made on the right side transversely from the middle line a finger breadth above the pubis and is about 5 to 8 cm in length. It has been tried out in thirty cases of appendicectomy in young women and has been found to give good exposure and a good cosmetic result in all the cases when the carefully selected. Those which were most suitable were thin or only slightly developed women with the caecum either low or mobile and with suspected lesions of the right pelvic organs. Operation was carried out for chronic or subacute appendicitis in twenty instances and for acute cases associated with gynaecological lesions were treated.

### 270 Atrophy of Articular Cartilage during Immobilization

H. ROUVIERE (*Ann. anat. path. med.-chir.* November 1937 p 721) points out that normal movement of a joint is necessary for the nutrition of the articular cartilage and if the joint is immobilized for a long time rapid changes arise which may lead to ankylosis. There are no blood vessels in the cartilage which receives its nourishment through the synovial membrane. During the day the tonicity of the muscles exerts pressure on the articular surfaces bringing them into contact. This has the effect of excluding the synovial membrane from the joint space. Experiments to prove this have been carried out on the knee joint of a dog which had been decalcified for 48 hours. After the joint had been exposed and the articular cartilage removed it was fixed by a wire round the neck of the femur and the tibiofemoral joint. The model was then immersed for six hours in a solution of methylene blue (1 in 500). It was found that the articular cartilage had no blood vessels. This experiment was repeated with loosely tied rubber tubing to resemble more nearly the pressure exerted by the muscles and the result was the same. This showed that it is not only necessary for the articular cartilage of a joint to be in contact with the synovial fluid but also that it is necessary for the nutrition to be cut off. It is suggested that the complete relaxation which comes with deep sleep is necessary to ensure the nutrition of the articular cartilage. Movement of the joint is also necessary and immobilization may lead to atrophy of the articular cartilage.

### 271 Infiltration Treatment of Joint Injuries

P. WERTHEIMER (*Rev. chir. Paris* November 1937 p 654) points out that the after-effects of a sprain or dislocation or fracture are not always confined to the immediate results of the trauma but may go on to multiple atrophy, contraction or decalcification. It is concluded that trauma produces a short phase of local vasoconstriction which is followed by active vasodilatation. The vaso-motor disturbances may cause a series of pathological changes such as synovial effusion, decalcification of the epiphyses and osteoporosis. A method of infiltration



tion anaesthesia has been tried to prevent these vasomotor changes and to re-establish normal vascular rhythm and function. This treatment is indicated in cases of joint injury when the reflexes which affect the vasomotor equilibrium of the injured limb are involved. It is specially recommended in contusions of the back of the hand or of the instep or shoulder, where oedema, muscular atrophy or osteoporosis may be expected. In cases of sprain affecting the foot, wrist, or knee it has been found that infiltration lessens the pain, limits or reduces the swelling, prevents effusion into the joint, and if effusion should take place facilitates its absorption. Infiltration enables reduction to be carried out easily in cases of dislocation, and may help to prevent permanent injury. This method is not suitable for fractures of the shaft of the long bones or of the ends of the bones, but may be used successfully in certain cases of fracture of the shoulder-blade, of the clavicle, metacarpus, or metatarsus. Infiltration should be carried out as soon as possible, a 1 per cent solution of novocain without adrenaline being used. The fluid is injected into the ligaments and under the periosteum, 10 to 50 ccm being used. The patient is then encouraged to move the injured joint, and this is followed by relative immobilization by means of a sling and rest in bed. Infiltration is carried out until restoration of function has taken place. It has been found to be a safe and satisfactory method of treatment in suitable cases.

## Therapeutics

### 272 Diathermy and Short-wave Therapy

H. G. SCHOLTZ (*Fortschr Ther* January 1938, p. 7) discusses the relative merits of diathermy and short-wave therapy in lesions of the female pelvis. Theoretically short-wave irradiation produces a greater heat in the deeper tissues than does diathermy. In the living subject, however, heat is being continually lost and distributed owing to reflex changes in the circulation. High temperatures in the pelvis can certainly be obtained but are accompanied by general hyperpyrexia. The author found that in investigating the temperatures produced in the pelvis by diathermy and short-wave irradiation large numbers of readings had to be taken in the same patient owing to the fluctuations caused by circulatory changes. No rise of temperature above 1°C was obtained by either of these physical methods. Scholtz is of the opinion that in those areas of the body which are richly supplied with blood short waves give no better results than diathermy provided only that sufficiently large electrodes are used in applying the latter but that they are of more value in those areas surrounded by layers of air—for example the thorax. Short wave irradiation has the advantage over diathermy in that it produces no pain and is very successful in the treatment of acute inflammatory conditions. Scholtz believes that other hitherto unspecified factors play a part in making the short waves therapeutically valuable. In his experience a distance of 2 cm. between the electrodes produced the greatest rise of internal temperature. Larger distances while productive of greater heat in the cadaver did not have the same effect in the living subject.

### 273 Thyroid, Pituitary, and Ovary

J. ADLER MONNICH and R. TIBERTI (*Wien Arch inn Med* 1938, 52, 7-41) allude to recent animal experiments showing that (1) follicular hormone inhibits the increased basal metabolism following the administration of thyroxine and (2) after thyroidectomy the lutinizing effect of prolactin is greatly increased. Choosing the reverse way of testing the hypophyseal thyroid antagonism by its effect on the female genital organs they have found that preparatory

administration of thyroxine in guinea pigs diminishes or abolishes the effect of the gonadotropic anterior pituitary hormone in increasing the size and contractility of the uterus and in the promotion of follicular ripening. In cases of genital hypoplasia in young females or of adiposity combined with ovarian hypofunction it is inferred that the combined therapeutic administration of thyroxine and folliculin and/or prolactin is illogical.

### 274

### Treatment of Rickets

H. U. KOTTGEN (*Med Welt* January 29 1938, p. 162) mentions in connexion with advances in the treatment of rickets (1) the fact that vitamin D<sub>2</sub> (with recent progress in knowledge of the by-products of irradiation of ergosterin) is now available commercially in so pure a form that the therapeutic is 1/3,500th of the toxic dose, and (2) so called shock treatment (*Stoßbehandlung*) by a single dose of concentrated vitamin D<sub>2</sub>. The efficacy of such treatment was discovered by Harnapp, who had found that single doses of an impure product of the irradiation of ergosterin not only cured spasmophilia but also rickets. Eventually he and others found that the dose of pure concentrated vitamin D<sub>2</sub> required for the complete cure of florid rickets is 12 to 15 milligrammes, which corresponds almost exactly with the total amount given in the ordinary therapeutic course comprising daily dosage for two to three months. In the one dose treatment the inorganic phosphates and calcium of the blood serum increase within twenty-four to forty-eight hours, improvements in ossification of the long bones and skull are demonstrable by X-rays within three to five days. This treatment is specially indicated in rickets coexists with spasmophilia and in pneumonia—in which coincident rickets is known to affect the prognosis adversely.

## Dermatology

### 275

### Electrical Reactions of the Skin

S. K. ROSENTHAL (*Ann Derm Syph* Paris, November, 1937, p. 863) describes a new method for measuring the electrical reactions of the skin. He points out that the reaction of the skin is complex, depending upon the state of the horny and deeper layers, and especially upon the permeability of the cell membranes, the tendency of the cells to produce histamine-like substances, the specific sensitivity of the skin, and the blood and nerve supplies. As it would be almost impossible to measure these at one and the same time he has chosen to measure the change in electrical resistance of the epidermis produced by injury. He used 10 per cent caustic potash in view of its well-known action on the epidermal cells, and a reduced continuous current, measured by a voltmeter accurate to a quarter of a volt, and a milliamperemeter reading to one-fortieth of a millimetre. The current passed into the body from the negative electrode—a gauze-covered metal plate dipped in physiological saline—and left it at the point of contact with a platinum electrode applied at the place where a drop of caustic potash had been deposited from the capillary tube. The current was passed for one or two seconds, again a minute later and the milliamperemeter readings were plotted on a graph. One hundred control cases and a number of patients suffering from eczema, psoriasis and asymmetrical skin and nervous diseases were examined and the results show that the skin of patients suffering from eczema is five times more easily influenced by chemical irritants than the normal and that this tendency diminishes when the patient is almost cured. In cases of psoriasis the skin does not show such marked reactivity but the response is least noticeable in those cases which should respond well to treatment. In unilateral conditions such as



hemiplegia the response is less marked on the healthy side. Rosenthal suggests that this method can be used for prognosis in eczema, psoriasis and certain unilateral skin or nervous affections and may be of value in prophylaxis if used as a test in the selection of workmen who have to deal with chemical or other irritants.

## 276 Activity of Sebaceous Glands

A. DESAUX (*Presse med.* November 24 1937 p 1672) discusses the abnormal activity of the sebaceous glands in association with puberty and endocrine dysfunction. A degree of activity of the sebaceous glands which is more than physiological is seen as a result of the action of icteroid intestinal toxemia and avitaminosis with perhaps in addition some disturbance of hormonal balance. Comedones, seborrhoea oleosa and a thick coarse epidermis or even acne conglobata are seen in association with the anterior pituitary changes leading to acromegaly and gigantism. Excessive seborrhoea is also observed in hyperthyroidism and pulmonary tuberculosis and adenitis patients showing especially rapid hair growth and loss of hair pigment brittle nails and hyperidrosis. The association of abnormal activity of the sebaceous glands with menstruation is confusing for it may be seen both in those women who have irregular and scanty menstruation and in those who are regular and normal and even in women showing signs of virilism. Possibly this is due to the prolonged and uninterrupted flow of folliculin into the blood from follicles which have matured but not ruptured acting in the same way as it does in the enlargement of a young girl's breasts. In animals excess of sebaceous secretion is seen following injections of corpus luteum hormone. Finally Desaux concludes that the whole dermal covering should be considered as a vast gland secreting hair, nails, sebum or keratin the activity of which is enhanced by growth by the secretions of the anterior pituitary and the thyroid and by cholesterol like bodies containing the oestrogenic principle similar to those which may produce cancer.

## 277 Bakers Eczema

J. R. PRAKKE and C. POSTMA (*Nederl. Tijdschr. Geneesk.* January 22 1938 p 367) review the literature and discuss the reasons for distinguishing bakers' eczema from eczema in bakers. Patch tests made with a 1 per cent and a 5 per cent solution of ammonium persulphate were strongly positive in fourteen out of fifteen bakers with eczema of the hands and forearms negative in five out of six bakers without eczema (the sixth who gave a positive reaction had had bakers' itch some years previously) and negative in fourteen controls one of whom was a normal individual while thirteen had eczema. The authors maintain that flour improvers containing persulphate play an important part in the production of bakers' eczema.

## 278 Epulis Granulomatosis

S. AYRES and N. P. ANDERSON (*Arch. Derm. Syph.* Chicago December 1937 p 1149) report a case of epulis granulomatosis occurring in a man aged 80 after the extraction of carious gold stopped teeth in the lower jaw. There was a cauliflower-like tumour, which seemed less hard and white than an epithelioma without any associated leucoplakia or adenitis. The condition has to be differentiated from fibroma, sarcoma, teratoma and carcinoma. Biopsy is essential for diagnosis. Excision should be done with a diathermy knife and the surrounding area well desiccated. The carious teeth should be removed, the lacerated surface of the gum painted with 2 per cent methyl violet in water and the affected area irradiated with unfiltered rays or a radium half-strength plaque applied for twenty-five minutes. In this case there was no sign of the disease after four months.

## 279 Virus Diseases in Dermatology

R. T. BRAIN and B. LEWIS (*Brit. J. Derm. Syph.* December 1937 p 551) discuss the difficulty of investigating virus diseases affecting the skin because the viruses produce such a variety of skin lesions with different degrees of inflammation in the cells of the skin. The size of the virus lesion bears little relation to the amount of virus present. Virus infections are associated with inclusion bodies in the cells and the involvement of particular cells—for example the nerve cells in rabies. Inclusion bodies may include the organism and in certain cases the virus itself is visible. It is difficult to differentiate true inclusion bodies from granular degeneration. To confirm the diagnosis it is essential to prove that the infective agent is not bacterial and this has to be done by animal inoculation. Here the difficulty lies in the varying susceptibilities to virus infection of different animals. The virus of herpes can easily be inoculated into the planar pad of a guinea pig's foot and those of dermatitis herpetiformis and pemphigus have also been conveyed to guinea pigs and rabbits. Blood from a suspected case may be centrifuged and tested for agglutination or a neutralization test may be done. The authors describe a case of Kaposi's varicelliform eruption, this disease has features suggesting an acute virus infection. The condition is clinically indistinguishable from generalized vaccinia but is seen in association with infantile eczema or Benier's prurigo. They report the case of a boy aged 15 who was vaccinated at the age of 3 months. Eczema developed one week after this followed by the typical asthma-eczema-prurigo syndrome. Before the onset of the present illness the boy had been anxious about his examinations, he developed a papulo-pustular eruption on the face with cervical adenitis. The lesions were umbilicated and associated with high fever and mainly distributed on the face and neck. Blood culture was negative, culture from skin lesions yielded *Staphylococcus pyodermae* and there was a haemolytic streptococcal infection of the throat. The fluid from blisters was injected into the pad of a guinea pig, pus formed and a specimen of this was transferred to the scarified cornea of a rabbit and from that rabbit to others. The post mortem and other findings were indefinite.

## 280 Hepatic Function in Skin Diseases

V. GENNER and T. K. WITH (*Hospitalstidende* December 7 1937 p 1241) have investigated at the Frøen Institute in Copenhagen relationship of certain skin diseases of hitherto unknown origin to disorders of metabolism traceable to the liver. If they argue functional disturbances of the liver are responsible for certain diseases of the skin, it should be possible to establish a causal relationship between the two by systematically applying certain liver tests to a large number of carefully selected cases of skin disease. Of the 165 patients tested 104 suffered from lupus vulgaris, seventy-four from psoriasis, 102 from eczema, fifty-nine from pruritus and prurigo and twenty-six from Benier's prurigo. The functions of the liver were examined by Bauer's galactose test, Rona's lipase test, estimation of Meugracht's jaundice index, Ehrlich's serial turbidimetric determinations and Folin's test for bile acids in the urine. In nearly all the cases these investigations were conducted on the patients so that the reaction of the diseases of the skin to treatment could be closely followed and correlated with the findings of the liver tests. It was noted that the applications to the skin caused transient interference with the functions of the liver. In other respects the findings were almost entirely negative and gave no support to the theory that hepatic disorders are the cause of most of the skin diseases investigated. The authors conclude that in the case of prurigo and eczema a causal relationship exists external to the body in conjunction with individual

peculiarities of the skin must be held responsible and they suggest that the more or less heroic dietetic limitations imposed on many patients suffering from diseases of the skin lack a sufficiently scientific rationale justifying the hardships inflicted

## Obstetrics and Gynaecology

### 281 Prontosil in Pregnancy

G ALSTEAD (*Ugeskr Laeg* December 16, 1937 p 1347) reports from Professor Meulengracht's hospital in Copenhagen three cases—the last fatal—in which drugs of the prontosil group caused serious poisoning. The first patient was a woman, aged 42, in the seventh month of pregnancy. Signs of infection of the urinary tract led to the administration of 0.6 gramme of prontosil rubrum three times a day. In the afternoon of the first day of this treatment the temperature rose to 104° F. Next day she was very drowsy, and cyanosis was detected but her dysuria and lumbar pain had completely disappeared. The cyanosis having become alarming, and the patient's general condition being disquieting, the prontosil was discontinued after altogether 4.2 grammes had been given. During the next few days the temperature fell and the general condition improved, but the cyanosis did not begin to disappear till the drug had been discontinued for four to five days. A neutrophil leucocytosis, methaemoglobinæmia, and later, severe jaundice were also observed in this case. In a second case, that of a woman aged 54 given 0.6 gramme of the drug three times a day for a tonsillar infection, a severe urticarial rash broke out after she had been given altogether 4.2 grammes. At the same time the fever and sore throat vanished. After describing a third case that of a woman, aged 31, much debilitated by a protracted puerperal infection and given injections of prontosil the author suggests that the risks and advantages of treatment with the prontosil group of drugs should be carefully weighed against each other. Sulphanilamide would seem to be contraindicated during pregnancy and when there is impairment of the renal and hepatic functions.

### 282 Phlegmasia Alba Dolens after Abortion

J SPINDLER (*Bull Soc Obstet Gynec* December, 1937, p 750) reports three cases of phlegmasia alba dolens following abortion. This is considered to be an uncommon condition, no case being reported in the *Bulletin* between the years 1920 and 1936. The question is raised why phlegmasia should so rarely follow abortion, which is often criminal and consequently septic, when it is a comparatively common sequel of full-time labour.

## Pathology

### 283 Comparison of Human and Cow's Milk

R. H. A. PLIMMER and J. LOWNDES (*Biochem J* October 1937 p 1751) have carried out detailed analyses of human milk to determine the distribution of nitrogen as caseinogen as lactalbumin and as non-protein nitrogen, the nitrogen sulphur phosphorus and the various amino-acid contents of the proteins and the calcium and inorganic and total phosphorus contents of the milk. Comparisons were made with cow's milk. Although the compositions of the two proteins from the two types of milk are in general similar there are marked differences in the phosphorus and cystine contents of human and cow caseinogen. Cow's milk contains two to three times as much of most components as does human milk, the same amount of cystine however occurs in both milks.

Dilutions of cow's milk with an equal volume of water therefore reduces the cystine content to half that of human milk. If methionine can replace cystine in the nutrition of the human infant, half-strength cow's milk contains enough sulphur-containing amino acids as compared with human milk but if cystine is not replaceable by methionine then 16 mg of cystine should be added to each 100 ccm of half-strength cow's milk to make up the deficiency. Dilution of cow's milk with twice its volume of water may reduce the tryptophane and arginine contents to below those of human milk.

### 284 Adrenal Deficiency

R. RIGLER (*Wien klin Wschr* December 24 1937 p 1731) alludes to the views that adrenal insufficiency interferes with oxygen consumption with carbohydrate metabolism and with the circulation, respectively. He considers at length the more recent theory which attaches chief importance to the disturbance of water and salt metabolism. The last view is supported by (1) the power of sodium chloride administration to relieve symptoms of experimental adrenal resection and of patients with Addison's disease, (2) the increased potassium ion plasma concentration in adrenal insufficiency, (3) the negative sodium balance in Addison's disease, (4) the occurrence in dogs which have been deprived of sodium ions by the intraperitoneal injection of glucose and subsequent paracentesis, of diminished blood volume and pressure, increased sensitivity to bleeding, and other signs and symptoms all of which are noted after experimental adrenal ectomy. It is known that adrenalectomized rats fail to respond to phloridzin or starvation by ketone body excretion. Rigler has found that the same is true of animals "de-salted" in the manner described and that oral feeding of the abstracted salt (but not of its sodium in combination other than with chlorine) restores the ketonuria. It is concluded that the diminished ketogenesis after adrenalectomy is a secondary consequence of disturbances of mineral metabolism and/or acid-base equilibrium not of renal origin. That the salt loss in adrenal deficiency may in part be due to the disturbance of renal reabsorption of salt is still a possibility to be reckoned with. Rigler found that in "de-salted" animals as in those from whom the adrenals had been removed, the capacity for diuresis in response to large amounts of water was to a very large extent lost.

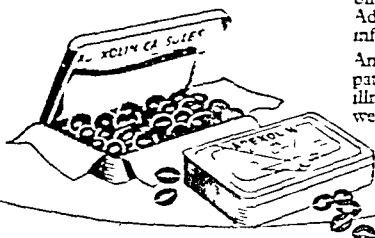
### 285 Adrenaline Inactivation

W. A. BAIN, W. E. GAUNT and S. F. SUFFOLK (*J Physiol* December 14 1937, p 233) have studied by a method of 'continuous assay' the rate of inactivation of adrenaline in cat's blood, plasma and serum, with and without added tissue extracts or slices. In plasma and serum inactivation proceeds slowly to completion more rapidly in serum than in plasma. The blood inactivation reaches an equilibrium at about half the initial concentration of adrenaline and proceeds no further. Addition of tissue slices or extracts leads to complete inactivation of adrenaline in blood, liver being the most effective. This action of tissues is prevented by boiling them and is diminished by increased acidity or absence of oxygen but not by cocaine or cyanide. The active adrenaline in a blood adrenaline mixture at inactivation equilibrium is entirely in the plasma but there is also adrenaline associated with the corpuscles which can be released by separating the cells and laking them or by plating them in Locke's solution or fresh plasma or serum. By taking an equilibrium mixture 80 per cent of the adrenaline added to blood can be recovered. The fate of the remaining 20 per cent is not known. It is not clear in what form the inactivated adrenaline is held by the blood cells. The relationship of the results to the inactivation of adrenaline *in vivo* is discussed.

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PROC. ROY. SOC. MED. JULY 1936 p. 109

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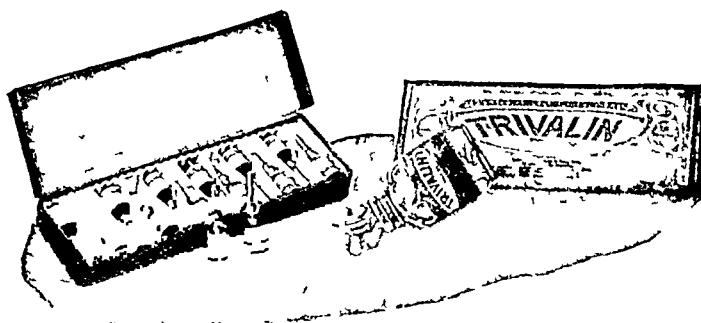
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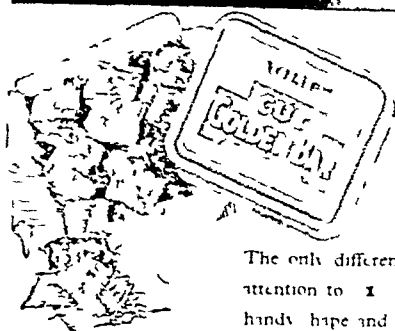
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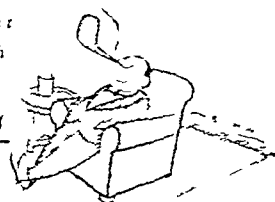




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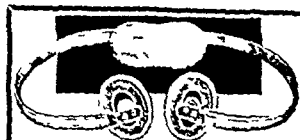
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Telephone: Podreby 2611 2612

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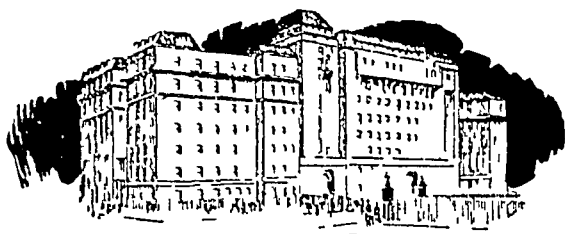
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# 3,902 patients

WERE RECEIVED AT

## The CLINIC in 1937

(236 were members of the Medical Profession  
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## GEORGE HENRY LEWES STUDENTSHIP

ANNUAL VALUE £250 (about)

The above Studentship will be vacant on June 15th 1938.

The Student is required to give his whole time to research work except such as in the opinion of the Trustees does not interfere with his original enquiries. Candidates should send (a) a statement of their qualifications and their record of pecuniary help, (b) the subject of their proposed research, (c) the name of one referee to Prof. Adrian Department of Physiology Cambridge by June 1st 1938. The Studentship is not limited to either sex and the Student is expected normally to work in the Department of Physiology Cambridge, or such in exceptional conditions he may obtain permission to work elsewhere.

Further particulars obtainable on request. Fee £10 10s.

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## ROYAL COLLEGE OF SURGEONS OF ENGLAND

### ELECTION OF PROFESSORS AND LECTURERS

The Council of the Royal College of Surgeons in England has elected to the office of HONORARY PROFESSOR ARTHUR ARNOLD LECTURER ARNOLD DEMONSTRATOR and FRANKLIN ALISON DEMONSTRATOR for the year 1938.

The Honorary Lectures are delivered by the Council of the Royal College of Surgeons in England.

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## HOLLAND (LINCS) COUNTY COUNCIL ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and trained medical practitioners for the position of Assistant Medical Officer of Health (male). Candidates must not exceed 40 years of age.

The person appointed who may have had postgraduate experience in pathology and in the treatment of venereal diseases, will be required to carry out all the duties assigned to him by the County Medical Officer under whose direction he will supervise the health of the district and be allowed to engage in private practice.

The salary will be £60 per annum plus allowances of £25 per annum to £70 together with travelling expenses according to the Council's scale.

The appointment will be for a term of 3 years, but the Council may terminate the appointment at any time.

Forms of application may be obtained from the County Medical Officer, County Hall, Boston, by whom the full particulars may be obtained.

Applications should be sent to the County Medical Officer, County Hall, Boston, by 11th April 1938.

County Hall, Boston, Lincolnshire.

H. C. TARRIS, Clerk.

March 11, 1938.

COUNTY BOROUGH OF BIRKENHEAD DEPARTMENT OF THE MEDICAL OFFICER OF HEALTH

BIRKENHEAD MUNICIPAL HOSPITAL (1 Bed)

PRESIDENT MEDICAL OFFICER

Applications are invited from duly qualified and trained medical practitioners for the position of President Medical Officer of Health (male). Candidates must not exceed 40 years of age.

The person appointed who may have had postgraduate experience in pathology and in the treatment of venereal diseases, will be required to carry out all the duties assigned to him by the County Medical Officer under whose direction he will supervise the health of the district and be allowed to engage in private practice.

The salary will be £60 per annum plus allowances of £25 per annum to £70 together with travelling expenses according to the Council's scale.

The appointment will be for a term of 3 years, but the Council may terminate the appointment at any time.

Forms of application may be obtained from the County Medical Officer, County Hall, Boston, by whom the full particulars may be obtained.

Applications should be sent to the County Medical Officer, County Hall, Boston, by 11th April 1938.

County Hall, Boston, Lincolnshire.

H. C. TARRIS, Clerk.

March 11, 1938.

CITY OF BIRMINGHAM EDUCATION COMMITTEE

APPOINTMENT OF TWO ASSISTANT SCHOOL MEDICAL OFFICERS (Male & Female)

Required to be qualified in the position of Assistant School Medical Officer (male or female). Candidates must not exceed 40 years of age.

The person appointed who may have had postgraduate experience in pathology and in the treatment of venereal diseases, will be required to carry out all the duties assigned to him by the County Medical Officer under whose direction he will supervise the health of the district and be allowed to engage in private practice.

The salary will be £60 per annum plus allowances of £25 per annum to £70 together with travelling expenses according to the Council's scale.

The appointment will be for a term of 3 years, but the Council may terminate the appointment at any time.

Forms of application may be obtained from the County Medical Officer, County Hall, Boston, by whom the full particulars may be obtained.

Applications should be sent to the County Medical Officer, County Hall, Boston, by 11th April 1938.

County Hall, Boston, Lincolnshire.

H. C. TARRIS, Clerk.

March 11, 1938.

BRIGHTON EDUCATION COMMITTEE

ASSISTANT TO SCHOOL MEDICAL OFFICER AND ASSISTANT TO THE MEDICAL OFFICER OF HEALTH

Required to be qualified in the position of Assistant School Medical Officer (male or female). Candidates must not exceed 40 years of age.

## CITY OF CAPE TOWN TUBERCULOSIS OFFICER

Applications are invited from qualified medical practitioners not over 45 years of age for the position of Tuberculosis Officer in the City Health Department.

The position will involve such administrative, clinical, home visiting and other duties as may be from time to time prescribed.

The appointment will be terminable upon one month's notice on either side and is subject to the provisions of Provincial Ordinance No. 10 of 1912 (Cape) and amending ordinances and to the standing rules and regulations of the Council.

If the successful applicant is resident in the United Kingdom his first class fare from Southampton to Capetown will be paid and half salary during the voyage and he will be required to enter into a three years' contract with the City Council.

Salary will be at the rate of £800 per annum rising by annual increments of £50 to £1000 per annum and a motor transport allowance of £13 a month will be paid. The officer appointed will be required to devote the whole of his time to his office and not to engage in private practice.

Applicants must submit particulars as to age, qualification, present position and past experience with details as to experience in the diagnosis and treatment of tuberculosis and public anti-tuberculosis schemes, and must also submit a medical certificate of physical fitness. Applications, accompanied by copies of not more than three recent testimonials must be delivered in a sealed packet endorsed Tuberculosis Officer either to the undersigned or to Messrs Davis and Soper Ltd, 54 St Mary Ave London EC3 from either of whom also certain further particulars as to the position may be obtained on application. If candidates are resident in South Africa applications must be delivered to the undersigned not later than noon May 7th 1938. If candidates are resident in the United Kingdom applications must be delivered to the office of Messrs Davis and Soper Ltd not later than noon April 23rd 1938.

Applications should state when they can commence duty.

The canvassing of Councillors will be regarded as a disqualification.

FRANK G GALE  
Deputy Town Clerk

City Hall Capetown  
March 14th 1938

## COUNTY COUNCIL OF MIDDLESEX VISITING ANAESTHETIST

Applications are invited for the appointment of Visiting Anaesthetist at the COUNTY SANATORIUM HAREFIELD. Candidates must be medical practitioners devoting the whole or the major part of their time to anaesthetics and must be specially skilled in the administration of anaesthetics by modern methods to patients undergoing thoracic operations.

The officer appointed will be required to attend one session per week at a fee of £3 3s 0d per session. The appointment which does not carry any superannuation rights will be held during the pleasure of the Council and is terminable by one month's notice on either side.

Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than April 9th 1938. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed Visiting Anaesthetist Harefield.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z  
Clerk of the County Council

Middlesex Guildhall  
Westminster SW 1  
March 17th 1938

## CITY OF NOTTINGHAM ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE WORK

Applications are invited for the above post from women medical graduates experienced in practical midwifery and ante-natal and infant welfare work. The duties will be chiefly in the ante-natal and infant welfare clinics under the administrative control of the Medical Officer of Health.

Salary £600 p.a. by annual increments of £50 to £700. The salary is subject to deduction under the Superannuation Scheme of the Corporation. The successful candidate will be required to submit to a medical examination in and to reside within the City of Nottingham.

The appointment will be subject to one month's notice on either side.

Further particulars may be obtained from the undersigned and may be returned to the post before April 15th 1938. Canvassing will be a disqualification.

J E RICHARDS  
Town Clerk  
Nottingham  
March 15th 1938

## CITY OF LIVERPOOL CITY BACTERIOLOGIST'S DEPARTMENT

Applications are invited for a TEMPORARY JUNIOR ASSISTANT BACTERIOLOGIST in the above department. The appointment will be for one year. Candidates will be required to possess a registrable medical qualification and evidence of special bacteriological training is desirable. The salary will be at the rate of £400 per annum. The person appointed will be required to devote the whole of his time to the work of the department.

Applications accompanied by copies of three recent testimonials together with details of training, experience and research work should be addressed to the Town Clerk Municipal Buildings, Dale Street Liverpool 2 endorsed Temporary Junior Bacteriologist and be delivered not later than April 9th 1938.

Canvassing of members of the City Council will be regarded as a disqualification.

W H BAINES  
Town Clerk

March 21st 1938

## PORTSMOUTH EDUCATION COMMITTEE SCHOOL MEDICAL SERVICE

The Committee invite applications from fully qualified candidates for the appointment of a male ASSISTANT MEDICAL OFFICER OF HEALTH and ASSISTANT SCHOOL MEDICAL OFFICER.

Salary £500 £25 £700 per annum. Experience in Refraction, Orthopaedics, Mental Deficiency, Diseases of the Ear, Nose and Throat or any other branch of the work will be deemed a recommendation DPH an advantage.

The selected candidate will be required to pass a medical examination and contribute to the Council's Superannuation Scheme.

Forms of application obtainable from the Chief Clerk Education Offices, Guildhall, Portsmouth and should be returned not later than the first post on April 6th 1938 to the undersigned. Canvassing in any form will disqualify.

F J SPARKS  
Portsmouth Town Clerk and Clerk to the Education Committee

March 17th 1938

## CITY OF MANCHESTER CRUMPSALL HOSPITAL (1543 Beds)

The Public Health Committee invites applications from registered medical men for the post of RESIDENT ASSISTANT MEDICAL OFFICER at the above-named hospital.

The salary for the appointment is £200 per annum with board residence and laundry in addition subject to the Manchester Corporation conditions of service.

The appointment will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter.

Full information and forms of application may be obtained from the Medical Officer of Health, Town Hall, Manchester 2 and applications for the post must be received by him not later than April 9th 1938.

F E WARBRECK HOWELL  
Manchester 2 Town Clerk

March 28th 1938

## CITY OF NORWICH ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER etc

Applications are invited for the post of Assistant Medical Officer of Health and Assistant School Medical Officer to include the duties of Medical Officer with residence at the Isolation Hospital. Salary £600 p.a. annum (including emoluments valued at £150 per annum) rising by annual increments of £50 to £700 per annum. Board allowance at the rate of £60 per annum granted when absent from hospital on leave. The post is designated under the Local Government and Other Officers Superannuation Act 1922. For particulars apply to the Medical Officer of Health 68 St Giles Street Norwich by whom applications for the post must be received not later than April 11th.

## BRITISH POSTGRADUATE MEDICAL SCHOOL

Applications are invited for the post of FIRST ASSISTANT (non-resident) in the Department of Obstetrics and Gynaecology in the above-named School. Special experience in Obstetrics and Gynaecology is required. The post will normally be a full-time salary £250 to £400 according to experience and qualification.

Further particulars can be obtained from the Dean British Postgraduate Medical School, Deane Road, Shepherd's Bush, London W 12 to whom applications accompanied by two testimonials and giving the names of two referees should be addressed to a free post not later than the first post on Tuesday April 19th.

## LONDON COUNTY COUNCIL

Applications invited from medical practitioners of at least one year's standing to undertake a position. Experience in a resident appointment in a general hospital for at least six months desirable. Married quarters not available.

ASSISTANT MEDICAL OFFICER (Grade II) — Salary £350-£25 £425 with board lodging and washing.

(a) KING GEORGE V SANATORIUM near Godalming Surrey — Experience in pulmonary tuberculosis desirable.

(b) ST LUKES HOSPITAL Lowestoft Suffolk — Experience in non-pulmonary tuberculosis desirable. (No accommodation for a woman).

ASSISTANT MEDICAL OFFICER (Grade II) — Salary £250 a year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(c) GROVE PARK HOSPITAL Lee S.E. 11 — Experience in pulmonary tuberculosis desirable.

(d) ST ALFEGES HOSPITAL 48 Vauxhall Hill Greenwich S.E. 10 — Casualty officer experience in anaesthetics desirable. (Candidates must have held resident appointment in a general hospital for at least six months).

Application forms obtainable (stamped address of footscap envelope necessary) from Medical Officer of Health Staff Division 2, County Hall S.E. 1 returnable by April 11th. Canvassing disqualifies.

## LONDON COUNTY COUNCIL CONSULTANT AND SPECIALIST SERVICES

APPLICATIONS INVITED for appointment as part-time CONSULTING PEDIATRIST for a total of one session a week for duty at Queen Mary's Hospital for Children, Carshalton Surrey and the Downs Hospital for Children, Sutton Surrey.

SALARY £125 a year (£75 a year if already employed as a part-time consultant or specialist in the hospitals service) and additional remuneration at the rate of £2 12s 6d a visit for emergency visits made in excess of the number of routine sessions.

Application forms containing full particulars obtainable (stamped addressed footscap envelope necessary) from Medical Officer of Health (Staff Division—6) County Hall Westminster Bridge S.E. 1 returnable by April 20th. Women eligible. Canvassing disqualifies.

## BOROUGH OF LLANELLY ASSISTANT (LADY) MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Town Council invite applications for above whole-time appointment from duly qualified single Lady Medical Practitioners. Applicants must have had at least three years' experience in the medical profession and special experience in midwifery and child welfare work. Possession of the Diploma in Public Health will be an advantage.

Salary £500 increasing by annual increments of £25 to £700 per annum.

The Officer will be required primarily to carry out duties relative to Maternity and Child Welfare and School Children and any assigned work in connection with the Medical Services of the Borough under the directions of the Medical Officer of Health.

The appointment is subject to the 1922 Superannuation Act.

The selected candidate must pass a satisfactory medical examination.

Prescribed application forms may be obtained from the undersigned and when sent in should be endorsed Assistant Medical Officer and addressed so as to be delivered to the undersigned on or before April 20th 1938.

DAVID J PHILLIPS  
Town Clerk Llanelly

## LEICESTERSHIRE COUNTY COUNCIL COUNTY SANATORIUM AND ISOLATION HOSPITAL MARKFIELD (210 Beds) JUNIOR RESIDENT MEDICAL OFFICER

Applications are invited for the post of married male Junior Resident Medical Officer at the above Institution.

The appointment will be for a period of six months, renewable if satisfactory for a further six months.

The salary will be £300 per annum together with board residence and laundry. The person appointed will have opportunity of gaining experience in the treatment of tuberculosis and infectious disease and in X-ray work.

Form of application may be obtained from the undersigned and must be returned to the undersigned not more than three weeks before the closing date, April 15th 1938.

CLAUDE E RUMSEY  
County Council Clerk of the Council  
Leicester  
March 25th 1938

# HIS MAJESTY'S COLONIAL SERVICE

## COLONIAL MEDICAL SERVICE.

During 1938 the Secretary of State for the Colonies proposes to select a number of Medical Officers to fill vacancies the majority of which will occur in Tropical Africa and Malaya

**QUALIFICATIONS**—Candidates must be British subjects of European parentage under 35 years of age and must possess a medical qualification registrable in the United Kingdom. Preference will be given to candidates who have held Hospital or Public Health appointments or who have special knowledge of anaesthetics radiology surgery medicine ophthalmology gynaecology and midwifery diseases of the ear nose and throat venereal diseases etc

**SALARY**—Initial salaries vary from £600 to £700 and rise by increments to a maximum of between £1 000 and £1 200

**PRIVATE PRACTICE**—Private practice is not allowed as of right but in the case of some appointments it is permitted on certain conditions

**QUARTERS**—In Tropical Africa, free quarters or an allowance in lieu are provided. In Malaya quarters are provided at an annual rental not exceeding 6% of the officer's salary

**PASSAGES**—Free first class passages are provided on first appointment and when proceeding or returning from leave. Assistance is also given towards family passages

**TERMS OF APPOINTMENT**—The appointments are pensionable subject to a probationary period which varies from two to three years

**COURSES OF INSTRUCTION IN TROPICAL MEDICINE AND HYGIENE**—Selected candidates will normally be required to attend a course of instruction leading to the Diploma in Tropical Medicine and Hygiene before proceeding overseas

**DUTIES**—Although Medical Officers are appointed in the first instance for general service there are opportunities for work in special branches of medicine and surgery in public health and in medical research

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service), 8, Buckingham Gate, London, S W 1

# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances

Opportunities are available for officers on the permanent list for postgraduate study, to specialise, to take higher examinations and to obtain further qualifications

Copies of the regulations for entry and conditions of Service, including rates of pay, allowances and retired pay may be obtained from the Medical Director General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than 31st May, 1938

## BOROUGH OF TORQUAY

### APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications for the above position are invited from registered medical practitioners not exceeding 40 years of age if occupying a designated post under another local authority but otherwise not exceeding 35 years of age and possessing a Diploma in Public Health or a similar qualification.

The officer appointed will be required to devote the whole of his or her time to the duties of the office and must not engage in private practice.

The salary will commence at £600 per annum rising subject to satisfactory service by annual increments of £25 to £700. A car allowance of £40 per annum will be made.

The position will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination.

Lists of duties and forms of application may be obtained from the undersigned and the forms duly completed must be returned in an envelope endorsed Deputy Medical Officer of Health not later than April 20th 1938.

HERBERT A. FIELD

Town Hall Torquay

Town Clerk

March 29th 1938

## CITY OF LEICESTER

### ISOLATION HOSPITAL AND SANATORIUM (340 Beds)

#### DEPUTY MEDICAL SUPERINTENDENT

Applications are invited from registered Medical Practitioners (male) for the post of Deputy Medical Superintendent at the above Hospital.

Applicants should be unmarried and preference will be given to those who have held General Hospital appointments together with experience in either Pulmonary Tuberculosis or Infectious Diseases.

Commencing salary £400 per annum rising by annual increments of £50 to £600 per annum together with residential emoluments valued at £150 per annum.

The appointment which will be in the first instance for a period of two years is designated under the Local Government and Other Officers Superannuation Act 1922 and is terminable by three calendar months notice on either side.

Further particulars of the appointment and forms of application can be obtained from the undersigned. Applications to be accompanied by copies of not more than three recent testimonials and must be delivered not later than April 14th.

E. K. MACDONALD

Medical Officer of Health

Health Offices Grey Friars

Leicester

April 1938

## DEVONSHIRE ROYAL HOSPITAL

### Buxton Derbyshire (300 Beds)

#### (A National Hospital for Rheumatism and Allied Diseases)

HOUSE PHYSICIAN (male). Salary £110 rising to £175 after three months service (and prospects of promotion to Resident Medical Officer) with board residence and laundry.

Candidates must be fully qualified and registered. The appointment is for a minimum period of six months and may be extended for a further period of six months.

Applications endorsed Medical Appointment stating age, experience and qualifications together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained.

Considerable orthopaedic experience is available and the appointments offer special facilities for a gentleman preparing a thesis or wishing to undertake special work as the Hospital contains all the necessary laboratory and other facilities for research.

Canvassing will disqualify.

By Order of the Committee of Management

PRESTON TURNER

General Superintendent and Secretary

## MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASE OF THE THROAT AND CHEST

Wanted an ASSISTANT MEDICAL OFFICER (male) for the Chest Sanatorium, Delamere Forest, Cheshire (110 beds). Salary £200 per annum with board, apartment and laundry.

Candidates must be registered. The appointment is for a minimum period of six months and may be extended for a further period of six months.

Applications endorsed Medical Appointment stating age, experience and qualifications together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained.

## COUNTY COUNCIL OF MIDDLESEX

### JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Central Middlesex County Hospital  
Acton Lane Willsden N.W.10

Applications are invited for the above appointment.

Candidates must be registered medical practitioners preferably with surgical experience who have held resident appointments in a general hospital.

Salary £250 per annum together with board lodging and laundry valued at £100 per annum.

The appointment (which does not carry any superannuation rights) will be subject to medical examination and is terminable by one month's notice on either side. It is for a period of six months in the first instance and may be extended for an additional six months. The officer appointed will work under the direction of the Medical Superintendent and will devote his or her whole time to official duties.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than April 20th. Application forms are not provided. Relationship to any member or officer of the Council must be disclosed in the application. Envelopes must be endorsed Junior Assistant Medical Officer Central Middlesex County Hospital.

Canvassing directly or indirectly will be a disqualification. C. W. RADCLIFFE, Z.

Clerk of the County Council

Middlesex Guildhall Westminster S.W.1

March 26th 1938

## COUNTY OF KENT

### ASSISTANT TUBERCULOSIS OFFICER

(Male)

Applications are invited for the above-mentioned whole time appointment on the staff of the Public Health Department.

The duties will include attendance at dispensaries and such other work as may be assigned from time to time.

The salary is at the rate of £600 a year rising subject to satisfactory service by annual increments of £25 to a maximum of £750 a year with subsistence and travelling allowance according to the County Council's scale.

The officer appointed will be required to reside in such part of the county as may be directed.

The post is designated as in established one under the Local Government and Other Officers Superannuation Act 1922 and is terminable by three months notice on either side. The successful candidate will be required to pass a medical examination.

Applications stating age, qualifications and clinical experience with special reference to practical experience in the diagnosis and treatment of tuberculosis accompanied by copies of not more than three testimonials must be received by the County Medical Officer of Health, Sessions House Maidstone not later than Wednesday April 13th 1938. No official form of application will be issued.

W. L. PLATTS

Clerk of the County Council

Sessions House Maidstone

March 28th 1938

## NORTHAMPTON COUNTY MENTAL HOSPITAL

Applications are invited for the post of DEPUTY MEDICAL SUPERINTENDENT (SENIOR ASSISTANT MEDICAL OFFICER) at the County Mental Hospital, Berrywood near Northampton.

Candidates must be registered Medical Practitioners possessing a Diploma in Psychological Medicine or its equivalent and must have had mental hospital experience.

Preference will be given to candidates who have special knowledge of and experience in the Insulin Shock Treatment of Schizophrenia. Research is encouraged and a well-equipped laboratory with trained assistant is provided.

Salary £600 rising by £25 annually to £700 and £20 for the D.P.M. with unfurnished house, light, laundry and garden produce valued at £100 yearly for superannuation purposes.

The appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909. Applications stating age and experience together with copies of not more than three recent testimonials must be sent not later than April 14th to the Medical Superintendent.

## WALSALL GENERAL HOSPITAL

The Committee will shortly proceed to the appointment of an ASSISTANT HON. SURGEON to the Ear, Nose and Throat Department.

Applicants must be registered medical practitioners and must be recommended by the undersigned.

WALTER FRANKCOMBE

Mar 1 1938

House Surgeon

## SURREY COUNTY COUNCIL

### SURREY COUNTY SANATORIUM

Appointment of FIRST ASSISTANT MEDICAL OFFICER (non resident)

Applications are invited from Registered Medical Practitioners for the above post.

The Sanatorium which is at Milford near Godalming has at present 300 beds but plans are being prepared for an addition of 45 beds. The Medical Staff consists of Medical Superintendent, Deputy Medical Superintendent and 3 Assistant Medical Officers.

Candidates must possess wide experience in the diagnosis and treatment by modern methods of pulmonary tuberculosis. Practical experience in modern operative methods will be considered an advantage.

There are no resident quarters at present available and the holder of the appointment would be required to live outside in the neighbourhood of the Sanatorium.

The successful candidate will be required to give his whole time to the duties of the appointment. He will be on the Established Staff of the County Council and the appointment will be subject to the Staffing Regulations of the County Council and to the provisions of the Local Government and Other Officers Superannuation Act 1922.

The appointment is subject to satisfactory medical examination and is terminable by three months' written notice on either side.

The salary is at the rate of £570 a year rising by annual increments of £25 to £670 a year plus meals and lodging when on duty valued at £10 per annum.

Applications stating age, qualifications and experience together with copies of three recent testimonials should be addressed to the County Medical Officer, County Hall, Kingston-on-Thames.

The last day for receipt of applications is Wednesday April 13th.

Canvassing directly or indirectly will disqualify.

DUDDLEY AUKLAND

Clerk of the County Council

March 28th 1938

## ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER

(187 Beds 5 Resident Officers)

Hospital recognised by the Royal College of Surgeons England

### TWO HOUSE SURGEONS

Applications are invited from fully qualified men for the above posts one to take up duty on May 1st and one as soon as possible. Six months appointment. Salary £100 per annum with board residence and laundry.

Candidates who must be of British nationality to make application to the undersigned and to send copies of three testimonials.

HERBERT MASLEN

Secretary

March 28th 1938

## TYNEMOUTH VICTORIA JUBILEE INFIRMARY

HOUSE SURGEON (male) required May 1st 1938. Applicants must be doubly qualified and registered. Salary £150 per annum with board residence and laundry.

Applications stating age and other relevant particulars and accompanied by copies of three testimonials and photograph to be addressed to the undersigned before April 13th 1938 to whom all particulars may be obtained.

The Hospital has two resident House Surgeons and contains 80 beds and cots in the Day Department and an Out Patient Department where a large number of cases are received.

CHAS ROWELL

1 Northumberland Place

North Shields

## ROYAL HOSPITAL RICHMOND SURREY

Applications are invited immediately for the following post—

JUNIOR HOUSE SURGEON (male) £100 per annum.

Board furnished apartment and laundry. Candidates must be fully qualified and registered. Form of application can be obtained from the undersigned.

G. M. IDEN

Secretary

## TEMPORARY TUBERCULOSIS OFFICER

required for HOLIDAY DUTIES for a maximum of four months from June 1st 1938.

Salary of £15 per week inclusive of travelling expenses. Applicants must be registered medical practitioners and must be recommended by the undersigned.

The Clerk of the County Council will be pleased to forward the necessary forms to the undersigned.

Chas. Rowell, 1 Northumberland Place, North Shields.

$$S_{\alpha} = \gamma$$

## HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton SW 3

The Committee of Management invite applications for the following posts—

**RESIDENT SURGICAL OFFICER** Candidates must have held a Resident Hospital appointment for not less than six months. Salary £150 per annum with board and residence and an additional £25 per annum for services in connexion with paying patients. The appointment is for twelve months commencing May 1st 1938.

**ASSISTANT RESIDENT MEDICAL OFFICER** Candidates must have held a Resident Hospital appointment for not less than six months. Experience in Artificial Pneumothorax essential and in Ear, Nose and Throat work desirable. Salary £150 per annum with board and residence. The appointment is for six months commencing May 1st 1938.

**HOUSE PHYSICIANS** There are three vacancies. The duties include work in the Out-patient Department and in the wards. One of the selected candidates will be appointed Assistant to the Tuberculosis Officer for the Local Tuberculosis Dispensary at the Hospital. The appointment is for six months commencing May 1st 1938 with an honorarium of £50.

Applications with copies of testimonials must reach the undersigned not later than Saturday April 16th 1938.

Brompton F G ROUVRAY  
April 1938 Secretary

## CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road WC 1

### ASSISTANTS IN THE OUTPATIENT DEPT

There are the following vacancies—  
THIRD Assistant to attend on Monday at 2 p.m.  
THIRD Assistant to attend on Friday at 2 p.m.  
THIRD Assistant to attend on Saturday (first session) at 9.30 a.m.

The duties are to assist the Surgeons in seeing the patients and the posts are honorary.

Applications which may be for periods of three, six or twelve months should be sent to the undersigned immediately.

JOHN H YOUNG  
Secretary Superintendent

## ROYAL CHEST HOSPITAL City Road EC 1 (Royal Northern Group of Hospitals)

Applications are invited for the following post: **RESIDENT MEDICAL OFFICER (male)** Vacant May 1st for a period of seven months (subject to re-election). Salary at the rate of £150 per annum with board residence and laundry.

Applications with copies of testimonials should be sent by April 15th to the undersigned from whom the necessary forms of application and rules can be obtained.

GILBERT G PANTER  
Royal Northern Hospital Secretary  
Holloway London N 7

## ROYAL NORTHERN HOSPITAL HOLLOWAY N 7

Applications are invited for the following appointment—**HOUSE PHYSICIAN** vacant June 1st. The appointment is for nine months (three months as Out Patient Medical Officer and Anaesthetist and six months as House Physician). Salary at the rate of £70 per annum with board residence and laundry.

Applications with copies of testimonials should be sent by April 8th to the undersigned from whom the necessary forms of application and rules can be obtained.

GILBERT G PANTER  
Secretary

## THE NORTH KENSINGTON WOMEN'S WELFARE CENTRE 12 Telford Road, Ladbrooke Grove W 10 (Gynaecological and Birth Control Clinic)

Applications are invited from women doctors only for the post of **HONORARY CLINIC ASSISTANT** at the above Centre. The work would involve one Birth Control Session weekly (on Tuesday or Wednesday evening from 6.30 to 8 p.m.). Applications accompanied by full particulars and testimonials should be forwarded to the Superintendent at the above address as soon as possible.

## RADIUM BEAM THERAPY RESEARCH at the Radium Institute, 1 Riding House Street London W 1

**ASSISTANT MEDICAL OFFICER** resident salary £150 per annum. Six months appointment. Applications stating age, qualifications and experience with copies of testimonials to be sent to the Secretary Radium Beam Therapy Research.

It is possible for a candidate to hold this post and at the same time to carry on some post graduate studies the mornings being free.

## NATIONAL HOSPITAL FOR DISEASES OF THE HEART Westmoreland Street Marylebone W 1

### RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer (male). The appointment is for a period of six months from May 1st but may be renewed for a further period not exceeding six months.

Salary at the rate of £150 per annum with board residence and washing.

Candidates who must be duly registered Medical Practitioners will not be expected to call on the Hon. Medical Staff but should send their applications with copies of three recent testimonials to me at the Hospital not later than Friday April 8th.

ROBERT G L WHITNEY  
Secretary

## ROYAL LONDON OPHTHALMIC HOSPITAL (MOORFIELDS EYE HOSPITAL) City Road EC 1

Applications are invited for the post of **OUTPATIENT OFFICER** to attend on Mondays and Thursdays (mornings) each week.

Candidates must be registered medical practitioners.

Salary at the rate of £100 per annum. The Outpatient Officer will be appointed for a period of one year and will be eligible for reappointment.

Copies of regulations can be obtained on application.

Applications with testimonials stating age and qualifications together with photograph must be received by the undersigned not later than April 6th 1938.

A J M LARRAIN  
Secretary

## SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN Preston E 11

Applications are invited for the posts of **RESIDENT SURGICAL OFFICER** and **RESIDENT HOUSE PHYSICIAN** (vacant May 1st) male or female.

The appointments are for six months and will expire on October 30th. Board and residence are provided. Salaries at the rate of £175 and £150 per annum respectively including £5 allowance for laundry. Personal canvassing not desired.

Applications with copies of three recent testimonials to be sent to the undersigned not later than April 11th.

A ERNEST WILKES  
Secretary

## ST PAUL'S HOSPITAL FOR UROLOGICAL AND SKIN DISEASES Endell Street London WC 2

Applications are invited for the post of male **HOUSE SURGEON**. Candidates must be qualified and registered. Salary £100 per annum with board residence. The appointment is for three months in the first instance and the holder will later be eligible for the post of Resident Medical Officer.

During his appointment as House Surgeon the duties involve work in the surgical wards and in the out-patient department. Applications with copies of recent testimonials to be submitted not later than April 9th. The successful candidate will be required to take up duty about April 23rd.

J P KEY CHISLETT  
Secretary

## THE BELGRAVE HOSPITAL FOR CHILDREN (Incorporated) 1 Clapham Road SW 9

The Committee of Management invite applications for the positions of two **HOUSE PHYSICIANS** and one **HOUSE SURGEON** which will become vacant on April 30th.

Applicants must be fully qualified and registered. The appointments are for six months with board residence and washing provided. Salary at the rate of £100 per annum in each case. Applications with copies of testimonials stating age to be forwarded on or before Thursday April 7th. By order.

THOMAS CLAPHAM  
Secretary

## THE LONDON LOCK HOSPITAL 253 Harrow Road W 9

Applications are invited for a **RESIDENT MEDICAL OFFICER (male)** to ALL DEPARTMENTS. Candidates must be doubly qualified and duly registered. The appointment is for six months commencing June 1st. Salary at the rate of £175 p.a. with furnished rooms full board and laundry. Preference will be given to candidates having previous obstetric experience. Applications enclosing copies (only) of three recent testimonials must be in the hands of the Secretary by first post on Friday April 29th and from whom any further particulars can be obtained.

## WEST LONDON HOSPITAL Hammersmith W 6 (239 Beds)

An additional **HONORARY REGISTRAR** is required for the Throat, Nose and Ear Department. The appointment is for one year from May 1st next and subject to annual re-election may be extended for a period of not longer than three years.

Applicants must be duly qualified registered medical practitioners with previous experience in oto-laryngology.

Application accompanied by copies of testimonials must reach me not later than Thursday April 21st. Candidates must attend a meeting of the Medical Council at 4.30 p.m. on Friday April 22nd and prior to that date call upon and send copies of their applications and testimonials to each member thereof. They must not canvass members of the Board but nevertheless must send copies of their application and testimonials to each member thereof and if so notified be in attendance at a meeting of the Board at 5 p.m. on Tuesday April 26th when the appointment will be made.

H A WADGE  
Secretary

## THE LONDON HOMOEOPATHIC HOSPITAL (Incorporated by Royal Charter) Great Ormond Street Bloomsbury WC 1

### A GENERAL HOSPITAL (200 Beds)

### APPOINTMENT OF TWO HONORARY CLINICAL ASSISTANTS FOR MANIPULATIVE SURGERY

Applications are invited for the appointment of two Clinical Assistants for Manipulative Surgery in the Orthopaedic Department. The appointment affords a good opportunity for learning the art of Manipulative Surgery and are for a period of six months.

It will be necessary for the Assistants to attend for three hours each day on five days of the week. Candidates must be fully qualified and registered and should address their applications to the undersigned.

L J KNOWLES  
Secretary

## THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road SE 1

### RESIDENT CASUALTY AND ORTHOPAEDIC HOUSE SURGEON

Applications are invited from qualified male Practitioners for the post of Resident Casualty and Orthopaedic House Surgeon to work in the Out Patient Department with care of Orthopaedic beds. Salary at the rate of £150 per annum with board and residence. The appointment is in the first instance for a period of six months. Applications with copies of testimonials should be sent not later than Wednesday morning April 20th to the Secretary at the above address from whom further particulars can be obtained.

## THE ROYAL CANCER HOSPITAL (FREE) (Incorporated under Royal Charter) Fulham Road London SW 3

Applications are invited for the post of **SECOND ASSISTANT PATHOLOGIST** to commence duties on May 2nd 1938.

Salary £300 per annum. The appointment is for twelve months and subject to rules a copy of which may be obtained from the Secretary.

Applications to be made on a form which will be supplied by the Secretary together with three (copies only) testimonials to be sent to the Secretary not later than the first post on Thursday April 14th 1938.

CLEMENT COBBOLD  
Secretary

## THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road SE 1

There will be a vacancy on May 1st 1938 for a **HOUSE PHYSICIAN (Male)** at the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum with board and residence. Applications with copies of testimonials should be forwarded not later than Wednesday morning April 20th to the Secretary at the above address from whom further particulars can be obtained.

## THE ITALIAN HOSPITAL Queen Square WC 1

Applications are invited for the post of **HONORARY EAR NOSE AND THROAT SURGEON**. Candidates must be Fellows of the Royal College of Surgeons of England or Edinburgh or possess the Italian equivalent and have a knowledge of Italian.

Applications should reach the Secretary by Monday April 11th.



## APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary of the British Medical Association B.M.A. House, Tavistock Square W.C.1 (in the case of Scottish appointments, with the Scottish Secretary 7, Drumhugh Gardens Edinburgh)

### (1) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(mid)</b>	<b>CONTRACT PRACTICE—(conid)</b>
ABERTYSSWG MEDICAL AID SOCIETY (Medical Officer)	MID RHONDDA MEDICAL AID SOCIETY (Medical Officer)	OAKDALE MON (Medical Officer for Medical Aid Association)
GILFACH GOCH CLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Society)	<b>PUBLIC HEALTH</b>
LLWYNPIA CLYDACH VALL PENYCRRAIG GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Workmen's Medical Scheme)	HAMPSHIRE COUNTY COUNCIL (Assistant County Medical Officer)
		SALOP MENTAL HOSPITAL SHREWSBURY (Assistant Medical Officer)

### (b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Friendly Societies' Appointments)	The Medical Secretary New South Wales Branch, 135 Macquarie Street Sydney N.S.W.	<b>VICTORIA</b> (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St. East Melbourne Victoria	<b>WESTERN AUSTRALIA</b> (All Friendly Societies' Appointments)	The Hon. Sec. Western Australia Branch British Medical Association 155 George Street Perth Western Australia
<b>QUEENSLAND</b> Brisbane Associate Friendly Societies Institute	The Hon. Sec. Queensland Branch British Medical Association B.M.A. House 5 Wickham Terrace Brisbane B.I.				

March 30, 1938

By Order of the Council

G. C. ANDERSON Secretary

#### BIRMINGHAM AND MIDLAND EYE HOSPITAL (114 Beds)

Applications are invited from duly qualified Medical Practitioners for the post of HOUSE SURGEON at the above Hospital which will be vacant on April 30th next.

Salary £110 per annum (rising to £120 at the end of six months satisfactory service) and £10 laundry allowance.

The Resident Staff consists of a Resident Surgical Officer and three House Surgeons.

Applications with testimonials and evidence of registration should be forwarded immediately to the undersigned.

J. W. PEARCE  
General Superintendent

Church Street, Birmingham 3

#### DORSET COUNTY HOSPITAL Dorchester.

##### APPOINTMENT OF HOUSE SURGEON

The Committee of Management are open to receive applications for the position of House Surgeon (male only) to take up his duties on May 14th 1938.

Every candidate must be unmarried and possess a recognized qualification to practice medicine and surgery from some recognized body in Great Britain or Ireland. Salary £150 per annum with board and lodgings. The appointment is for a period of six months.

All applications, accompanied by copies of three recent testimonials, should be sent to the Secretary Dorset County Hospital as early as possible. Candidates must be of British birth and nationality.

#### BEDFORD COUNTY HOSPITAL

Wanted FIRST HOUSE SURGEON to take over his duties on April 1st for a term of not less than six months. He must be fully qualified and unmarried. Salary £155 per annum together with board, lodgings, and laundry. Applications, stating age, nationality and qualifications, together with three recent testimonials to be sent to the Secretary Hon. Medical Staff Committee.

#### BARROWMORE TUBERCULOSIS SANATORIUM AND SETTLEMENT Gt Barrow near Chester

Male JUNIOR ASSISTANT MEDICAL OFFICER required. Salary £200 per annum with board, residence and laundry. The appointment will be made in the first instance for a period of six months renewable for a further six months if satisfactory.

The Institution deals with all cases of Pulmonary Tuberculosis, and comprises Hospital, extensive extensive workshops for manual work and a Settlement.

Special treatment Sanatorium and Artificial Pneumothorax Unit.

Applications marked Junior Assistant Medical Officer with copies of three testimonials should be sent to the Medical Director at the above address by Wednesday April 6th 1938.

#### BRISTOL EYE HOSPITAL (10 Beds) (11 Private Patients) 19-1017 In-patients 17-24 Out-patients

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £100 per annum. Sent in post available after examination on April 14th 1938.

Substitute experience for DOMS. Applicant on stating age and qualifications etc. with three recent testimonials to reach the undersigned by April 14th.

D. M. BABER  
Secretary J. H. G. G. G.

#### HEREFORDSHIRE GENERAL HOSPITAL, HEREFORD (11 Beds)

Applications are invited for the post of HOUSE SURGEON (M.D.) in charge of Casualty and Ear, Nose and Throat Departments.

Salary at the rate of £150 per annum with board and laundry. Applications, stating age and qualifications, together with three recent testimonials, should be sent at once to the undersigned.

T. W. LIPSON  
Secretary

#### ROYAL BERKSHIRE HOSPITAL READING (100 Beds)

Applications are invited for the post of Junior Assistant Medical Officer. Salary £100 per annum with board and laundry.

One HOUSE SURGEON to the Medical Departments (Ear, Eye, Nose and Throat) (M.D.)

Applications, stating age and qualifications, together with three recent testimonials, should be sent to the undersigned by April 14th 1938.

H. E. RYAN  
Secretary

Applications, stating age and qualifications, together with three recent testimonials, should be sent to the undersigned by April 14th 1938.

H. E. RYAN  
Secretary

#### ROYAL SURREY COUNTY HOSPITAL, GUILDFORD (100 Beds)

WANTED MAY 1st a RESIDENT SURGICAL OFFICER (M.D.)

Applications, stating age and qualifications, together with three recent testimonials, should be sent to the undersigned by April 14th 1938.

H. E. RYAN  
Secretary

Applications, stating age and qualifications, together with three recent testimonials, should be sent to the undersigned by April 14th 1938.

H. E. RYAN  
Secretary

#### REDLANDS HOSPITAL, GLoucester

Applications are invited for the post of Junior Assistant Medical Officer. Salary £100 per annum with board and laundry.

One HOUSE SURGEON to the Medical Departments (Ear, Eye, Nose and Throat) (M.D.)

Applications, stating age and qualifications, together with three recent testimonials, should be sent to the undersigned by April 14th 1938.

H. E. RYAN  
Secretary



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## ASSISTANCIES

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**WANTED IMMEDIATELY OUTDOOR** female ASSISTANT for private and panel practice in Glasgow.—Address No. 4738 B.M.A. House Tavistock Square W.C.1

**WANTED AT EARLY DATE YOUNG** single male outdoor ASSISTANT English or Scottish and recently qualified preferred for mixed practice in Essex 30 miles from London. Salary £480 including car allowance. Own car essential. References.—Address No. 4424 B.M.A. House Tavistock Square W.C.1

**WANTED IMMEDIATELY INDOOR ASSISTANT** Growing practice within 40 miles London. Possibility of partnership later. Own car desirable.—Address No. 4836 B.M.A. House Tavistock Square W.C.1

**WANTED (ABOUT EASTER) INDOOR** male ASSISTANT unmarried £300 all found South Wales mixed practice. Car allowance. Suit newly qualified Scot. Hospital Dispensers kept. Usual Bond.—Address No. 4644 B.M.A. House Tavistock Square W.C.1

**WANTED MAY 1st YOUNG MALE ASSISTANT** for mixed country town practice in South of England. H.P. preferred. Protestant Testimonials £300 usual allowances. Possible view.—Address No. 4737 B.M.A. House Tavistock Square W.C.1

**WANTED END-APRIL ASSISTANT FOR** practice in Midland town. Salary £300 increasing to £350 with rooms and attendance. Car provided. State essential particulars.—Address No. 4725 B.M.A. House Tavistock Square W.C.1

**WANTED INDOOR ASSISTANT IN LARGE** Panel and mainly working-class Practice in coastal town in Devon. Salary £300 per annum and £50 per annum car allowance.—Address No. 4845 B.M.A. House Tavistock Square W.C.1

**WANTED YOUNG INDOOR MALE ASSISTANT** near Newcastle Northumberland. Car provided or own car allowance. Salary £350. References.—Address No. 4447 B.M.A. House Tavistock Square W.C.1

**WANTED PART-TIME ASSISTANT** Mornings 10-1. Two evenings 6-9. No Sunday or other duty. London. Salary £4 4s. Address No. 4849 B.M.A. House Tavistock Square W.C.1

**WANTED PERMANENT BRITISH ASSISTANT** single experienced for Glamorgan colliery practice. Good hospital. Dispenser kept. Give full particulars and photo. Salary £4 0 plus £50 car allowance.—Address No. 4721 B.M.A. House Tavistock Square W.C.1

**WANTED ASSISTANT WITH A VIEW TO** partnership in Ophthalmic and Ear, Nose and Throat Practice in Africa. Applicant must be gentlemanly of good appearance, manner and a good mixer. Give full particulars of qualification, experience and age (which should be under 35). No premium for share.—Address No. 4705 B.M.A. House Tavistock Square W.C.1

**WANTED—YOUNG MALE ASSISTANT** Outdoor Sheffield. Private and panel practice. Scotch graduate (Abdn. preferred). Car allowance. Hospital experience essential.—Address No. 4732 B.M.A. House Tavistock Square W.C.1

**WANTED RADIOLOGICAL ASSISTANT** with view to partnership for rapidly growing South African town. Salary £100 progressive. Applicant must hold D.M.R.E. or equivalent should forward recent testimonials particulars of age experience willingness to learn Afrikaans etc.—Address No. 4709 B.M.A. House Tavistock Square London W.C.1

**WANTED INDOOR ASSISTANT MALE OR** Female Midlands Wolverhampton area. Salary £300 p.a. Car supplied. State full particulars.—Address No. 4702 B.M.A. House Tavistock Square W.C.1

**WANTED INDOOR ASSISTANT MALE** single Panel and private practice University town near London. Able cycle or car allowance. Salary £300 plus board and lodging.—Address No. 4715 B.M.A. House Tavistock Square W.C.1

**WANTED—YOUNG ASSISTANT MALE** Protestant English or Scots. Practice in country seaside district North of England. Good sports facilities. Send full particulars to.—Address No. 4729 B.M.A. House Tavistock Square W.C.1

**WANTED—ASSISTANT OUTDOOR ENG** lish or Scottish preferred. Country practice private and panel near London. Salary £400 p.a. plus car allowance. State experience and copy testimonials.—Address No. 4832 B.M.A. House Tavistock Square W.C.1

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### THE SAMARITAN FREE HOSPITAL FOR WOMEN

Marylebone Road NW 1

Applications are invited for the post of HOUSE SURGEON for a period of six months commencing May 1st next. Salary at the rate of £100 per annum with board lodging and laundry. Previous experience is House Surgeon essential. Applications stating age accompanied by copies only of testimonials should be sent to the Secretary at the Hospital on or before Wednesday noon April 20th 1938.

G H HAYKINS  
Secretary

### THE HOSPITAL OF ST CROSS RUGBY

(120 Beds)

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (three R.M.O.s).

Salary to commence at the rate of £100 per annum for the first three months, £125 per annum for the second three months and at the rate of £150 per annum for subsequent months. Full board washing etc. provided.

Six months appointment and eligible on completion of service for further extension of six months.

Candidates must be prepared to commence duties immediately.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.s.

Applications stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W COCKBURN  
Superintendent and Secretary

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Applications stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W COCKBURN  
Superintendent and Secretary

### PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invite applications for the post of HOUSE SURGEON to the EYE, EAR, NOSE AND THROAT WARDS AND CLINICS.

Salary at the rate of £150 per annum with board residence and laundry. Six months appointment.

Applications stating age, qualifications and experience together with copies of testimonials to be forwarded to

JOHN GIBSON

Superintendent and Secretary

Royal Infirmary Preston

March 28th 1938

### THE CHESTER ROYAL INFIRMARY

(225 Beds)

Applications are invited for the post of HOUSE SURGEON (male) to take up duty as soon as possible. Salary £150 per annum with board lodging and laundry. Duties will include work in the Orthopaedic Department and Fracture Clinic. The appointment is approved in connection with the M.S. (London University) and F.R.C.S. (Eng.) examinations. Application list closes April 8th. Application forms may be obtained from—

W H GRACE M.D. M.R.C.P.

Hon. Secretary Medical Committee

March 16th 1938

### MONTAGU HOSPITAL

MEYBOROUGH (113 Beds)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male). Salary £175 p.a. with usual residential emoluments. Previous experience essential. The appointment is for six months and is subject to renewal. This post offers excellent opportunity for experience in the treatment of fractures (Bohler).

Applications stating age, nationality, qualifications and experience, accompanied with copy testimonials to be sent to the undersigned.

JOHN N DRAKE

Secretary Superintendent

### THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD  
Firth Auxiliary Norton

Applications are invited for the post of RESIDENT MEDICAL OFFICER from registered Medical Practitioners.

The appointment will be for six months commencing immediately subject to renewal for a further six months with salary at the rate of £150 per annum plus board residence and laundry. Previous Obstetrical experience is desirable.

The Firth Auxiliary Hospital contains 47 beds of which 23 are set apart for the treatment of Puerperal Sepsis the remainder being for Ante Natal and Gynaecological cases.

Applications should be lodged with the undersigned addressed to the Jessop Hospital for Women Sheffield immediately.

DAVID OSWALD

Superintendent and Secretary

### WEST KENT GENERAL HOSPITAL

(Incorporated)  
Maidstone (135 Beds)

Applications are invited for the post of HOUSE SURGEON who must be a male of British nationality and unmarried. Salary at the rate of £175 per annum with board apartments and laundry. Candidates must possess registered qualifications.

Applications stating qualifications and experience together with copies of testimonials should be sent to the undersigned on or before April 9th 1938. The successful candidate will be required to take up residence in early April.

EDWARD J GRIGG

House Governor and Secretary

### THE ROYAL INFIRMARY SHEFFIELD

(500 Beds)

The Board of Management invite applications for the post of HOUSE SURGEON TO THE EAR, NOSE AND THROAT DEPARTMENT. The salary attached to this post is £50 per annum increasing after six months service to £100 per annum with board and residence.

The appointment will be tenable until April 30th 1938. The successful candidate will be eligible for re-election to this or one of the other fourteen House appointments.

Applications with copies of testimonials to be sent to the General Superintendent and Secretary March 14th 1938.

### THE STAFFORDSHIRE GENERAL INFIRMARY STAFFORD

HOUSE PHYSICIAN AND HOUSE SURGEON required on May 1st. Salary £150 and £175 respectively. The appointment to be held for at least six months. The Hospital has 145 beds including 14 Private Wards and there are three Residents.

Applications stating age and accompanied by copies of three recent testimonials as to qualifications and experience should be sent to the undersigned not later than Thursday April 14th.

Stafford

A E COLLINS

March 31st 1938

Secretary

### STOCKTON AND THORNABY HOSPITAL

Stockton on Tees  
(140 Beds 3 Residents)

HOUSE PHYSICIAN (male) alternating with Casualty Officer required for a period of at least six months to commence on or about April 16th 1938. Salary £150 per annum with board residence and laundry. Candidates must be duly qualified and unmarried. Applications stating age, nationality and experience together with copies of three testimonials to be sent to the undersigned.

J WILKINSON

Secretary

### VICTORIA HOSPITAL ACCRINGTON

The Governing Body of this Hospital invites applications for the post of HOUSE SURGEON. Candidates must be duly qualified and registered. Number of beds 50. Salary £175 per annum with board and lodging.

Conditions of appointment and particulars of duties may be obtained from the undersigned to whom applications with copies only of testimonials should be sent on or before April 11th.

Victoria Hospital

J KENYON

Accrington

Secretary

### WEST SUFFOLK GENERAL HOSPITAL

Bury St Edmunds (112 Beds)

Applications are invited for the post of HOUSE SURGEON. Duties include charge of the Surgical beds. Salary £180 per annum with board lodging and laundry.

One other Resident Medical Officer. Applicants must be registered practitioners.

Applications stating age, experience and nationality with three copies of three recent testimonials to be sent to the Secretary.

L E HARDWICKE

March 15th 1938

Secretary

### THE ROYAL CRIPPLES HOSPITAL

Birmingham

(306 Beds for acute cases (including a proportion of patients suffering from tubercular bone disease) and large Out Patient Department)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male) vacant immediately. Salary £200 per annum plus car allowance. The appointment which is for a period of six months is renewable on the discretion of the Medical Board and is terminable by one month's notice on either side.

Candidates must be unmarried and preference will be given to those with previous experience in General and Orthopaedic Hospitals.

Applications with copies of three recent testimonials to be sent to the General Secretary Royal Cripples Hospital 80 Broad Street Birmingham 15.

### THE MOUNT VERNON HOSPITAL

Northwood Middlesex  
(For the treatment of Cancer)

There will shortly be a vacancy for a HOUSE SURGEON. Candidates must be fully qualified and registered. Salary at the rate of £150 per annum with board residence etc. Six months appointment. Applications accompanied with testimonials to be sent to the undersigned.

Offices

W J MORTON

32 Fitzroy Square W1

Secretary

### LONDON JEWISH HOSPITAL

Stepney Green E1  
General Hospital 109 Beds

Applications are invited for the post of EAR, NOSE AND THROAT REGISTRAR. Honorarium at the rate of Twenty Guineas per annum. Particulars can be obtained from the Secretary to whom candidates must send their applications and copies of three recent testimonials.

### LONDON & DISTRICT NURSING ASSOCIATION

Doctors are recommended to make use of our Super Staff for res, non res, or duly visiting.

All grades of qualified nurses, and also good hospital trained assistants.

Secretary

374 Gray's Inn Road WC1

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THE DOCTOR IN PRACTICE OR ABOUT TO ENTER THEREIN SHOULD BE ADEQUATELY PROTECTED BY INSURANCE IN RESPECT OF

HIS LIFE  
HIS HEALTH  
HIS HOME  
HIS PRACTICE  
AND  
HIS CAR

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The  
Medical Insurance Agency  
(Limited by Guarantee)  
BRITISH MEDICAL ASSOCIATION HOUSE  
TAVISTOCK SQUARE, WC1

□

WE CAN ALSO ARRANGE  
ADDITIONAL CAPITAL FOR THE  
PURCHASE OF A PRACTICE OR  
PARTNERSHIP

State age next birthday  
when writing



# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1880)

Tele Address  
Triform, Westcent—London

TAVISTOCK HOUSE SOUTH  
TAVISTOCK SQUARE, W C 1

Telephone Euston { 1614  
1645

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical, Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent  
Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them

## REDUCTION IN FEES

In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill, book debts, furniture, drugs, fittings and other effects (excluding sales of any freehold or leasehold property, or of practices, effects etc., outside Great Britain) is limited to a maximum fee of Fifty Pounds

## FULL TERMS ON APPLICATION

### Practices and Partnerships for Disposal

- 1 DEATH VACANCY—MIDDLESEX, growing neighbourhood—PRACTICE doing at rate of about £900 a year Panel 1,540 Two small houses to be purchased
- 2 MIDDLESEX—PARTNERSHIP in steadily increasing middle class Practice about £4,000 p.a. in residential district Panel 1,500/1,600 House available Premium two ninths share (about £1,000 p.a.) two years purchase
- 3 EAST ANGLIA—Country PRACTICE, about £1,700, in beautiful agricultural district Panel about 1,000 Tudor house (4 bedrooms), garage and large garden Price about £1,025 Premium £2,800 to include drugs, etc.
- 4 MIDLANDS—PRACTICE in growing residential district, near good town Receipts last year, £770 Panel about 100 Attractive modern easily run house (4 bedrooms) Price £3,500 Scope Premium one and a half years purchase
- 5 S W OF ENGLAND—FOURTH PARTNER required in mixed country town Practice, nearly £6,800 p.a. Panel 4,600 Share worth about £1,100 p.a. at two years purchase Partner must be young and have made special study of medicine Preliminary Assistantship
- 6 LONDON, W 9—PRACTICE doing between £900/£950 p.a. in residential part Panel 50/60 Rent of maisonette (4 bedrooms, etc.), £200 p.a. Scope Premium £1,250
- 7 ESSEX COAST—PARTNERSHIP in well established Practice over £1,600 p.a. in growing district Panel about 1,000 Detached house (3 bedrooms) with garage and garden Price £1,450 Yachting sea fishing, etc. Decided scope Premium one half share, £1,600
- 8 W CROYDON—Cash and Panel PRACTICE Receipts last year £680 Panel 400 and club Rent of house, £104 p.a. Premium £850 or very near offer
- 9 LONDON, W—Middle-class PRACTICE, £600 p.a. in nice suburb Panel 267 House (5 bedrooms) Price £1,300 Good scope Premium one and a half years purchase
- 10 S COAST HEALTH RESORT—PRACTICE averaging £1,600 p.a. Panel 900 House with beautiful garden Price £2,250 Scope Premium £3,750
- 11 EASTERN COUNTIES—PRACTICE, about £2,500 p.a. in progressive market town Panel 1,500 Centrally situated house (7 bedrooms) garage and garden Rent £68 p.a. Well equipped hospital Ample scope Premium two years purchase
- 12 LONDON, N W—PARTNERSHIP in Practice averaging over £5,000 p.a. Panel about 6,000 Flat to rent One fifth share at first at two years' purchase Applicant should be English or Scottish
- 13 DEATH VACANCY—S WALES—Country PRACTICE averaging about £760 p.a. Panel 360 House (5 bedrooms, etc.), large garage and garden for sale or rent
- 14 SURREY—PRACTICE in new developing district doing at rate of nearly £700 p.a., appointment, worth £50, and increasing panel 163 Well situated house (3 bedrooms and professional accommodation) Price about £1,650 Ample scope Premium £400
- 15 LONDON, N W 8—Branch PRACTICE Receipts about £220 Premises in residential flats Rent £150 p.a. Scope Premium £300
- 16 S WALES—SEASIDE RESORT—PRACTICE averaging £800 p.a. Panel 234 Visits 5/- to 10/6 Corner house, for sale or rent Premium two years purchase

### Full Particulars sent free

- 17 NEW ZEALAND—AUCKLAND PROVINCE—PRACTICE of £750 p.a. in dairy farming district Seven roomed house with grounds of two acres Premium, house and practice £1,100
- 18 HOME COUNTY—PARTNERSHIP in sound Practice, about £3,300, in progressive town Panel 1,650 House (6 bedrooms) for sale or rent Premium one fourth share £4,500 Smaller share considered Purchaser should be able to do major surgery
- 19 MIDLANDS—Inland Watering Place—THIRD PARTNER required in middle class Practice about £3,800 p.a. Panel about 1,300 Fees 3/6 to 10/6 Premium seven twenty fourths share two years purchase and up to one third in three years Short Assistantship
- 20 SURREY—Increasing middle and working-class PRACTICE, doing about £1,500 in thickly populated suburban district Panel about 800 Small house with garage Price £500 or rent £78 p.a. Scope Premium £2,500 to include fittings, furniture, drugs, etc.
- 21 MIDLANDS—Country PRACTICE, averaging £800 p.a. in very beautiful district (Panel and appointments about £360) Exceptionally attractive house (5/6 bedrooms), garage and about 2 acres grounds, for sale Premium £1,500
- 22 SCOTLAND—FIFESHIRE—PRACTICE, nearly £800 p.a. in small town Panel about 500 House (6 bedrooms) garage and good sized garden Shooting, fishing, etc. available Premium house and practice £2,500
- 23 S COAST—Ophthalmic PRACTICE Receipts £900 p.a. House (5 bedrooms), garden, small garage for sale Possible hospital appointment in near future Premium £1,350 including full equipment, etc.
- 24 SOUTH AFRICA—Old established PRACTICE, averaging £3,000 p.a., near Capetown House to rent Cottage hospital Scope for surgery Premium £2,500 to include most up to date X-ray apparatus etc. etc.
- 25 MIDLANDS—PARTNERSHIP in Practice, about £2,600 p.a. in small town Two fifths share at two years purchase after short Assistantship
- 26 W OF ENGLAND—Old-established middle class PRACTICE in good town Receipts 1937, £1,450 Panel 300 Visits 5/- to £1 1s plus medicine Very convenient detached non basement house (7 bedrooms etc.) to rent Premium one and a half years purchase or near offer
- 27 PRIVATE MENTAL HOME for both Sexes—Cash receipts average £3,900 p.a. Premium for licence and goodwill, freehold property and furniture, £7,000 Further details on request
- 28 S MIDLANDS—PARTNERSHIP in Practice, nearly £2,400 p.a. in county town Panel about 2,000 House could be obtained Premium two fifths share one and three quarter years purchase or near offer (Short Assistantship)
- 29 SURREY—PRACTICE doing about £900 in growing neighbourhood Panel 650 increasing Detached house (3 bedrooms) nice garden and room for garage Rent 35/- weekly Net rent of branch 12/6 Premium £1,500 or offer
- 30 LONDON, S E—Suburban PRACTICE Receipts 1937 £780 Panel 350 Detached house (7 bedrooms etc.) small garden, no garage Price freehold £700 Scope Premium one and a half years purchase



# British Medical Bureau

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TAVISTOCK SQUARE W C 1

Telephone Euston 1644  
1645

## Practices and Partnerships for Disposal (continued)

31 MIDDLESEX—Increasing PRACTICE doing at rate of £400 in Harrow Panel 150 Small modern detached house Rent £90 p.a. Premium £500

32 LONDON SE—PRACTICE doing at rate of £770 p.a. in thickly populated district Panel 670 Small house (3 bedrooms) Rent £50 p.a. Branch surgery £40 p.a. Premium £150 to include drugs, etc.

33 SUSSEX COAST—PARTNERSHIP with early succession in steadily increasing Practice doing about £160 in beautiful country district Attractive modern house for sale Excellent sailing, etc. Scope Premium one half share £1000

34 N.E. COAST—Old established and easily worked middle and better working-class PRACTICE over £150 p.a. in seaport town No panel Private residence for sale Good scope Premium £800 to include furnishings and fittings of consulting rooms, etc.

35 LONDON W9—PRACTICE doing about £1600 Panel 1700 and P.M.S. 40 Semi-detached corner house (4 bedrooms, etc.) no garage or garden to rent Premium £3,250

36 S. OF ENGLAND—First rate Residential Town—Good-class non-dispensing PRACTICE about £1200 p.a. Consultations and visits 10/6 sometimes 7/ No midwifery Good house (6 bedrooms) in best part Price £1500 Good scope Premium two years purchase Suitable to a physician

37 SURREY—PARTNERSHIP in well established and rapidly growing middle-class Practice doing about £370 in developing residential neighbourhood Panel 750 Visit 5/- to 10/6 House (3 bedrooms) garage and small garden Price £1,250 One fourth share at first at two years purchase

38 DEVON AND CORNWALL BORDER—Very old-established unopposed and steadily increasing country PRACTICE £1325 p.a. Panel 413 Visits 3/- to 15/6 medicine extra Very nice detached house (6 bedrooms 2 dressing rooms, etc.) garages and garden about one acre with fine orchard for sale Ample scope for increase All health cause of sale Reasonable premium accepted for quick sale

39 SE COAST—PARTNERSHIP in old established middle and working-class Practice in growing resort Receipts 1937 £4,350 Panel about 3000 House (5 bedrooms) garage etc. to rent at £120 p.a. Premium one third share two years purchase

40 SEASIDE TOWN WITHIN HOUR OF LONDON—Very old-established PRACTICE about £625 p.a. Panel about 300 Nice detached house (5 bedrooms) large garage and garden for sale or rent Good scope Premium £1000

41 W. OF ENGLAND—PARTNERSHIP in non-dispensing PRACTICE of £1800 in first rate residential town Panel 2000 Suitable flat available Premium four ninth share two years purchase

42 S. OF ENGLAND—Well established SANATORIUM for the Open Air Treatment Receipts £2,250 Premium £1000 to include furniture, etc. Full details on application

43 LONDON SW—PARTNERSHIP in second old established and steadily increasing Practice in pleasant living residential district Visits 3/6 to £1/15 No midwifery Suitable house obtainable Share £1,250 p.a. Premium £2,000

44 N. MIDLANDS—PARTNERSHIP in steadily increasing middle-class Practice in rapidly growing country town Panel 900 House with beautiful garden and good garden to rent One fifth or one fourth share two years purchase

45 EASTERN COUNTIES—PARTNERSHIP in Practice over £2000 in very pleasant agricultural district Moderate panel Pleasantly situated house Rent £160 p.a. on lease Extra grass land available Good scope for increase by young energetic man Premium one half share two years purchase

46 N. WALES—PARTNERSHIP in mixed Practice averaging about £2400 p.a. in industrial district Panel 1950 Visits 3/6 to £1/10s medicine extra House (bed rooms) electric light and gas garage and garden We are necessary but an asset Premium one half share to include remainder of lease £2,500

47 KENT—PARTNERSHIP in middle-class Practice over £4000 p.a. in growing residential district Panel 1000 Non-basement house (4 bedrooms and dressing room) garage and garden to rent Cottage hospital One fourth share at two years purchase

48 MIDLANDS—PRACTICE in good town easy access to London Earnings average £2,800 Panel 1950 Large house with garage and garden Rent £150 p.a. Vacancy for a physician on staff of local hospital also scope for surgery and gynaecology Premium two years purchase

49 EAST ANGLIA—PARTNERSHIP in Practice over £3,500 in first rate country town Panel 1500 Incoming partner should preferably be graduated at Oxford or Cambridge and must have had surgical training and be able to do surgical work on county hospital

50 SW ENGLAND—Ear Nose and Throat PRACTICE in large town (34 receipts over £1000) Fees £2 2/6 Good house containing 14 consulting rooms garage and garden Price £2,000 Scope Premium £1000 Purchaser must be experienced and possess the F.P.C.S. or D.L.O.

51 EASTERN COUNTIES—PARTNERSHIP in Practice over £5000 p.a. in country town Panel 1500 Main surgery premises (4 bedrooms, etc.) garage and garden to rent Premium one fifth share two years purchase Further share in 4 or 5 years Short Asbestos pipe

Purchasers can raise additional capital for the purchase of approved practices or shares  
Particulars will be forwarded on application

**RELIABLE LOCUMS AND ASSISTANTS ARE URGENTLY REQUIRED**  
All communications to be addressed to The Manager

Manager  
W. M. SCOBIE

**SCOTTISH BRANCH, 21, Alva Street, Edinburgh 2**  
FOR DISPOSAL

A EDINBURGH—Old-established PRACTICE Receipts averaging £1000 Panel 805 Knowledge of Homoeopathy an advantage Suitable house Price £1,500 Premium, practice two years purchase

B N. OF SCOTLAND—Old established country PRACTICE in beautiful district Receipts £1,300 Attractive and commodious house for sale Premium, practice and house £2,850

C LOCUMS required for Doctors taking Post-Graduate Courses in Scotland from June 2nd until end of

September Applications with full particulars and qualifications and when available are invited

D N. OF SCOTLAND—Old-established country PRACTICE in beautiful district Receipts average £1,000 Excellent house to rent Premium £1600

E EASY DISTANCE OF GLASGOW AND EDINBURGH—PRACTICE nearly 200 p.a. in small town House (6 bedrooms) garage and garden Premium practice and house £2,500

F EDINBURGH—Small PRACTICE Receipts approximately £400 Suitable house on main road

For further details apply The Manager 21 Alva Street, Edinburgh.

Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager, to whom all communications should be addressed



# BRITISH MEDICAL BUREAU

(The Scholastic, Clerical and Medical Association Ltd.)

(FOUNDED 1880)

## NORTHERN BRANCH

33, CROSS ST., MANCHESTER, 2.

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{ Manchester - Blackfriars 3925  
{ Manchester - Rusholme 2549 (Night Calls)

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Recommended with every confidence to the profession by the **BRITISH MEDICAL ASSOCIATION** as a thoroughly trustworthy medium for the transaction of all Medical Agency business

**TRANSFER OF PRACTICES AND PARTNERSHIPS INTRODUCTION OF RELIABLE ASSISTANTS AND LOCUM TENENS at Short Notice VALUATION and INVESTIGATION OF PRACTICES, Etc**

**FOR DISPOSAL**

Full particulars free on request

Practices and Partnerships wanted Large list of bona fide purchasers with ample capital available Enquiries invited from prospective vendors All information treated in strict confidence

**YORKSHIRE (WR)**—Very old-established Mixed Panel and Private PRACTICE Cash receipts £1 200 p.a. Panel 900 Scope Good detached house 2 reception 4 bedrooms Professional rooms garage and garden Premium—1½ years purchase or near offer—No 1060  
**MANCHESTER**—Old established mixed-class PRACTICE Cash receipts last year £1 222 Panel 800 Scope Good house 2 reception 5 bedrooms Premium—1½ years purchase—No 1009  
**WORCESTERSHIRE**—Very old established Country PRACTICE in beautiful district Cash receipts £800 p.a. Panel 400 and appointments £60 p.a. Nearest opponent 5 miles Attractive house 3 reception 5 6 bedrooms electric light garage and large garden Good sport Premium—Practice—£1 500—No 1097

**MANCHESTER**—Well established mixed class PRACTICE Cash receipts £1 600 p.a. Panel 1 600 Good surgery premises to rent at £52 p.a. Purchaser can choose own residence Premium—1½ years purchase Vendor retiring—No 1079

**NORTH EAST COAST—SEASIDE RESORT**—Very old established middle class (non Panel) PRACTICE in present hands 39 years Cash receipts last year £1 000 Scope for energetic man Nice detached house 3 reception 6 bedrooms garage and garden of over half an acre Premium—Practice—£750—No 1098

**LANCS TOWN—PARTNERSHIP** in old established mixed-class PRACTICE in large town 6 miles from Manchester Average gross cash receipts nearly £4 000 p.a. Panel 3 600 Good house 2 reception 4 bedrooms garage and small garden To rent Premium—2½/5th share (about £1 600 gross)—2 years purchase or near offer—No 1073

**LANCS TOWN**—Old established mixed Panel and Private PRACTICE Cash receipts last year £1 070 Panel 1 300 Good detached house 2 reception rooms 4 bedrooms Professional rooms garage and garden Rent £60 p.a. Premium—1½ years purchase—No 1099

**NORTH EAST COAST**—Old established mixed Panel and Private PRACTICE Cash receipts approximately £2 100 p.a. Panel 2 140 Appointment and Clubs £400 p.a. Good house 2 reception 3 bedrooms 3 Professional rooms garage and small garden Price £800 Premium—2 years purchase—No 1094

**NORTH WALES SEASIDE RESORT—PARTNERSHIP** (after preliminary Assistantship) in good class Practice Cash receipts last year £4 070 Panel 1 050 and appointments £600 p.a. Incoming man should have good degrees and Hospital experience Probable appointment to local Hospital Salary during Assistantship £400 p.a. plus £50 car allowance and rooms overlooking sea 1 room—1½ share—2 years purchase Increases to 1 share later—No 1096

**SCOTLAND—FIFESHIRE**—Old established PRACTICE in small town Cash receipts £800 p.a. Panel 800 Good house 2 reception 4 bedrooms Professional rooms (separate entrance) electric light garage and good garden Freehold All kinds of sport Premium—Practice and house—£2 500—No 1095

**MANCHESTER**—Sound old established mixed Panel and Private PRACTICE in industrial district Cash receipts 1st year £2 200 Panel 2 230 Good house reception room 4 bedrooms 2 Professional rooms, small garden Rent £50 p.a. Premium—best offer—No 1084

**LANCS TOWN**—Sound old established middle and better working class PRACTICE Cash receipts last year £2 620 Panel over 1 700 Good house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and small garden Rent £70 p.a. Premium—1½ years purchase—No 1090

**NEAR BUXTON**—Old established PRACTICE capable of great increase Cash receipts 1st year £740 (increasing) Panel 862 Excellent house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and good garden Premium—Practice and house £1 700—No 989

**MR HUDDERSFIELD**—Well established mixed class PRACTICE near large town Average cash receipts £1 175 p.a. Panel 1 121 Good house 2 reception 4 bedrooms 3 Professional rooms garage and garden Rent £65 p.a. Premium—1½ years purchase or near offer—No 1085

**MANCHESTER—MEDICAL WOMAN'S PRACTICE** in present hands 9 years Cash receipts last year £1 021 Panel 370 Good detached house 2 reception 3 bedrooms garage and garden Price £1 050 Premium—1½ years purchase—No 1072

**SOUTH YORKS**—Old established Mixed Panel and Private PRACTICE in agricultural and industrial district near large town Average Cash Receipts £2 000 p.a. Panel 1 800 Scope Excellent house 3 reception rooms, 4½ bedrooms

garage and garden Rent £50 p.a. Branch surgery premises for sale Premium—Practice—best offer—No 1100

**NORTH WALES**—Good-class PRACTICE in attractive residential seaside resort Cash receipts over £1 200 p.a. for last 17 years Panel 425 Good house in excellent position with garden to rent or purchase Socially very pleasant Premium—£1 700 or near offer Vendor retiring—No 929

**DERBYSHIRE**—Old established mixed class PRACTICE near beautiful country and within easy reach of large town Average cash receipts £1 100 p.a. Panel 970 and transferable appointments £200 p.a. Scope Nice detached house 2 reception 6/7 bedrooms garage and large garden Freehold—Premium—1½ years purchase—No 1067

**AUSTRALIA**—TICE in North West Victoria Income £1 450 Premium—25% of gross cash takings for two—£125 cash—No 1091

**DERBYSHIRE**—Increasing Private and Panel PRACTICE in well known Spa Cash receipts approximately £700 Panel 200 Good ground floor flat Rent £50 p.a. Premium—best offer—No 1057

**YORKSHIRE (WR)**—Well established mixed-class PRACTICE with no resident opposition in pleasant village near a town Cash receipts last year £1 225 Panel 1 100 Good house 2 reception 4 bedrooms Professional rooms electric light garage and garden Rent £52 p.a. Premium—1½ years purchase—No 1067

**MIDI AND HEALTH RESORT—PARTNER SHIP** (after preliminary Assistantship) in very old-established mixed-class Practice Cash receipts last year £3 774 Panel 1 300 Fees 3/6 to 10/6 Incoming partner should be Protestant and may choose own residence Possibility of Hospital appointment Premium—7/24th share—2 years purchase Further share in three years—No 1069

**SOUTH COAST**—Old established middle class PRACTICE in first rate seaside resort Average cash receipts £1 200 p.a. Panel 640 Good house 2 reception 4 bedrooms maid's room 3 Professional rooms garage and garden To rent Premium—2 years purchase—No 1078

**LAST COAST—PARTNERSHIP** (after preliminary Assistantship) in middle and better working class Practice in large seaport town Cash receipts £3 800 p.a. Panel 2 600 Choice of suitable houses Premium—1¼ or 1/3rd share—2 years purchase—No 1076

**SHROPSHIRE**—Old established Unopposed Country PRACTICE Cash receipts last year £688 Panel 450 Modern house 2 reception 5 bedrooms 3 Professional rooms garage and large garden Electric light Rent £80 p.a. Premium—best offer—No 1086

**NORTH EAST COAST**—PRACTICE Cash receipts £1 100 p.a. Panel 1 100 Rent—£800—No 1078

**DERBYSHIRE**—PRACTICE in pleasant district near large town Scope for great increase owing to building developments Cash receipts last year £4 138 Panel 3 700 Suitable accommodation available Premium—2½/5th share—2 years purchase—No 1089

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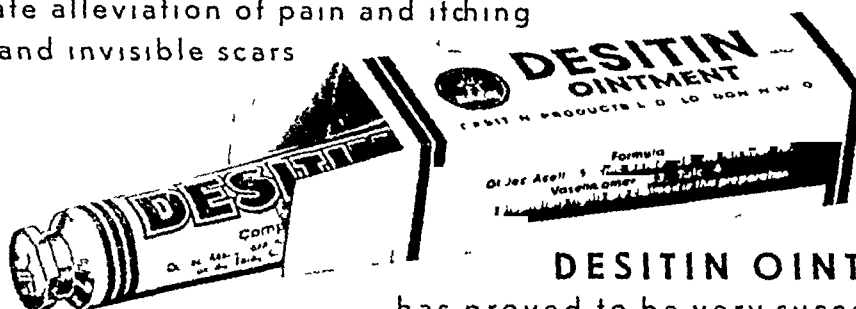
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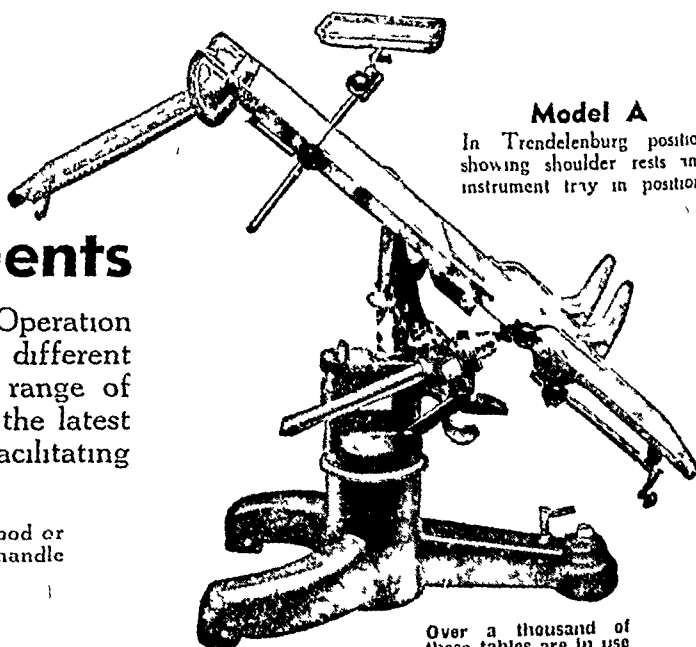
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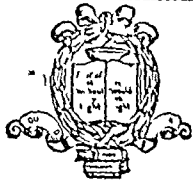
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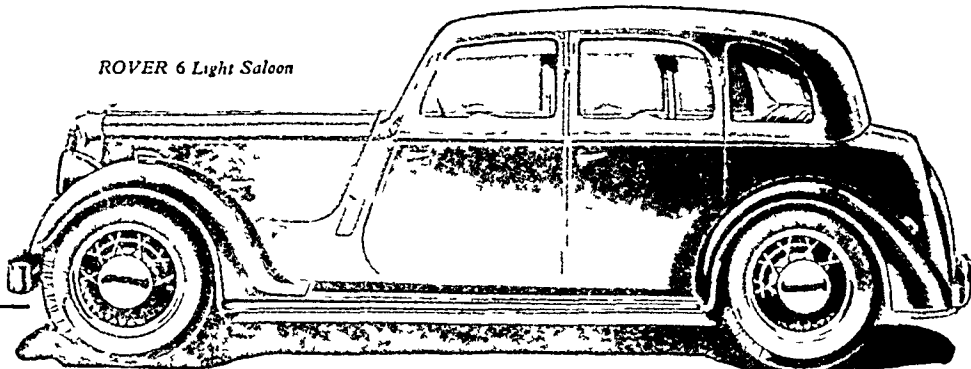
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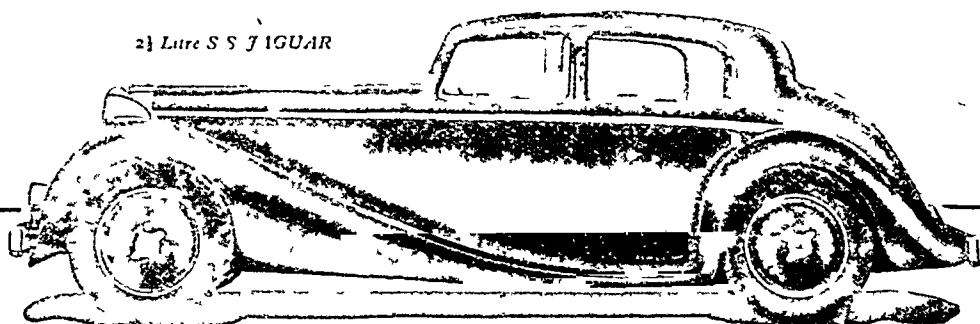
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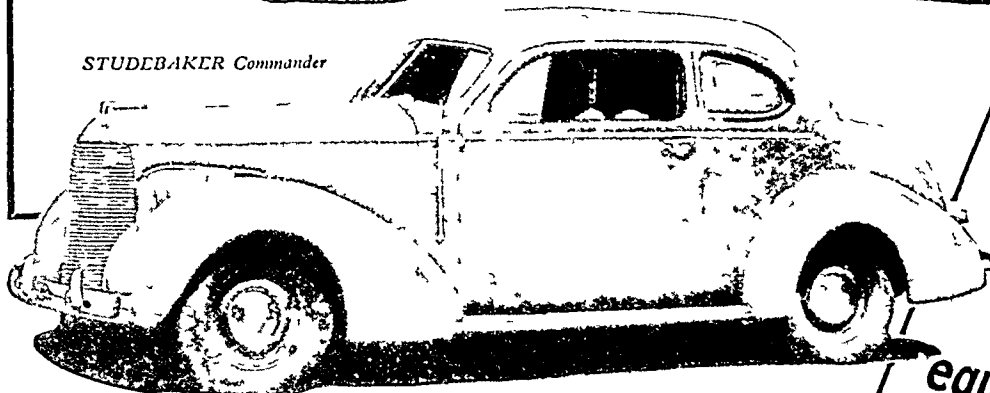
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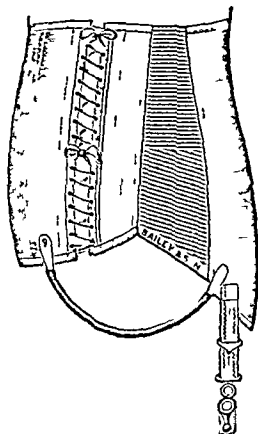


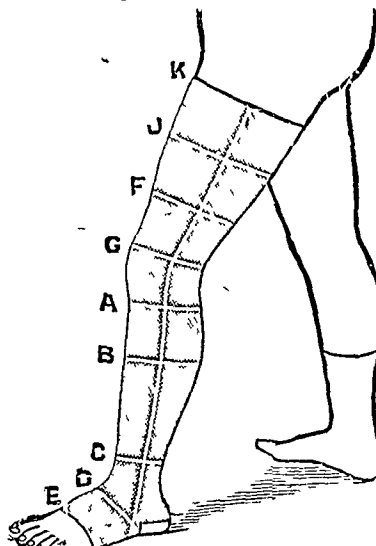
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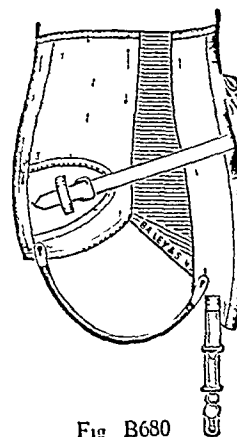
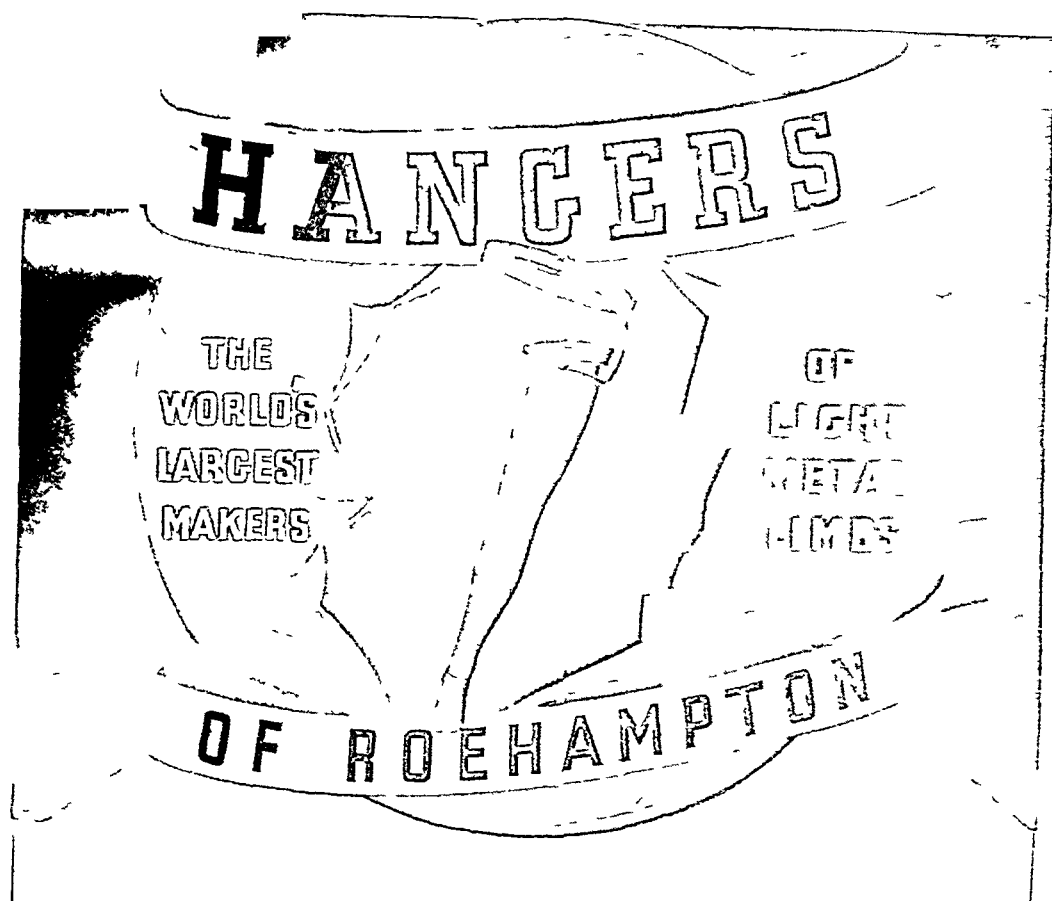


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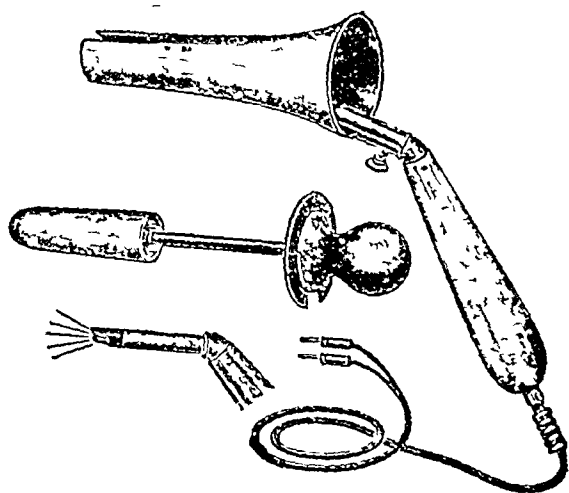
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*Vide Brit Med Jour, 26th June, 1937*

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for use in Midwifery and for General Anaesthesia

Designed by T. YOUNG SIMPSON

IMPROVED MODEL

The apparatus illustrated can be safely used for Analgesia or Anaesthesia during labour, or for Anaesthesia during any surgical procedure with or without a pre-anaesthetic. A Surgeon writes: "The apparatus was designed for PRODUCING PAINLESS LABOUR, and none of the patients on whom I have used it remember anything of the labour afterwards. I have not found it check the pains or prolong the labour. It can safely be left in the hands of a nurse under medical supervision."

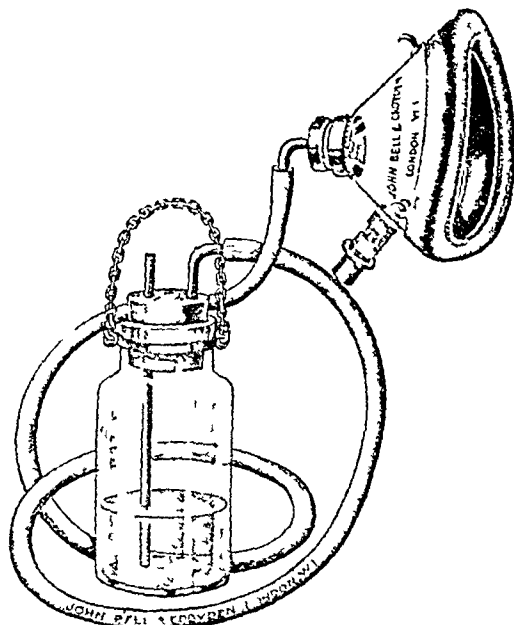
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### PRICES:

Apparatus (as illustrated)	£2 7s 6d
Rubber Headband for use with same	6s 9d
Rubber Bag for short Vinesthene Anaesthesia	2s 0d
Leather Carrying Case	12s 6d

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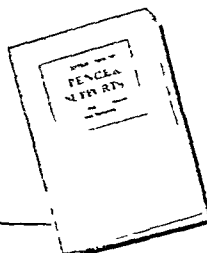
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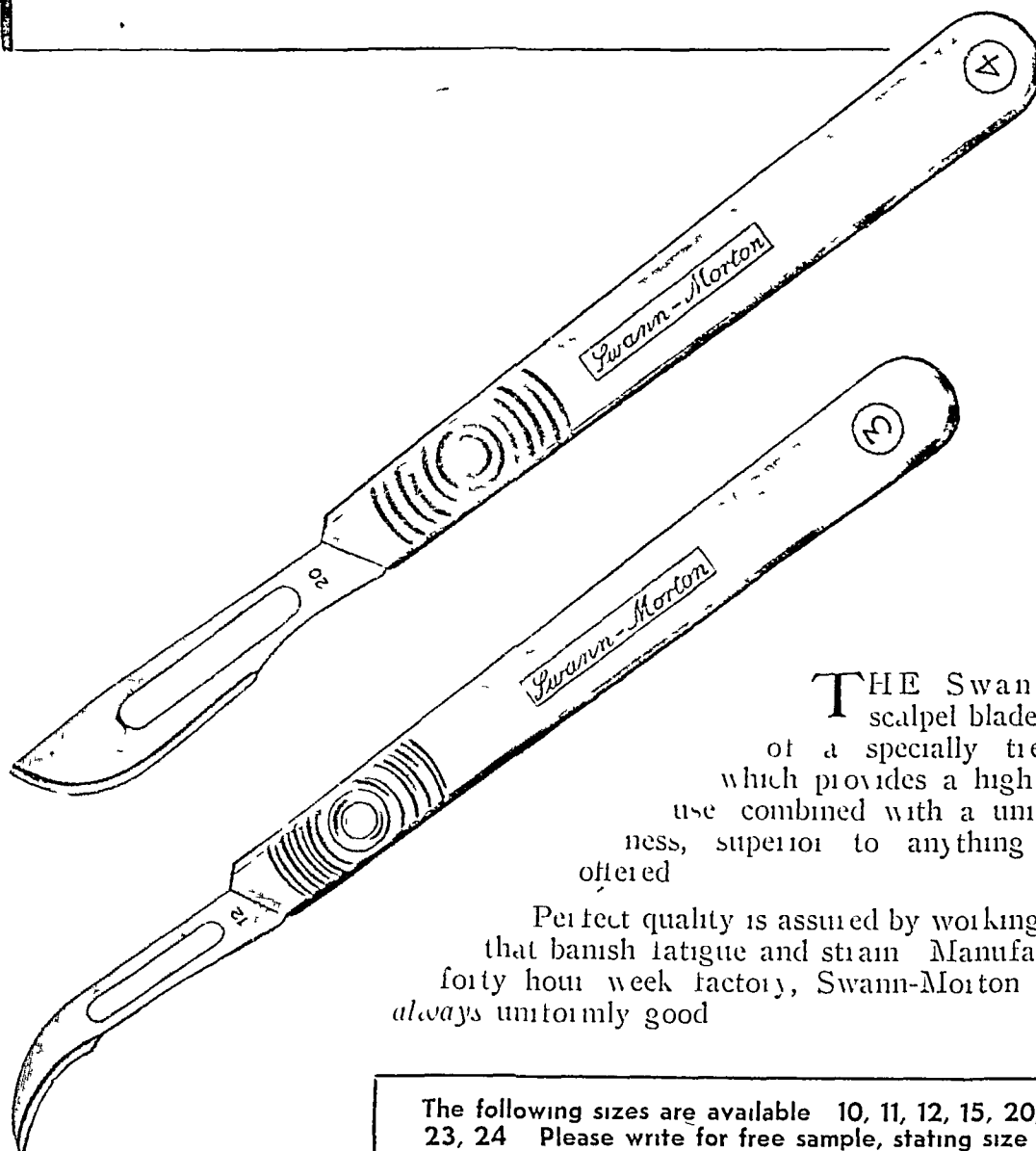
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# DESOUTTER

## CASE RECORDS

### *The value of artificial limbs for children*

THE child who attends school on crutches or a Pylon is a cripple, and as such he is necessarily separated from his fellows and develops a crippled mental attitude. His physical growth is seriously interfered with, particularly in cases where only one crutch is used. Here the full weight of the body is borne on one leg at every step, and the Pelvis is tilted downwards on the unsupported side. Scoliosis is inevitable result. In addition, the shoulders are hunched, the chest contracted and the free use of the arms impeded. At the same time the muscles of the stump atrophy, and there is abduction and flexion with loss of mobility.

The use of a Pylon does not give much better results. The lack of a correctly articulated foot means loss of support, and the difficulty of balancing on a Peg-end results in the body being thrown sideways at every step. The absence of a knee joint forces the patient to swing the Pylon from the hip in a circular movement, and once this habit is formed it is impossible to teach a patient to walk correctly on a fully articulated limb.

Of the number of children who have passed through our hands some were so young when fitted that they actually took their first steps on artificial limbs, and were thus spared the misery and loneliness of a cripple. A child learns to use a limb so quickly and well that in a very short time he is no longer regarded as a cripple but begins to live the life of a normal child. He is able to join freely in the work and play of other children, both at home and at school, even participating in school games; in fact, it would be difficult to exaggerate the improvement in health and happiness of a child after the fitting of a limb.

It is almost inconceivable that after seeing both sides of the picture there can be any hesitation in providing artificial limbs for amputated children.

#### Case No 7641 1929

Amputation double Symes Cause Deformed feet with absence of fibulas (congenital)

The limbs were amputated when the child was six years old, and both stumps were fully end-bearing. As is common in these cases, there was excessive lateral movement of the knee joints, particularly in the left leg, which showed marked Genu Valgum when the patient was bearing his own weight. (See Fig No 1)

After careful consideration it was decided to construct a pair of light metal limbs with extensible shins to allow for growth, and the stumps being fully end-bearing the sockets were fitted loosely, leaving

room for expansion. At the same time the Genu Valgum deformity of the left leg was corrected. (See Fig 2)

The child made very rapid progress and was soon able to walk quite naturally, run and jump, ride a two-wheeled bicycle, and take part in most of the school games. The improvement in his health, mental and physical, has been most striking. A second pair of limbs was made 2½ years later, and Fig Nos 3 and 4 show the child at the age of 11, when a third pair of limbs was made. Comparison with Fig No 1 will show the increase in the size of the stumps and the muscular development of the thighs. There is practically no Scoliosis or Lordosis.



FIG 1

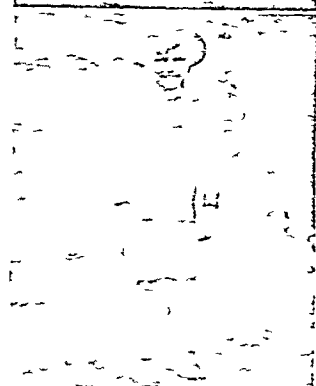


FIG 2

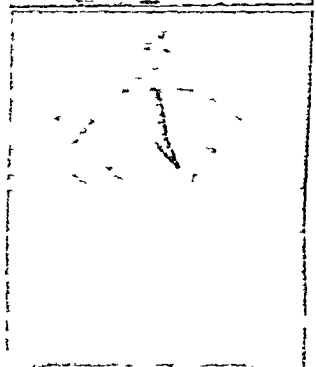


FIG 3

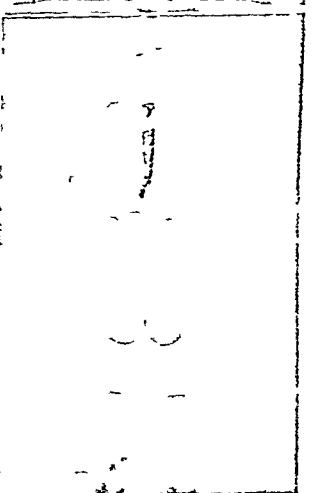


FIG 4

## INTESTINAL TOXAEMIA

More and more doctors are prescribing Salvitae to correct faulty elimination and toxic retention. Salvitae combats acidosis and restores the alkalinescence of the circulating fluid.

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SALVITAE stimulates and encourages the natural activity of the several eliminative organs with the object of dispersing and excreting the toxic elements formed through dietetic errors and imperfect metabolism.

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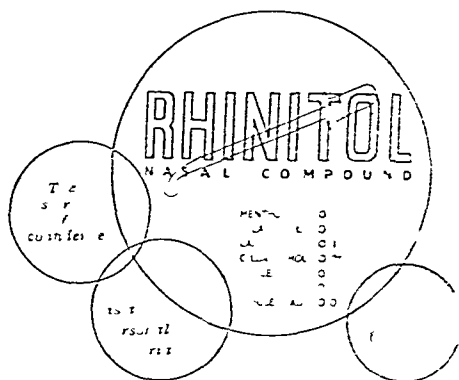
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He states. We recommend now that 40 c.c. pentnucleotide be given each day intramuscularly. One cannot judge its effectiveness or lack of it from smaller amounts. (*Ann Int Med* Jul, 1935)

\* Reactions following injection are usually avoided by administration in divided doses of 20 c.c. each

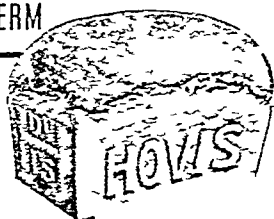
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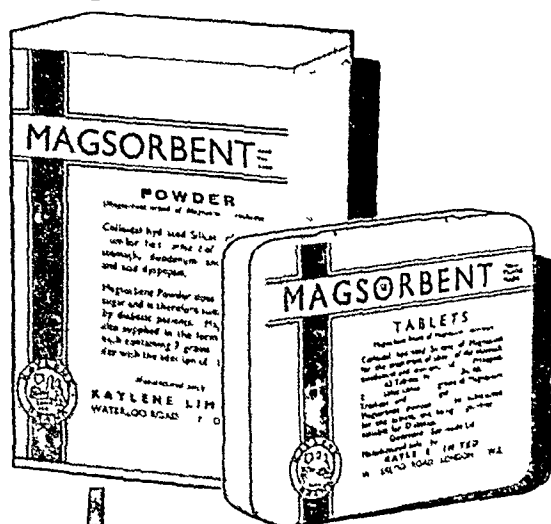


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For full particulars see B.M.J., Oct 2nd, 1937, p 660

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(PUBLIC HEALTH)

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(—M.D.)

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(—M.R.C.S., L.R.C.S., D.P.H.)

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(THE PRACTITIONER)

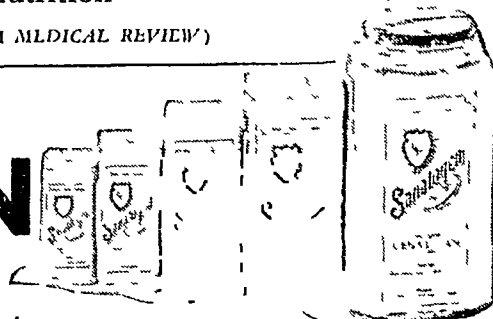
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*for use by the method described by Claus Jensen*

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The recommended dosage is a single injection of 1 c.c. of a purified toxoid with aluminium hydroxide, followed four weeks later by nasal instillation of the 'purified toxoid in isotonic solution'. Such instillation does not in any way trouble the children and may well be carried out by the mother or visiting nurse.

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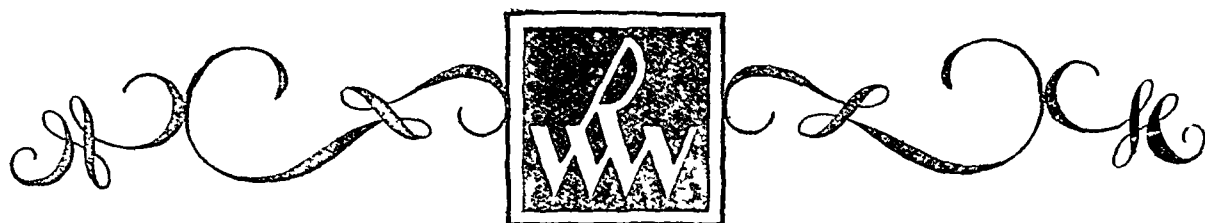
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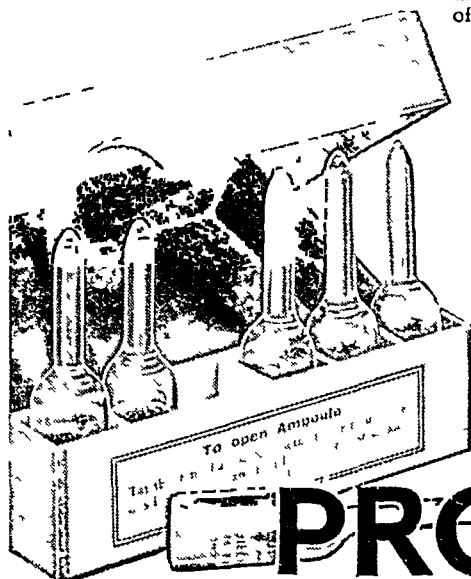
<sup>1</sup>British Medical Journal 1935 November 16th p 938

<sup>2</sup>British Medical Journal 1938, January 15th, p 105

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Mnc1/S/8

### SUMMARY OF RESULTS

Type of Case	Treated	Cured	Failures
Pyelitis			
Recent acute	13	12	1*
Chronic	5	1	4†
Pregnancy	1	—	1‡
Puerperal	4	3	1§
Cystitis			
Acute	2	2	—
Chronic and Bacilluria	8	7	1
Total	33	25	8

75 per cent cured

Notes on Failures —

\*Ovariotomy acute pyelitis cured relapsed, discharged herself

† (a) Urine never acid uricular flutter, died from cerebral embolism

(b) Not completely treated or investigated

(c) > Functionless kidney

(d) Hypertension, recent albuminuria of pregnancy blood urea 32 mg but difficulty in acidifying urine

‡ Pregnancy || Cystocele Residual urine

§ Puerperal > Ureteric calculus

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# Supplements to Children's diet

## The Effect of Adding Vitamin B

A recent editorial statement in the *British Medical Journal* (16th October, 1937, page 753) that "Vitamin B<sub>1</sub> deficiency [is] an outstanding fault in the diet of many millions of people" lends additional significance to the results of a test carried out with the co-operation of a large group of doctors before knowledge of Vitamin B deficiency had reached its present state. The test was devised to ascertain the effects of the addition of Vitamin B to the diet of children, even in cases where reliance had been placed on an "ordinary mixed diet" as guaranteeing a suitable supply of Vitamin B.

The children were placed in two age groups, namely, 1-5 (infancy) and 6-15 (the chief period of growth). The main criteria employed were:

- (1) Improvement in appetite (loss of appetite is known to be characteristic of Vitamin B<sub>1</sub> deficiency)

- (2) General physique (3) Bowel function  
(4) Apparent strength and resistance

Of the 158 children in the first group, 141 (89.2%) were classed as "definitely improved" and 17 (10.8%) were classed as having shown no definite response. In the second group, out of 178 children, 176 (98.9%) were rated as "definitely improved," while only two in this group showed no definite response. It was considered significant that in the second group definite improvement in health followed in practically all cases as shown, whereas in the first group there was a small but definite minority of children who showed no improvement in health. This disparity is possibly connected with a special need for increased supplies of Vitamin B during the years of maximum growth. The results are set out more completely in the following table:

	GROUP I		GROUP II	
	141 Children ages 1-5		176 Children ages 6-15	
	No. of cases	Per cent	No. of cases	Per cent
Improvement in appetite	52	36.9	50	28.4
Improvement in physique	58	41.1	77	43.8
Improvement in bowel function	38	26.9	43	24.4
Improvement in digestion	5	3.5	5	2.8
Diminution in symptoms associated with constipation e.g. head ache, listlessness, etc.	2	1.4	10	5.7
Improvement in strength, resistance, etc.	23	16.3	39	22.2

The Vitamin B supplement employed was Bemix which supplies, in addition to approximately 100 International Units of Vitamin B<sub>1</sub> per ounce, all the other vitamin and mineral constituents of wheat germ, some at least of which are regarded as essential to optimal nutrition. Clinical sample of Bemix and literature on request. The Bemix Laboratories (Dept. B 37), 23, Upper Mall, London, W 6.

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BY  
R W JOHNSTONE, CBE MD, FRCS Ed, FCOG  
Professor of Midwifery and Director of Women's University of Edinburgh

The train of my thought on this subject was started by reading about a year ago a brief and modest article in the *American Journal of Obstetrics and Gynecology* in which Drs Allen and Bauer of Chicago summarized an analysis of 9 696 consecutive uterine pregnancies in their hospital service. Their conclusions were statistically tabulated but they were also put into words which arrested my attention like a slogan. Thus (1) It was five times more dangerous for a woman affected with a medical disease to bear children than it was for a healthy woman (2) A child born to a woman suffering from a medical disease was twice as apt to be stillborn as a child born to a healthy mother

This raised the question in my mind whether the association of general diseases with pregnancy was as significant a factor in relation to maternal mortality and morbidity in this country. I knew of no statistics comparable to those of Drs Allen and Bauer because while in American cities almost every woman goes to hospital for her confinement and their statistics of a consecutive series of cases may therefore be regarded as a very fair sample of the population in this country the patients who go to the maternity hospitals are still only a variable proportion

These reports together cover some 810 deaths, of which just under 25 per cent were attributed to obstetric diseases rather than to an obstetric factor. In view of this I sought information from the Department of Health for Scotland kindly gave me, and the first place Dr Charlotte Douglas occupies in the schedules concerning maternal death in Scotland has occurred since the 1955 report was drawn up. Of 2136 deaths she attributed 561—that is 26 per cent—to associated diseases. I regard this as probably too high an estimate but it must be remembered that in making such an analysis there is a large personal equation and that the schedules are often so sketchily filled up that in many cases more than one opinion might well be formed as to the primary cause of death. In the second place Dr Lang also analysed the deaths in the Registrar General's Hospital Edinburgh in the year 1954, and found a total of 462 she attributed 145 or 31 per cent to associated diseases.

The death of the mothers in these cases is not the only tragedy; there is also the comparison of the fatal pregnancies in our words, the effect of the pregnancies upon the health of the mothers. The English report is a corollary to the case of the non-tubercular disease and kidney disease.

The death of the mother is also the cause of the tragedy, there is also the fact of the fatal pregnancies or upon the fact of diseases upon the pregnancies or the cause of child if born alive is the corollary to the fact of pregnancy upon the disease. The English report gives no information on this important point but in the 1935 Scottish report covering over 2000 maternal deaths we found that in only 40 per cent was the child born alive. In the other 60 per cent the mother had died undelivered or before her death had aborted or had been delivered prematurely or had given birth to a still

4031



born child or to a living child which had not survived for more than a comparatively few days. That figure, of course, includes a very large number of obstetrical emergencies, and is not confined merely to cases of associated disease. But if we confine our attention to the latter and choose the main disease groups we obtain these figures:

Maternal Deaths due to	Fœtal Deaths
Heart disease	59 per cent
Non tuberculous respiratory disease	70 "
Renal disease (including pyelitis)	68 "
Tuberculosis	55 "
Anæmia (" + malnutrition)	42 "

The corresponding figures for the 2,136 maternal deaths in Scotland investigated since 1935 showed

Maternal Deaths due to	Fœtal Deaths
Heart disease	65 per cent
Non tuberculous respiratory disease	57 "
Renal disease (including pyelitis)	60 "
Chronic and acute nephritis alone	76 "
Anæmia, malnutrition, debility	46 "
Tuberculosis	60 "

From the humane point of view this aspect of the problem is perhaps less important, but from the national standpoint in these days of a falling birth rate it is very significant.

Now it is obvious that to analyse any number, however large, of maternal deaths is by no means an accurate method of assessing the actual incidence of associated diseases, because it takes no cognizance of the patients who suffer from these diseases but survive. There is, so far as my knowledge goes, no accurate means of assessing the actual incidence of associated diseases in pregnancy, and I can present no figures parallel to those of Allen and Bauer. An attempt was made to gain some knowledge on this point in connexion with the investigation on which the 1935 Scottish report was based, for in the course of their analysis of the mortality figures the investigators felt that "much of the information could not be fully used without comparable details for mothers who survived. Accordingly an inquiry into the circumstances attendant upon all births in Scotland over a period of six months was instituted. It was purely voluntary, and the schedules were completed by the doctor or midwife. The returns, which were in many respects incomplete and imperfect, covered 39,205 births, and one rough conclusion which may be drawn is that in 10 per cent of the mothers there was a definite deterioration in health during pregnancy, most of which was attributable to the coexistence of general diseases. How far this deterioration was permanent I have no means of knowing.

These morbidity figures for Scotland showed that the proportionate incidence of the more important disease groups was parallel to their proportionate roles in the mortality figures, with the striking exception of heart disease. Thus the incidence of non-tuberculous respiratory disease (including in order of frequency influenza, bronchitis, asthma, and pneumonia) was 3 per cent, that of kidney disease 3.3 per cent, and that of heart disease 0.9 per cent. It is surely a very striking commentary on its dangers that heart disease should be below 1 per cent in its incidence in over 39,000 pregnancies in Scotland, and yet in both the English and the Scottish reports should be found responsible for over 49 and 75 per cent respectively of the total maternal deaths from all causes, both obstetrical and medical, and in each series for about 25 per cent of the deaths attributed to associated diseases.

So much, then, for the importance of these associated diseases in pregnancy. I have tried to show that they

account for something between one-quarter and one third of maternal deaths, and that in those mothers who survive they cause definite ill-health in some 10 per cent of cases. Lastly, they are accountable for a huge wastage of foetal and neo-natal life.

### Some Interesting Problems

My next point is that the association of medical diseases and pregnancy presents us with some peculiarly interesting problems. Disease means that some organs are partially disabled. Pregnancy means that increased demands are put on all the mother's organs. Therefore, if pregnancy occurs in a woman who is already suffering from disease, it superimposes conditions of strain upon already disabled organs, while if disease originates after the pregnancy has already begun it introduces an element of disability to the pre-existent conditions of strain. Further, it may be assumed that the pregnancy-strain element is capable of being assessed with some approach to accuracy, while the influence of the disease is generally less capable of measurement. We are therefore dealing with the interaction of two sets of factors—one more or less known, the other more or less unknown—and the situation partakes of the character of a clinical experiment. To watch how the diseased organs behave under the new conditions becomes a fascinating study, while to determine whether the experiment may safely be allowed to continue or whether and just when it must be interrupted calls for the exercise of a wide knowledge and a nice judgment.

It is not necessary to recall to your recollection all the physiological changes in the maternal organism produced by pregnancy. The fact that only the woman of perfectly sound health of body and mind can adapt herself to the new conditions without suffering from some symptoms of difficulty is familiar to us all, as is also the significant fact that such a woman feels triumphantly and exuberantly well during pregnancy, presumably because all her organs are working under high pressure, so to speak, yet without undue strain. But so complex is the necessary adaptation that if disease exists the affected organ is liable to suffer further detriment, while in other cases an occult weakness may become revealed for the first time during pregnancy. May I try to illustrate my thesis by one or two examples?

### Cardiac Disease

Consider, for example, diseases of the heart, most commonly chronic endocarditis of rheumatic origin. For my purpose it matters not what the exact nature of the heart lesion is, nor even whether the organic defects are or are not fully compensated. The point is that soon after pregnancy begins the heart enters upon a period of progressive strain which may last for several weary months and culminate in the severe muscular effort of labour.

That the normal heart is able to bear the strain of pregnancy and labour is obvious, and I do not suppose that with healthy patients we often give any thought to the matter. But that astute and painstaking observer the late Sir James Mackenzie has told us that even the healthy heart does give indications of the strain of pregnancy. Probably all of you who are especially interested have read his classical monograph on *Heart Disease and Pregnancy*—a little book which is full of wisdom of a much wider application than its immediate subject, salted with devastatingly candid criticisms of both obstetricians and physicians. That sagacious old Scot, in some respects so reminiscent of Thomas Carlyle, based his statement characteristically on his own personal observation of such signs as the restriction of the response to effort, on the

slight tendency to oedema at the bases of the lungs recognizable only on careful auscultation on the tendency to overfilling of the veins of the lower limbs and on the pulsation of the jugular veins. He summarizes his views in these words. It is perfectly evident that in the pregnant state towards the later months the heart is embarrassed in healthy women for the woman is not capable of so much exertion as she was accustomed to undertake and becomes breathless during efforts which at other times would not have inconvenienced her. If we accept Mackenzie's statement then *a fortiori* the diseased heart is bound to manifest more obvious reactions to the same conditions and it is the detection and proper evaluation of these that is the practical problem.

Now it is no part of my purpose to discuss the methods of detecting incipient heart failure or preventing its development or of treating it when once declared. These points are familiar to you all. I would however just summarize the experience we have had in the Royal Maternity Hospital Edinburgh where Dr Rae Gilchrist acts as our advisory physician. On the whole that experience in the last twelve years has tended to imbue us with a tempered optimism provided we get these patients under our supervision early in pregnancy. For we never see in such women the advanced degree of congestive heart failure often found in women admitted as emergency cases later in pregnancy. This is obviously a point of very wide application for if congestive heart failure can be avoided by adequate treatment and supervision under the conditions or strain imposed by pregnancy then all the more can similar care avert heart failure in non-pregnant patients. Dr Gilchrist attributes such success as we have achieved to prolonged rest in bed to the use of large doses of digitalis on modern lines and to the exhibition where necessary of the extraordinarily efficacious diuretics of the mercurial type such as salyrgan neptal and novurate.

A second point is that the study of heart disease in pregnancy demonstrates impressively the enormous power of even a damaged heart to adapt itself to a gradually increasing burden and even to post-operative shock and anaesthesia provided congestive failure is not present. The key to that statement surely lies in the words "a gradually increasing burden" for it is a physiological truism that all our organs have an amazing power of adaptation provided the stress is applied gradually.

Thirdly we have been impressed with the utility of any operative procedure in the presence of congestive heart failure. It is the straw that breaks the camel's back. As our experience has increased we have found ourselves gradually doing fewer Caesarean sections in heart cases because we have seen that ordinary labour is surprisingly well borne. The labours of cardiac patients are indeed often remarkably and inexplicably easy. A fair proportion of them occur prematurely and in these the small size of the baby makes for an easy labour. But even at full time the labour is often unexpectedly easy.

Fourthly the danger is not always completely over when the labour is passed. In patients who have shown any pronounced degree of heart failure before labour exhaustion of the cardiac reserve sometimes occurs suddenly and totally a few days later. Care must therefore not be relaxed.

Fifthly it is remarkable how slight is the embarrassment induced by pregnancy in cases of congenital heart disease. This teaches us that the prognosis must be better for such of these individuals as reach puberty than might be supposed. Congenital cases are but a small percentage

of the total coming under observation in any ante-natal clinic but we have not seen one go on to an sign of congestive failure. This contention is to some extent supported by individual cases reported in the literature—for example Firket's patient a woman with combined mitral stenosis and auricular septal defect who had eleven uneventful pregnancies and three abortions and lived to be 74 years of age.

Lastly our experience seems to show that death from congestive heart failure in young or middle aged married women could be prevented or postponed if after one or two pregnancies more of them were sterilized. It is infrequently happens that having sustained one or two pregnancies successfully a woman after an interval of some years during which in all probability conception has been practised presents herself at the hospital about the sixth month or later with early signs of congestive failure. Such cases do badly. Sterilization earlier might well have prolonged the life of such a patient.

### Anaemia

I turn next to anaemia as a subject in which medicine and obstetrics have found much common ground in recent years and in which the contact has been the means of considerably advancing knowledge. The fact that tissues of women in pregnancy are unduly filled with fluid has long been observed and the old clinicians used to attribute it to what they described as the venous congestion of pregnancy.

When the study of the blood began to be placed on a scientific basis it was recognized that in pregnancy there is an increase in the quantity of the body fluids but due not strictly to plethora but rather to a dilution of the blood by an increase in its fluid constituents. In recent years numerous observers have carried out repeated systematic observations of the blood of pregnant women at frequent intervals throughout the whole period of gestation and the puerperium and from these observations it appears that there is uniformly a definite fall both in the number of red cells per cubic millimetre and in their haemoglobin content. This fall begins at the end of the third month reaches its lowest point at the seventh month and persists to the end of the eighth month when conditions usually improve. Within a few days after delivery there is a rapid improvement and continues during the next few months and by six months after delivery the blood should be once more in a normal condition.

We have also come to appreciate in recent years how very real are the demands which the upbuilding of the foetus makes upon the mineral constituents of the maternal blood through the placental interchanges and how often the mother's blood contains an inadequate supply of these substances her blood and tissues will become depleted or them to an extent which may cause more or less serious symptoms. The harmonious symphony which nature said to describe the relation of mother and foetus in a healthy pregnancy under perfect hygienic conditions degenerates into something indistinguishable from parasitism in the undernourished mother. The normal demands are for iron, calcium and phosphorus. The possible depletion of the mother's blood is well known with the disease of osseous metastasis. The more recent has been considered as a possible explanation of the inertia in labour. It is possible that upon the mother's resources the foetus remains until calcium and phosphorus the result is seen in a predilection to

rickets after birth. But in relation to anaemia our main interest is concerned with iron, for while there is no direct transference of blood from the mother to the foetus, yet the latter has to derive from the former the materials for making its own haemoglobin. This, as Strauss and Castle point out, means the equivalent of a definite blood loss in every pregnant woman, even in the absence of any actual haemorrhage. Moreover as the same authorities have proved, "no matter how anaemic the mother, the infant is born with a normal amount of haemoglobin."

Bunge has shown that the milk of a bitch contains the same quantities of mineral substances as the tissues of its offspring except iron, which is present in the tissues of the offspring in a quantity six times greater than in the mother's milk. This store of iron gradually diminishes during the period of lactation, but increases again when the young animal begins to take a mixed diet. In other words, the offspring has a store of iron at birth for the purpose of supplying that substance during the weeks in which it is fed on its mother's milk, which is poor in iron. Hugounenq confirmed these findings in general with regard to the human foetus. Weight for weight the liver of the newborn child contains five times more iron than that of its mother, and this store is apparently accumulated in the last three months of its intra-uterine existence—a point to be linked up with the observation that the loss of red cells and haemoglobin is greatest at this period of pregnancy.

Still another factor has come to be recognized during observations upon pregnant women—namely, the influence of functional disturbances of the gastric secretions. Nearly thirty years ago Faber of Copenhagen showed that the proportion of total and of free hydrochloric acid in the stomach has a direct bearing upon the absorption of iron from the food. The proportion of acid in the stomach varies considerably in different individuals, but Strauss and Castle found that the great majority of the women they studied during pregnancy had a marked deficiency.

Here, then, we have abundant evidence that in pregnancy the haemopoietic system is labouring under a strain. In the healthy woman on an adequate diet it can adapt itself to the conditions of strain without either serious symptoms occurring or lasting damage being wrought. But if the woman be already suffering from anaemia when pregnancy occurs, or if her diet be inadequate in the essential constituents we have again a condition of what I may call a clinical experiment superimposed by the occurrence of pregnancy.

Thus the physiological hydraemia of pregnancy, combined with dietetic deficiency and possibly some slight hypochlorhydria, may adequately account for the common but mild anaemia of the hypochromic microcytic type. Obviously there may be also other factors at work, such as unhygienic surroundings, and toxic conditions such as chronic nephritis, pre-eclamptic toxæmia, or pyelitis, as well as actual blood loss from obstetrical complications.

Occasionally we meet more severe anaemias of the same type—women with red counts of  $3\frac{1}{2}$  millions or less and haemoglobin below 45 per cent—which are essentially due to the same factors. But Fullerton of Aberdeen, who has studied the subject carefully, believes that in these cases the women were suffering from a definite anaemia before the pregnancy ensued. Both these forms are susceptible to treatment by large doses of iron with hydrochloric acid, fortified if necessary by a proper diet and hygienic surroundings.

The severe hyperchromic macrocytic anaemia of pregnancy is relatively rare in this country, although so common in India as to constitute one of the major dangers of reproduction. Both the clinical picture and the blood picture resemble Addisonian pernicious anaemia. The most important point of difference is that the disease clears up when the pregnancy ends and does not tend to recur (in the absence of another pregnancy), whereas true Addisonian pernicious anaemia of course has that tendency. Strauss and Castle have shown it to be due to much the same mechanism as true pernicious anaemia. It will be recalled that this involves an essential reaction between an intrinsic stomach factor present in normal gastric juice and an extrinsic dietary factor associated with vitamin B. In their cases Strauss and Castle found that in pregnancy the breakdown was due to the temporary absence of the intrinsic stomach factor combined with an iron deficiency resulting from foetal demands or dietetic errors, or both. Iron, liver extracts, and occasionally transfusion of blood are the lines of treatment, and not infrequently the pregnancy has to be interrupted.

Here again we have an example of the interaction of the physiological strain of pregnancy and the processes of disease. Here also, I submit, is a field for co-operation between physician and obstetrician.

### Polyneuritis

This modern conception of certain anaemias as deficiency diseases naturally led my thoughts to another sometimes associated with pregnancy—namely polyneuritis, in regard to which a similar aetiological claim has been put forward. This is generally regarded as a rare condition, but it is probable that it sometimes escapes diagnosis and that its rarity is more apparent than actual. Most often it occurs in a woman who has been suffering for a considerable number of weeks from hyperemesis gravidarum, so that it usually makes its appearance about the fourth or fifth month of pregnancy. The early symptoms are vague and mainly subjective—extreme weakness and hyperæsthesia of the skin—and there is only too much reason to believe that these have occasionally been looked upon as merely further hysterical manifestations in a woman thought to have been suffering from so-called neurotic vomiting. When actual paresis of the muscles appears and tendon reflexes disappear the condition becomes much more recognizable. Still later there ensues a state of mental confusion and obfuscation, of the type found in association with alcoholic neuritis (Korsakoff's syndrome) and characterized by loss of a sense of place and time and of recent memory. Regarded as a rare form of pregnancy toxæmia and treated as such even to the point of therapeutic abortion, polyneuritis in pregnancy has proved a very fatal condition. Plass and Mengert collected twenty-eight cases from the literature, with a mortality of no less than 68 per cent. My own experience is very limited, but I can recall four cases which corresponded to the description given, although an accurate diagnosis was made in only one. One of these patients died during an induced delivery, and the others very slowly recovered after the artificial termination of pregnancy.

Theobald first drew attention to the striking similarity between this disease in pregnancy and the endemic form of polyneuritis known as beriberi. It is stated that the pathological degenerative changes in the nervous system are identical in the two conditions. Beriberi is accepted as being due to a deficiency of vitamin B<sub>1</sub>, which is now accordingly spoken of as the antineuritic factor.

Now experiments on animals show that during pregnancy there is a transference of vitamin B from the mother's tissues to the foetus as well as to the mammary glands for the functions of which it is essential. In a healthy woman on an adequate diet this drainage of vitamin B can be compensated without the appearance of deficiency symptoms. But if the woman is vomiting severely a vitamin B starvation is caused along with starvation in respect of all other elements of diet and in some cases a polyneuritis may apparently result. On the other hand dietary deficiency alone may cause it in pregnancy for the condition is much commoner in those parts of the world in which beriberi is endemic—that is in which a large proportion of the population exist on a diet deficient in vitamin B. In these latter cases the superimposition of what I have called the experimental conditions of pregnancy with its increased demand for vitamin B may thus reveal for the first time a pre-existing but hitherto occult deficiency in the mother's tissues. Lastly some evidence is slowly accumulating of the good results of prompt treatment of the condition by a diet rich in vitamin B or by concentrated extracts of the vitamin.

Such is the argument. Whether we can as yet adopt this new view in its entirety may be open to debate. What is not in doubt as it seems to me is that it offers a small but most interesting field for co-operative research by neurologists and obstetricians and teaches us when we are treating prolonged cases of hyperemesis to keep a watchful eye upon the nervous system and to see to it that an adequate supply of vitamin B is provided in such diet as the patient is able to assimilate.

### Diabetes

Diabetes mellitus is another disease sometimes associated with pregnancy in which the interaction of the physiological and the pathological conditions provides an interesting study. It is I think undoubtedly true to say that the discovery of insulin and the increasing understanding of the whole subject of carbohydrate metabolism which has followed it have robbed the association of pregnancy with diabetes of its former terrors. But that does not mean that the association is no longer fraught with considerable risk to the mother and even more to the foetus. For one thing the treatment of diabetic women with insulin is making the association much more frequent than before. In pre-insulin days it was definitely rare because the diabetes brought about a depression of ovarian activity and an atrophic condition of the whole genital tract which militated against the occurrence of conception. Nowadays if, under insulin the diabetic woman can be kept in approximately normal health her whole endocrine system apart from the pancreas may function as in a normal woman and there is nothing to prevent conception. The evidence of diabetic clinics is clear on this point.

The occurrence of conception in a diabetic woman is however another example of physiological conditions of extra strain being superimposed upon a disease. If we consider the influence of pregnancy upon the carbohydrate metabolism of the healthy woman we find evidence of strain or at least of a disturbance of the normal conditions. Apart from the accepted increase in the basal metabolic rate which is probably linked up with increased endocrine activity the most obvious example of this is the frequency with which sugar appears in the urine during pregnancy. For this as you are aware there are several possible explanations. The sugar may be lactose about which I would only say that while

lactosuria is common enough in the puerperium it is not in our experience very common in pregnancy. Moreover the recognition of lactose by the appropriate tests does not by any means exclude and may even mask a more significant glycosuria unless tests are applied for glucose also.

In the second place the glycosuria may be of the so-called alimentary type or as Skipper prefers to call it the impaired carbohydrate tolerance or pregnancy. This is due to the liver being less able than usual to synthesize and retain glycogen so that the ingested or any considerable quantity of carbohydrate is followed by hyperglycaemia and glycosuria. So common is this condition found in the first three months of pregnancy that it was propounded as a diagnostic test for early pregnancy by Frank and Nothman and the so-called adrenaline and phloridzin tests are essentially just modifications of it. But none of these tests has the degree of specificity and uniform accuracy necessary for that particular purpose. While not of itself serious alimentary glycosuria is important because it is almost impossible to differentiate it from a mild but true diabetes during pregnancy. After delivery the glycosuria of true diabetes persists the other disappears.

In the third place glycosuria in pregnancy may be and probably most commonly is due merely to a lowering of the renal threshold for sugar. The cause of this increased permeability of the kidney is not understood but it is legitimate to speculate that it is connected with the activity of the anterior pituitary lobe.

There is still another apparently physiological point to be considered—namely the frequency with which acetonuria occurs in pregnancy. Lambie in his masterly review of the subject states that acetonuria occurs in more than 30 per cent of normal pregnancies. It indicates of course that there is a disturbance in the normal proportion of fats and sugars undergoing simultaneous combustion in the body and a significant rise in the ratio of ketogenic to anti-ketogenic substances. Lambie attributes the acetonuria in part to the lowered carbohydrate tolerance which we have discussed and in part to the demands of the foetus for carbohydrate. But whatever be the exact explanation of the phenomenon there is no question that it complicates in some measure the ease of estimating the significance of a glycosuria just as it increases the difficulty of controlling the condition by diet and seriously increases the risk of coma in actual diabetes.

I need not dwell upon the dangers of pregnancy to the diabetic mother because whereas Matthews Duncan in a famous communication in 1882 painted a very gloomy picture and Whitridge Williams in 1909 collected six cases with a maternal mortality of 27 per cent at or shortly after labour (mostly in coma) and an additional mortality of 23 per cent within two years of the records since 1923 when insulin became available tell quite another story. Thus Skipper collected 113 cases with an immediate maternal mortality of only 9.3 per cent, and in thirty-three cases under his own observation at the London Hospital there was no immediate mortality. In the Royal Maternity Hospital at Edinburgh during the last ten years we have had twenty-one patients with diabetes two of whom have been under our care in two pregnancies each. Of these even one case survived till the hospital before delivery and have not been traced. But among twenty deliveries in eighteen patients there was no maternal mortality although it has been impossible to follow the patients up and find out the ultimate results.

While, therefore, the outlook for the diabetic mother has enormously improved, there has been no corresponding improvement regarding the influence of diabetes upon the pregnancy, for the foetal mortality still remains tragically high. Abortion is very common in diabetics, and intra-uterine death in the later weeks adds to the toll, while not infrequently its undue size causes the death during delivery of many a foetus which has survived until term, and yet others die shortly after birth. In Williams's pre-insulin series of cases the foetal mortality, including abortions, was 41 per cent. In 136 pregnancies collected by Skipper the foetal mortality was 45 per cent, and in the thirty-seven pregnancies which he himself observed it was 40.5 per cent. In our twenty pregnancies in the Royal Maternity Hospital in Edinburgh the foetal mortality was 35 per cent.

Priscilla White, writing from Joslin's special clinic in Boston, gives an interesting series of figures. In cases in the pre-insulin era the stillbirth and abortion rate was 44 per cent. After the introduction of insulin there was a reduction in the foetal mortality to 34 per cent, while in cases under the direct and careful observation of the clinic it amounted only to 23 per cent. "Stillbirths and the macerated foetus of the giant type," she writes, "are nearly as characteristic of diabetic pregnancies which are allowed to come to term as they were in the pre-insulin era." Her solution of the problem is the delivery by Caesarean section of "the fully developed but chronologically premature infant." Whether we agree with that view or not, her figures, and those others that I have quoted, are an eloquent plea for the careful ante-natal supervision of such patients by a physician well versed in the management of diabetes, and a clear proof that all such cases must be treated on strictly individual lines and not by any mere routine. For treatment to be fully successful it seems to me that co-operation between the obstetrician and the physician is a *sine qua non*.

### Conclusion

I have chosen these three or four diseases to illustrate my thesis that their association with pregnancy can be understood only in the light of the physiological strain of pregnancy. Other examples might equally well have been chosen. I was tempted, for instance to refer to the temporary benefit in phthisis brought about by the physiological ascent of the diaphragm, compressing the lung and closing up cavities, and to the disastrous relapses which follow the abrupt and ruthless removal of this factor when the uterine tumour suddenly subsides after labour. I was tempted also to refer to kidney diseases, in which the physiological strain is so subtle and so uniform that, as Gibberd has succinctly expressed it, "pregnancy is the best test of kidney function." But these are large subjects, and to have indulged myself would have been to put a wholly unwarrantable tax upon the kindly patience with which you have listened to me.

If I have succeeded in interesting you in my main thesis you will find additional interest in working out its application in these and in other conditions at your leisure.

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The London hospitals have received during the past year a present of over 5,000 gramophone records by the courtesy of the B.B.C. and the record manufacturing companies. These records which have been used for broadcast purposes, are delivered to the hospitals free by the Gramophone Company in accordance with a schedule drawn up by King Edward's Hospital Fund for London in collaboration with the B.B.C.

## CALCIUM AND PHOSPHORUS DEFICIENCIES IN A POOR HUMAN DIETARY

BY

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(WITH SPECIAL PLATE)

Dietary surveys and experiments on the feeding of milk and other supplements to children and adults suggest that the diets of various classes of the population both in this and in other countries may be deficient for the maintenance of health. These observations in groups of human beings have led to experiments in which rats were fed on diets similar to those in common use among people whose nutritional state was being studied. One of the best-known of these experiments is that of McCarrison (1926-7), in which a striking parallelism was shown between the health and physique of rats and the health and physique of different tribes in India whose diets were fed to different groups of rats.

In an experiment of this type Orr, Thomson, and Garry (1935) maintained a large colony of rats for two and a quarter years on a diet which approximated the average diet eaten by a working class community in Scotland as ascertained by dietary survey (Davidson *et al.*, 1933). Another colony received the survey diet with the addition of green food and unlimited milk. Four generations of animals were reared. The rats on the human dietary supplemented with green food and milk were quite normal, and in all respects were equally as healthy as rats kept on the Rowett Institute stock diet (Thomson, 1936). On the other hand, with a similar environment and heredity, the animals fed on the survey diet alone showed a slightly impaired reproductive capacity, a considerably increased death rate, a retarded rate of growth, a lowered haemoglobin content of the blood, and a clinically poorer condition. It was thus shown that the addition of green food and milk converted a deficient human diet into one that was adequate, though Orr and his co-workers were unable to state which factor or factors in this diet were responsible for the benefits obtained.

An analysis of the diet showed that it was very deficient in calcium and phosphorus, and the addition of green food and milk greatly increased the content of these elements. The hypothesis that this deficiency might be a major factor in the difference in health and physique of the two groups of rats was strengthened by the fact that numerous experiments with large animals have demonstrated that calcium and phosphorus lack is a common cause of deficiency disease, retardation of growth, and low viability in young at birth (Osborne and Mendel, 1918, Elliot, Crichton, and Orr, 1922, Elliot and Crichton, 1926). Orr (1930) has reviewed the influence of mineral salts in stock feeding, showing the benefits of adding calcium and phosphorus in various forms to the rations of pigs, cattle, and poultry. Similar deficiencies may occur in human diets. A survey made of 607 diets in Scotland in 1926-7 (Orr and Clark, 1930) showed that as family income fell the diet became poorer in calcium. In 205 of the families the intake was less than 0.3 gramme per head per day. In a feeding experiment with the children of these families it

was found that a considerable increase in growth and a definite improvement in health followed the supplementary feeding of either whole milk or separated milk in quantities of from 3/4 pint for younger children to 1 1/2 pints for older children. As the separated milk without the fat or the fat-soluble vitamins contained in the fat had practically the same result as the whole milk it was thought that the great increase in the calcium and phosphorus intake due to the milk might be an important and possibly the most important factor in producing the improvement in growth and health and that the remarkable results obtained earlier by Corry Mann (1926) in children from the increased consumption of milk might be due largely to the same factors.

In view of the obvious importance of calcium and phosphorus it was decided that these elements should be the first to be tested in the experiments now being developed at the Rowett Research Institute in the investigation of specific dietary deficiencies.

### The Experiments

**The Diets**—Three groups of rats were fed on different diets. Group 1 was given the survey diet described by Orr *et al* (Diet 1) whilst Group 2 received the survey diet in which were incorporated the same amounts of milk and green food as were used in the earlier experiment (Diet 2). Diet 3 fed to Group 3 rats was constructed by the addition of salts of calcium and phosphorus to Diet 1 in such amounts that its calcium and phosphorus contents were the same as those of Diet 2.

Analyses for calcium and phosphorus were carried out daily for a fortnight on samples of Diets 1 and 2 excluding the Sundav diets which for each group consisted of bread and water only. Average figures for the whole series of analyses are given in Table I.

TABLE I—Analysis of Diets 1 and 2 (Averages for Twelve Samples of Each Diet)

	Ca	P	Ca P
Diet 1	0.121	0.249	0.030
Diet 2	0.284	0.333	0.34
Difference	0.163	0.089	

Diet 3 was constructed by adding the following amounts of salts to Diet 1 per 100 grammes wet weight: calcium lactate (B.P.) 0.324 gramme, Na HPO<sub>4</sub> (analytical reagent) 0.105 gramme.

The accuracy of this addition and the efficacy of mixing the added salts with the rest of the diet were checked by the analysis of samples of Diets 1 and 3 taken on the same day. The results are given in Table II; the figures for the recovery of the added calcium and phosphorus being in good agreement with the amounts actually added.

TABLE II—Analysis of Diets 1 and 3

	Ca	P
Diet 1	0.099	0.253
Diet 3	0.213	0.340
Difference	0.119	0.087

**The animals used** were Lister Institute hooded rats bred at the Rowett Institute for several generations before the start of the experiment. They were bred from stock the experiment beginning at weaning. Three groups of 21 day old rats, each containing twenty four males and

twenty four females were used. In each group twelve males and twelve females were kept for breeding and four males and four females were killed for examination at 70 and at 100 days of age. In almost every case each male rat in Group 1 had a female litter mate in the same group; in addition these two rats had a male and a female litter mate in both Groups 2 and 3. It was thus possible to compare litter mates of the same age and both sexes in different groups.

**The management of the animals** was suffered like that described by Orr *et al* to merit but little discussion. The amount of food fed was regulated so that a fixed quantity was left every day but the actual food consumption was not measured. Tap-water was given *ad libitum*. The rats were weighed at the beginning of the experiment and thereafter twice weekly. The animals killed for examination were radiographed prior to dissection of the upper and lower incisors and the remaining tibiae and fibulae of both legs. The upper incisors and the tibiae of the right leg were used for histological examination while the lower incisors and the tibiae of the left leg were reserved for chemical analysis. The remaining rats of each group were used for breeding standard methods being employed.

The experiment is being carried out over three generations; the results reported in this paper dealing almost entirely with the first generation. Data relating to all the generations will be published in full at a later date.

### Results

(a) **The Rate of Growth**—The accompanying chart shows the rate of growth of the male rats in the first generation. It will be seen that the growth rates of

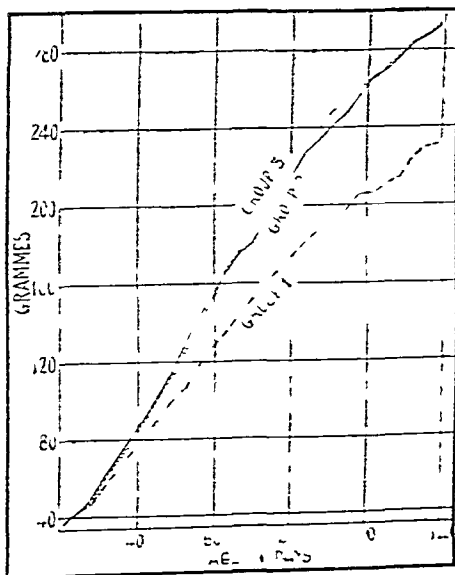


Chart showing the average growth of male rats from 21 to 110 days of age.

Groups 2 and 3 are identical and are much slower than that of Group 1. Exact similar results were obtained with the females though as is always the case the weights were lower than those of the males. The growth curves of the second generation have also been obtained and it has been found that in this case the Group 1 rats do not grow as fast as those in Group 2, but are

much better than those in Group 1. The general condition of the rats on Diet 1 was poor, these rats had not the sleek appearance of their litter mates in Groups 2 and 3, who were always in good condition.

(b) *X-Ray Photographs*—In all cases the films showed a striking difference in the degree of calcification of the rats in Groups 1 and 2, very little difference could be seen between Groups 2 and 3. Figs 1, 2, and 3 (Special Plate), reproducing x-ray photographs of litter mates in the three groups, demonstrate this fact.

(c) *Histological Examination of the Teeth*—This examination was used to demonstrate the relative values of the three diets, in the same way as was done by Mullick and Irving (1937) in assaying the nutritional value of Indian diets. Schour and his co-worker (Schour and Ham, 1934) and many others have pointed out that the width of predentin in the rodent incisor tooth offers a very delicate test for the degree of calcification, being wider when calcification is impaired. Longitudinal sections of decalcified upper incisor teeth were cut, stained with haematoxylin and eosin, and the predentin width in the apical part of the tooth measured. The normal value for this width is from 16 to 20  $\mu$ . The average results obtained from the first generation are given in Table III.

TABLE III—Width of Predentin ( $\mu$ ) in Longitudinal Section in Upper Incisors (Average Results from the First Generation)

Age in Days	Sex	Groups		
		1	2	3
40	M	29	25	22
	F	31	20	21
70	M	41	23	19
	F	34	22	19
100	M	38	20	21
	F	25	20	21

These results show quite clearly that calcification is deficient in the rats of Group 1 but is normal in those of Groups 2 and 3. In addition it is possible that calcification is most impaired in Group 1 at 70 days, improving after this time. Photomicrographs of teeth from litter mates are reproduced in Figs 4, 5, and 6. The section of the tooth from the Group 1 rat shows vascular inclusions in the predentin, these were quite commonly found in teeth from Group 1 rats at 70 and 100 days of age, but were always absent in the teeth of rats in the other two groups. The histological examination of the bones failed to reveal any differences which could be compared quantitatively. Results from this examination have not been included in this paper.

(d) *Chemical Analyses*—These are limited to the ash contents of the femur, tibia, and fibula combined, and of the lower incisors. The results are given in Table IV. The percentage of ash in the bones of Group 1 rats is in every case much lower than the corresponding figures for the animals in Groups 2 and 3. The differences between Groups 2 and 3 are not significant. The lowered calcification of the bones of Group 1 rats and the similarity in the calcification of Group 2 and Group 3 animals are more truly expressed when the ash contents (in absolute amounts) of the bones of Groups 2 and 3 are stated as percentages of those of the Group 1 rats. Despite this similarity it cannot, however, be concluded that calcium and phosphorus in inorganic form are equally as available as those elements in milk and green food, since there are no figures for the total calcium and phosphorus contents of the animals. The relative availability can only be decided by balance experiments.

TABLE IV—Weight and Composition of Dry Extracted Bones and Teeth (Average of Four Rats)

BONES							TEETH			
Age	Sex	Group	Wt of Bone	Wt of Bone Ash	Ash expressed as % of Group 1	Ash % of Bone	Wt of Tooth	Wt of Tooth Ash	Ash expressed as % of Group 1	Ash % of Tooth
40 days	M	1	0.1484	0.0532	100	36.06	0.0510	0.0362	100	70.88
		2	0.2005	0.0860	163	42.94	0.0529	0.0389	107	72.70
		3	0.1953	0.0832	157	43.60	0.0546	0.0398	110	73.09
	F	1	0.1463	0.0567	100	38.58	0.0504	0.0366	100	72.63
		2	0.1869	0.0836	147	44.79	0.0534	0.0393	107	73.64
		3	0.1528	0.0705	124	43.82	0.0519	0.0384	105	74.01
70	M	1	0.2924	0.1317	100	44.88	0.0856	0.0657	100	77.16
		2	0.4392	0.2456	187	55.56	0.1027	0.0790	120	76.94
		3	0.4086	0.2292	174	56.10	0.1000	0.0783	119	78.40
	F	1	0.2232	0.1054	100	46.50	0.0766	0.0596	100	77.53
		2	0.3438	0.1919	182	56.03	0.0910	0.0723	121	79.50
		3	0.3481	0.2034	193	58.42	0.0927	0.0749	125	78.98
100	M	1	0.4075	0.2122	100	51.79	0.1164	0.0878	100	75.44
		2	0.6002	0.3642	172	60.41	0.1362	0.1061	121	77.93
		3	0.6603	0.4142	194	62.70	0.1459	0.1142	130	76.20
	F	1	0.2769	0.1442	100	52.06	0.1043	0.0790	100	75.77
		2	0.4653	0.2895	202	61.88	0.1308	0.1025	130	78.63
		3	0.4897	0.3075	213	62.75	0.1302	0.1020	129	78.65

The tooth-ash figures show much slighter differences between the three groups. This result is in marked contrast to the histological findings, which follow the bone ash figures closely. This lack of correspondence between the histological and chemical data with teeth has often been noted by us and by other workers, and shows that the histological examination is a much more sensitive test of normal tooth calcification than is chemical analysis.

(e) *The Reproductive Performance of the Rats of the First Generation*—This is shown in Table V.

The figures show that the rats from Group 1 mated less readily, producing smaller litters with a low weaning weight, the reproductive performances of rats from Groups 2 and 3 were considerably better.

TABLE V—Reproductive Performance of First Generation Rats

	Group		
	1	2	3
Average time between introduction of milk and birth of litter (days)	48	34	26
Average number born per litter	8.7	9.7	10.0
Average weight at birth (grammes)	5.30	5.36	5.48
Average weight at weaning (21 days) (grammes)	24.3	32.0	27.3

### Discussion

The results quoted show clearly that, using rats bred from stock, the improvement in a poor human diet induced by milk and green food supplements can be largely reproduced by the addition of equivalent amounts of calcium and phosphorus salts. This result is in agreement with the work of Sherman and Campbell (1935), who found that the improvement in the nutritional quality of a diet caused by adding dried milk was also obtained by using an equivalent amount of  $\text{CaCO}_3$ . In a recent paper Coward *et al* (1938) have shown that the addition of calcium and phosphorus salts to a poor human diet fed to rats increased the ash content of the bones. These results are of great interest in confirming our findings, but it is unfortunate that the diets chosen do not approximate



more closely to those actually consumed by man as shown by dietary surveys. Further we cannot agree for the reasons given above that these authors are justified in stating that the calcium in milk is no more available to the animal than is the calcium in inorganic salts. This can only be decided by balance experiments and indeed the literature on this subject states quite clearly that milk calcium is the more readily available (Givens and Mendel 1917 McCluskey and Mendel 1918).

### Conclusions

It has previously been shown that the nutritional value of a poor human dietary can be greatly improved by the addition of milk and green food supplements. The experiments here reported demonstrate that in rats bred from stock this improvement is due largely to the calcium and phosphorus contained in the supplements. This conclusion is of particular interest at the present time when much stress is being laid on mineral metabolism and it is being realized that a deficiency of calcium in particular is likely to occur in human diets. An increased consumption of milk as now widely practised in America is the most efficient means of ensuring an adequacy in this respect.

We wish to express our indebtedness to Sir John Orr FRS for his interest and criticism.

### REFERENCES

- Coward K H Kassner E W and Waller L W (1938) *British Medical Journal* 1 39  
 Davidson L S P *et al* (1933) *Ibid* 1 655  
 Elliot W E Crichton A and Orr J B (1922) *Brit J exp Path* 3 10  
 — (1926) *J agric Sci* 16 65  
 Givens M H and Mendel L B (1917) *J biol Chem* 31 421  
 McCarrison R (1926-7) *Indian J med Res* 14 649  
 McCluskey H B and Mendel L B (1918) *J biol Chem* 35 353  
 Mann H C Corry (1926) *Med Res Council Sp Rep Ser* 105  
 Mullick D N and Irving J T (1937) *Nature* 140 319  
 Orr J B (1930) *J Musc Atr* 37 115  
 — and Clark M L (1930) *Lancet* 2 59  
 — Thomson W and Garry R C (1935) *J Hyg Camb* 35 476  
 Osborne T B and Mendel L B (1918) *J biol Chem* 34 131  
 Schour I and Ham A W (1934) *Arch Pathol* 17 22  
 Sherman H C and Campbell H L (1935) *J Nutr* 10 363  
 Thomson W (1936) *J Hyg Camb* 36 24

L Lofgren (*Finska LakSallsk Handl* December 1937 p 937) has searched for a patent foramen ovale among the 785 bodies examined post mortem at the Medico Legal Institute in Helsingfors during 1935 1936 and 1937. No child under 10 was included in this study and there were only 170 women. In as many as 120 cases (15.3 per cent) a patent foramen ovale was found. The smallest only just admitted a fine sound the largest was over 1 cm in diameter. In most cases the diameter was from 2 to 5 mm. Comparing his findings with those of other observers the author notes how widely they have differed partly no doubt because of the differences in the ages of the persons examined. Those—and they are in the majority—who have included children of all ages in their studies must necessarily find a comparatively high proportion of cases for the anatomical closure of a patent foramen ovale may occur long after birth. A patent foramen does not seem to influence growth for the average height of the adults examined by the author was normal and he is of the opinion that a patent foramen gives rise to no anatomical changes such as hypertrophy or dilatation of the heart. With regard to the diagnosis during life he considers this impossible as the condition so seldom gives rise to clinical manifestations when unaccompanied by other heart lesions. The author discusses briefly the association of a patent foramen with paradoxical or crossed embolism.

## FRACTURE OF THE NECK OF THE FEMUR

BY

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(WITH SPECIAL PLATE)

The treatment of fractures of the neck of the femur by the insertion of the Smith Petersen nail is now so firmly established that attention is focused more on refinement of the technique of insertion than on comparison with other methods. As Hey Groves has said the Smith Petersen nail has completely dominated the situation. There are certainly several other fractures which have more pressing claims to Kellogg Speed's title of the unsolved fracture.

### A Simplification of the Smith Petersen Method

A year ago I published an account of a method of inserting the nail. I was not claimed that this was exactly original but I suggested that it was probably the most simple procedure yet recorded. I have since further simplified this considerably and I now feel that an one with a moderate degree of operating skill—equivalent to that possessed by any competent house surgeon—can place a Smith Petersen nail correctly at the first attempt by a method which has the additional advantage that it demands a minimum of teamwork and in the end it does not take long. The average duration of the operation in each of the last dozen cases has been slightly more than half an hour and this comprises the total time spent by the patient in the theatre.

### TECHNIQUE

The first step is to attach the patient's feet to the foot pieces of an orthopaedic table by plaster of Paris. Reduction is performed by the Whitman manoeuvre, other variations such as those of Tavernier Leadbetter etc. are reserved for difficult fractures. Traction is exerted by hand only; it is difficult to assess the amount of traction when using a screw axis is used. When the necessary traction is obtained by hand it is secured by one arm of a traction skin having been protected with sterile oiled towelling. The nail is applied to the skin over the fracture. The nail is placed over the middle point of the line joining the symphysis pubis and anterior superior iliac spine. The nail is situated half an inch medial to the anterior superior iliac spine and the opposite anterior superior iliac spine. The nail is placed anterior to the lateral margin of the great trochanter, approximately one and a half inches from its upper margin. The fourth is put in position midway between the first and third. A calibrated guide is then introduced directly anterior to the neck of the femur along the line of these clips until it abuts against either the head of the femur or the lesser trochanter. A fifth Michel clip is applied one and a half inches posterior to the point of entry of the guide.

Antero-posterior and lateral radiograms are now taken (Figs 1 and 2). The antero-posterior direction is selected from either the position of the guide or that of the clip and the lateral direction from the position of the guide. The point of entry of the guide in the bone is determined by a Michel clip point somewhere between the guide and the fifth 1 1/2 inch clip. In the last twenty cases more than 70 per cent of the nail was parallel to the guide or deviating only slightly from it. The calibrations of the guide are counted and the nail is driven to allow for the fact that the guide is in front of the neck and therefore nearer the fracture it must also be driven to allow for impaction. A full inch of nail is now driven between the point of entry of the guide and the point of the Michel clip. The cortical bone is drilled with a quarter inch



drill. A quarter inch drill is essential as by this means the direction of the guide is not interfered with by pressure on the cortical bone.

At this stage a non-calibrated guide is introduced in the direction chosen. I have discarded the use of the calibrated guide in the bone, because of the risk of impaction of the nail on a calibration. It has been suggested that the guide may bend at the site of the fracture but this will not occur if the feet have been fixed in plaster of Paris. The Smith-Petersen nail is gently tapped home, it can be decided when the head is flush with the bone by using the calibrated guide. The wound is then closed with one suture.

*Table of Results*

Patients	Died	Non union	Arthritis
66	7 (one after union)	4	1

Percentage of all patients with bony union 85.70  
arthritis (excluding deaths) 5.68

### Time of Operation

The optimum time of operation I consider to be, as a rule, on the third day after the fracture. The patient has by then got over the initial shock, and should not yet have developed bed-sores, pneumonia, delirium tremens, etc. Pneumonia and passive congestion are indications for immediate operation. It is here that the use of the nail becomes a life-saving procedure. The elderly patient with pneumonia has a poor chance of survival if she is immobilized by an untreated fracture of plaster-of-Paris. I have been impressed by the great improvement which takes place in these patients after they have been rendered mobile in bed by the insertion of a nail. Three of the five deaths have been due to pulmonary embolus. I think it is significant that in all those cases operation was postponed, being performed between two and three weeks after the fracture. The other two deaths were due to cerebral haemorrhage and pyonephrosis, the latter unconnected with the insertion of the nail.

### Lateral and Trochanteric Fractures

I have repeatedly been disappointed at the tendency to late adduction in these fractures when treated by immobilization in plaster or by the Roger Anderson well-leg traction. Adduction has taken place in some patients after five months immobilization, even before weight-bearing had commenced, and when on the clinical and radiological evidence, the fracture had seemed firm. Even at the best, with immobilization, one has the handicap of stiff knees to contend with, and, at the worst, adduction or external rotation deformity in addition. I therefore attempt to nail all these fractures. It may be necessary to start the nail very low on the shaft to get good bone but this is nearly always possible. The nail need not extend right into the head of the femur. The cortical bone of the superior border of the neck affords a sufficient hold, and accidental penetration of this until union takes place is not a very serious disadvantage. I consider that an attempt to surmount the technical difficulties of the operation is well worth while. The benefit to the patient from immediate mobility leaves me with the impression that nailing is the treatment of choice.

### Reduction

Reduction is usually obtained by the Whitman procedure, and it is rarely found necessary to vary this. Before the patient is placed on the orthopaedic table the hip is always flexed to disimpact the fragments. I have used the Leadbetter method of reduction, but consider its weak point is that the fractured limb is held by an

assistant. If a ray control is to be reliable certain factors are essential: (1) there must be no movement of the fractured limb, (2) the tube must be constantly centred over the same point. I was recently privileged to watch the insertion of a Smith-Petersen nail during which the limb was held by an assistant instead of being secured on a table. Comparison of two antero-posterior skiagrams revealed a marked discrepancy in the position of the nail, the second one showing it to be dangerously near the cortical bone of the head.

### Impaction

I agree with Watson Jones that gross impaction is unnecessary if reduction is accurate. If there is a gap between the fragments which cannot be reduced by manipulation I impact by a dozen gentle blows with the Stirling or Smith-Petersen punch. I reserve impaction for those cases in which reduction has not been perfect and a gap is left, and also in the very aged where the nail has traversed the head too easily, like a knife through butter.

### After-treatment

The usual routine is to keep the patient in bed for four weeks. No precautions other than this are necessary with a well-placed nail. At the end of four weeks an x-ray photograph is taken and if the nail is still in good position, possibly with signs of early union present, the patient may be allowed to sit up out of bed. At the end of eight weeks progression on crutches is permitted, but no weight-bearing until the end of three months or until bony union has occurred.

### Complications

Complications are due to (a) changes in position of the nail, (b) arthritis.

#### (a) CHANGES IN POSITION OF THE NAIL

Of sixty-six, seven have broken out, two coming out in their longitudinal axis after union. I have found that nails emerge in three ways: (1) in the longitudinal axis of the nail, (2) by an external rotation strain, and (3) by an adduction strain.

1 *In the Longitudinal Axis*—It may be only coincidence, but I have had only one nail come out in its longitudinal axis since I have been using nails with snagged edges, whereas previously this was quite common. Whether callus forms between the teeth it is difficult to say, as against this one knows that eventually rarefaction occurs all round the nail. This resulted in one case of non-union in the last twenty-five patients. This patient was discharged as an in-patient at eight weeks, and unfortunately did not attend again for over six months. He was then found to have non-union, and the nail had withdrawn a distance of one inch. I performed a bifurcation osteotomy for non-union on the lines laid down by McMurray.

2 *External Rotation*—I consider this is the commonest method of breaking out. It is the position taken by the fractured limb, and puts most strain on the fracture and nail. Internal rotation is a definite active movement, and though more forceful than external rotation is not a rule adopted by the patient. It can be guarded against by applying a plaster-of-Paris T-piece to the foot or the leg.

3 *Adduction Strain*—This occurs when a nail is placed in too perpendicular a position. If the arc described by the point of the nail can clear the lip of the acetabulum when the limb is adducted slightly, I consider the nail is in danger of breaking out by this strain. If so well placed that it will be protected by the lip of the acetabulum I

consider it to be safe. That holds also for external rotation strains but it is difficult to determine this in a lateral photograph. The best placed nail is that which is directly central. Any deviation from this however should be towards a posterior or low position. When a nail has broken out I always replace it immediately after the diagnosis has been made and with the exception mentioned above union has always occurred.

#### (b) ARTHRITIS

My experience of the closed treatment of fracture of the neck of the femur—namely the Whitman procedure—is not extensive enough for me to compare the incidence of arthritis with that method and the incidence with treatment by the Smith-Petersen nail. In my cases of SIXTY SIX closed nailings there were three cases of arthritis. To these I might add twelve previous cases of open nailings, nine of these patients I have communicated with and apart from two pseudarthroses they have not developed arthritis. I feel that the nail should not be blamed and that the truth of the matter is that we are now seeing over 80 per cent of bony unions and a much higher survival rate and in consequence more arthritis. The arthritis is of a degenerative type sometimes called aseptic necrosis of the head of the femur. Contributory causes to its occurrence are (1) delayed union (2) in accurate reduction and in consequence faulty weight-bearing (3) excessive impaction (4) perforation of the cartilage by the guide or nail (5) pre-existing arthritis.

Eric Lloyd has stated that the abduction fracture should not be nailed. Figs 4 and 5 (Special Plate) show arthritis following six years after an abduction fracture with slight displacement. Whether this was due to the fracture not being reduced or to degenerative arthritis as a result of inadequate blood supply it is difficult to say but I hold most emphatically that any fracture abduction or other wise should be reduced and nailed if there is any displacement.

#### Summary

- 1 The treatment of fractures of the neck of the femur by the Smith-Petersen nail has been generally adopted.
- 2 A method of insertion of the Smith-Petersen nail is described.
- 3 It is suggested that this is the most simple method yet described, necessitating no elaborate instrumentarium and that by its use the nail can be placed correctly in about half an hour.
- 4 Complications are due to breaking out of the nail or to arthritis.

In August 1937 the signing of the National Cancer Institute Act authorized the establishment of such an Institute as part of the US Public Health Service. For the necessary building and equipment 750,000 dollars were allotted and a yearly appropriation of 700,000 dollars is needed to maintain the Institute. The primary object of this Institute is to be research into all phases of cancer—diagnosis prevention and treatment. Knowledge gained in the Institute will be available to medical men and agencies all over the world. The appropriation also makes it possible for funds to be utilized as grants in aid for research. The Institute is given the power to establish and maintain research fellowships with such allowances as the Surgeon General may consider necessary. In September 1937 a National Advisory Cancer Council was formed under the Chairmanship of Surgeon General Thomas Parran consisting of Dr James Ewing, Dr Francis Carter Wood, Mr C. C. Little, Sc.D., Mr Arthur H. Compton, Ph.D., Mr James B. Conant, LL.D. and Dr Ludwig Hektoen.

## MALIGNANT TUMOUR OF THE THYMUS GLAND

BY

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(WITH SPECIAL PLATE)

Tumours of the thymus gland are comparatively rare and therefore the following case appears to have a definite interest.

#### History of the Case

A male child 5 years old was first taken to the family doctor on April 12 1937 because he had complained of a tight chest during the previous two weeks. He had had measles in February 1937 followed by a normal convalescence. His health had been good and he had always been an active child. Both parents and one brother were alive and well and there was no history of tuberculosis in the family.

The patient was seen in consultation on April 15 1937. He was born a blue baby and the parents were told at the time that there was something wrong with his heart. A slight dry cough was present but no expectoration. The appetite was poor and there had been much recent loss of weight. Shortness of breath and tightness of the chest were the most pronounced features.

On clinical examination the patient was obviously distressed and there was marked cyanosis of the lips and face. He was able to stand but could not walk a step owing to respiratory embarrassment. He was fairly well nourished although he had obviously lost weight recently. The temperature was 99° F and the pulse rate 120 per minute. There was no clubbing of the fingers. Nothing definite was noted in the mouth or nasopharynx but the superficial veins over the upper abdomen and chest were very prominent. On the right side of the neck in the region of the right lobe of the thyroid gland was a fluctuating swelling that appeared to transmit an expansile impulse on coughing. The heart apex beat was displaced to the left. The right chest was immobile and showed a decided dullness. There was absolute dullness on percussion and the breath sounds were tubular in character. The heart sounds were accentuated but no definite valvular lesion was present. No abnormal physical signs were observed in the left lung apart from very harsh breath sounds. The liver dullness appeared to be increased but nothing definite was palpated in the abdomen. Both testicles were present in the scrotum. A ray examination of the chest showed a dense opacity occupying the inner parts of all zones of the right lung bed and shading off towards the periphery. The diaphragm outline and costo-phrenic sulcus were obliterated. The heart and mediastinum were displaced to the left. The radiographic appearances suggested a large pleural effusion. After consideration of the clinical and radiological aspects of the case a diagnosis of mediastinal neoplasm was made.

The patient was admitted to hospital for further examination. His temperature now varied from 99° to 100° F the pulse rate from 120 to 140 and the respiration rate from 30 to 40 per minute. The following investigations were carried out by Dr A. F. Sladden, pathologist to the Sydney General Hospital.

**April 20 Pleural Fluid**—The fluid was turbid and of a brownish colour with clot. Microscopical examination revealed a few polymorphous lymphocytes plus a few endothelial cells. No tubercle bacilli or other organisms were seen and culture was sterile. Erythrocytes plus pH 6.9 protein 3 grammes per cent. albumin-globulin ratio 2:1.

**April 21 Blood Count**—Red cells 4,600,000 white cells 15,200 per cmm. haemoglobin 90 per cent colour index 1.0. Average diameter of red cells 7.1.

**April 2 Pleural Fluid**—The fluid contained a large amount of blood. Films showed blood cells, polymorphs, and lympho-

cytes No tubercle bacilli or other organisms present, culture was sterile

*April 28 Blood Count*—Red cells 3,742,000 white cells 41,000 per cmm haemoglobin 64 per cent colour index 0.82 Polymorphs, 81.0 per cent, lymphocytes, 11.5 per cent, monocytes, 6.5 per cent, eosinophils, 1.0 per cent, basophils, 0.07 per cent, anisocytosis ±

Further x-ray examinations were made on April 17, 22, and 29. These radiographs showed some slight increased translucency in the upper zone of the right lung with what appeared to be a definite lateral border to a mediastinal mass. The child's condition gradually deteriorated. His weight decreased, the dyspnoea became more severe and he was obviously gravely distressed. The physical signs remained unchanged. At the request of his parents he was discharged from hospital on May 7. He died a few hours after his arrival home.

### Post-mortem Findings

The body was very emaciated. There was no oedema of the legs. No enlarged glands were present in the neck. A cystic swelling was seen in the region of the right lobe of the thyroid gland. On opening the thorax the right pleural cavity was filled with a brownish-coloured fluid—about three pints in all. A large growth was situated in the anterior mediastinum. No glands were palpated in the abdomen. The thoracic contents were removed *en bloc*. I am indebted to Dr W. H. Tytler, research bacteriologist to the Welsh National Memorial Association, for the following report:

'A large soft relatively avascular tumour [see Special Plate] measuring 5 by 5 by 4 inches lies in the anterior mediastinum in front of the trachea, and extends from just below the thyroid gland downwards for about 5 inches. The tumour is adherent to the upper part of the anterior parietal pericardium, and extends downwards to the apex of the pericardial sac as a broad tongue of growth about half an inch thick.

"It does not infiltrate or enclose the trachea but the ascending limb and arch of the aorta and great vessels are surrounded and compressed but not infiltrated by it. A thin layer of growth extends downwards, infiltrating part of the posterior wall of the left auricle and ventricle and isolated plaques of soft yellowish-white tumour tissue lie in the anterior wall of the left ventricle and at the apex of the heart, and are covered by the visceral pericardium. The cut surface of the growth presents a smooth, whitish yellow, slightly lobulated appearance.

*Heart* This appears normal apart from infiltration of its walls by the tumour as described. Small flattened thrombi lie in the left ventricle and aortic valve. The pericardium itself is nowhere infiltrated by the growth, and the sac contained no fluid.

*Right Lung* Normal and air-holding.

*Left Lung* This is compressed and practically airless. A few indefinite fibrous like thickenings are felt over the left margin of the upper lobe, and the cut surface shows a purulent bronchitis.

### MICROSCOPICAL SECTIONS

The tumour is composed of a diffuse undifferentiated mass of cells resembling small lymphocytes. The stroma is very scanty and there are practically no reticulum cells. The blood vessels of which there are comparatively few, are small and thin walled.

*Metastases—Heart* The areas involved show a solid mass of tumour cells on the surface and extending into the muscle to about one-half of its depth, forming columns and layers between the muscle cells.

*Left Lung* Sections including the thickened areas described show extensive areas of infiltration by tumour cells which

involve the pleura and form dense masses round some of the blood vessels and bronchioles. There is evidence of a purulent bronchitis, with desquamation of bronchial epithelium and leucocytic infiltration, and the alveoli are largely collapsed.

*Right Lung* Apart from some congestion, sections show nothing noteworthy.

### "INTERPRETATION OF FINDINGS

'The tumour is a malignant lymphoma and on account of its situation possibly arises from the thymus gland. Its origin, however, cannot be stated with any degree of certainty as the thorax contains many other lymphocytic structures from which it may have arisen. The findings indicate that death was due to asphyxia and venous obstruction.'

### Pathology

Much is still unknown about the normal functions of the thymus gland and the part it plays in conditions of disease. The weight of the gland in relation to that of the body is greatest at birth. The maximum actual weight is attained at about the fifteenth year, and thereafter involution occurs—that is, at puberty, and not when the body is fully grown. This suggests an intimate relation between the thymus and the genital glands, and experimental results confirm this view. In tuberculosis the gland is very rarely affected. Small nodules and occasionally small caseous masses may be present in acute miliary tuberculosis, but neighbouring lymphatic glands may be involved by tuberculous infection without lesions occurring in the thymus.

The thymus gland is rarely the seat of either primary or secondary new growths. Voges (1926) notes that tumours of the gland were known to Virchow, who regarded it to be often the starting-point of lymphosarcoma. The commonest growth appears to be a primary malignant tumour composed of small round cells with scanty stroma. Most writers describe it as a round celled sarcoma or lymphosarcoma, but some observers maintain that it is of epithelial origin. The carcinomata of the thymus have been the subject of much controversy, as they present many peculiar characteristics. One form of cancer may be ill defined and resemble sarcoma, while a second variety may take the form of ordinary 'medullary' carcinoma. Other observers classify the carcinomata of the thymus as small-celled and large celled varieties, and also a form of tumour special to this gland, the lympho-epithelioma. In view of the two types of cells present in the thymus—epithelial and lymphoid—this growth may be called a true thymoma, a term which has been rather loosely applied to various forms of growth originating in the gland. Pure epithelial tumours are extremely rare. "Thymic epiblastoma" is a term used by Foot and Harrington (1923) in their description of a case.

Gandy and Piedelievre (1920) describe a tumour resembling a lymphadenomatous growth which infiltrated neighbouring parts, including the heart and superior vena cava. It is interesting to note here that Symmers and Vance (1921) subdivide lymphosarcomata into two varieties: (1) a growth consisting of masses of lymphoid cells separated by strands of connective tissue (the usual lymphosarcoma), and (2) tumours histologically resembling Hodgkin's disease containing giant cells and eosinophil elements.

Bosanquet and Lloyd (1932) found forty three instances of adequate records in the literature on tumours of the thymus gland. They state that twenty nine of these were carcinomata and fourteen sarcomata, ten of the latter being lymphosarcomata. Of the carcinomatous tumours

twelve were apparently lympho-epitheliomata thirteen were described simply as carcinomata and four as epitheliomata. Davidson (1933) quotes the recent view of Barnard that many of the tumours in the mediastinum called lymphosarcomata are in reality a form of carcinoma. The interpretation as to the character of malignant tumours seems to depend on the view held concerning the peculiar histological structure and nature of the small thymus cells and in any case the classification of tumours according to histological structure appears to be unsatisfactory. Hassall's corpuscles may or may not be present but their absence does not negative an origin in the thymus gland.

Metastases occur most frequently in the neighbouring lymphatic glands in the pleura and in the lungs. They may also arise in the abdominal glands liver kidneys suprarenal bodies stomach ovary and very occasionally in the bones.

Simple tumours such as fibroma and myxoma are said to occur in the thymus and also cysts of varying kinds both developmental and dermoid (Ewing 1916).

### Symptomatology

In most cases of tumour of the thymus gland dyspnoea is the predominant symptom usually of increasing intensity and frequently paroxysmal in character. This is accompanied by cyanosis and often oedema of the neck and face due to pressure on the venous trunks and even involvement by the growth. The pericardium and heart muscle may be infiltrated by the growth. Haemoptysis may occur owing to involvement of the bronchial vessels. Pleural effusions are a frequent accompaniment and the fluid is usually haemorrhagic. Pneumothorax has also been met with. The case described shows several of the above features increasing dyspnoea inclined to be paroxysmal in character cyanosis haemorrhagic effusion and pneumothorax. The heart muscle was infiltrated by the growth and deposits were found also in the left lung and pleura. Metastases are often the cause of the most prominent symptoms—for example abdominal symptoms—and secondary deposits occurring in the spine may give rise to a paraplegic condition before the seat of the primary lesion is recognized.

It is more usual for tumours of the thymus gland to occur in childhood. Among the cases which Bosanquet and Lloyd (1932) collected there were eighteen instances of carcinoma in persons over the age of 40 and ten below that age. The sarcomata were more evenly distributed three occurred in the first decade of life two in the second three between 21 and 30 years of age and three between 31 and 40 the remaining two being in persons aged 60. Bedford (1930) describes a carcinomatous growth of the thymus in a newborn child. Death was caused by asphyxia, and metastases were present in the lung liver bones, and skin.

Several authors discuss the association of thymic tumours with other diseases—namely lymphosarcoma associated with lymphatic leukaemia and thymic tumours occurring in patients suffering from myasthenia gravis—most of which are regarded as having been benign in character although originally reported as otherwise by the authors. Two cases have been described in which thymic tumour was present in patients with tuberculosis. Ewing (1916) reports a case in which repeated attacks of tonsillitis occurred. In view of the close resemblance in histological structure between the tonsil and the thymus the association of these symptoms is worthy of note.

### Diagnosis

It is extremely difficult and often impossible to make an absolute diagnosis of thymic tumour during life. In most cases dullness on percussion over the upper part of the sternum dyspnoea venous engorgement and the radiographic appearances will help in arriving at a tentative diagnosis of the condition. Unfortunately one or more of these symptoms and signs are frequently absent and the radiograph may not show the shadow of an enlarged thymus as instanced in our own case. Screening examination shows that the opacity increases in size when the child cries.

The diagnosis from tuberculous enlargement of the superior mediastinal glands rests upon the characteristics noted above. An intradermal Mantoux test would also prove helpful in the differentiation. In our own case the radiological diagnosis of a thymic tumour was rendered difficult by the appearances of a massive effusion in the right pleural cavity although later films showed an apical but defined edge in the upper mediastinal area on the radiograph suggesting the possibility of a mediastinal tumour. Unfortunately the child was so ill that it was deemed inadvisable to prolong the examination for screening and lateral radiographs to be taken.

### Treatment

Apart from symptomatic and palliative measures the treatment of these cases is very unsatisfactory. A case is recorded by Lenz (1928) in which an epithelial tumour of the thymus was successfully removed by operation and the patient recovered. Owing to the involvement of the great vessels in these tumours in the majority of cases it would appear that surgical methods are extremely limited. In our own case surgical removal of the tumour would obviously have been impossible. American workers report success in treating mediastinal lymphoblastomata with deep x rays but although improvement occurs this is probably only transient. The thymus like lymphoid tissue generally is very sensitive to the action of x rays degenerative changes are produced in the lymphocytes which may become destroyed. In early life the thymus has great powers of regeneration as is seen when a part is removed. Davidson (1933) records a case similar to the one here described in a child of 3 years. Urgent dyspnoea was the main symptom and a blood-stained effusion was present. A considerable improvement was brought about for a time following deep x ray therapy but subsequently the patient died ten weeks after admission to hospital. The growth in this case was classed as a sarcoma, and sections showed it to be composed of small round cells of the lymphoid type in a fibrous reticulum.

### Prognosis

In the case reported by Bosanquet and Lloyd (1932) the disease seems to have been present for several years before the patient eventually died. Kneringer and Priessl (1923) describe the case of a man aged 71 in whom the disease had apparently lasted for over eight years. While Miller (1926) records a case in a child of 9 years who died in twenty-six days. In the present case the patient died within thirty-nine days after the onset of symptoms. A duration of two years is not rare but the majority of patients die within a year of the onset of symptoms.

### Summary

1. A case of malignant tumour of the thymus gland has been described. It presented many typical features

from the clinical standpoint, but the radiological appearances were not diagnostic

2 The tumour infiltrated the heart muscle and the left lung and pleura, but the pericardium was free from involvement. The arch of the aorta and great vessels were surrounded by the tumour, but not infiltrated

3 The origin of the tumour cannot be stated with any degree of certainty, but it appears to be a primary growth in the thymus gland itself

4 The microscopical findings show the tumour to be composed of a diffuse undifferentiated mass of cells resembling small lymphocytes. It is not a true "thymoma" in the strictest pathological sense, but more correctly a malignant lymphoma

5 Post-mortem findings indicate that death was due to asphyxia and venous obstruction

#### REFERENCES

- Bedford G V (1930) *Canad med Ass J* 23 197  
 Bosinquet, W C, and Lloyd, W E (1932) *Brompton Hosp Rep* 1, 108  
 Davidson M (1935) *Manual of Diseases of the Chest* p 473, London  
 Ewing J (1916) *Surg Gynec Obstet* 22 461  
 Foot N C, and Harrington H (1923) *Amer J Dis Child* 26, 164  
 Gandy C, and Pudelevre, R (1920) *Bull Mem Soc med Hop Paris* 44, 867  
 Kneringer, E, and Priesel A (1923) *Vnchows Arch* 241, 475  
 Lenz, R (1928) *Wien med Wschr* 78 224  
 Miller, J (1926) *Canad med Ass J* 16 810  
 Symmers, D, and Vance B M (1921) *Arch intern Med* 28, 239  
 Voges, H (1926) *Frankfurt Z Path* 33, 501

## SPONTANEOUS HAEMOPNEUMOTHORAX

By

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(WITH SPECIAL PLATE)

Although a spontaneous pneumothorax is by no means an uncommon event, it is comparatively rarely that the condition proves to be serious. In most cases the collapse of the lung results from the rupture of an innocent cyst or bulla into the pleura, and the air is gradually absorbed from the pleural cavity. Occasionally a valvular opening may occur, with the result that there is a mounting pressure in the pleura and serious interference with respiration, at other times, especially when there is active tuberculosis in the lung, there may be pleural effusion or even pyopneumothorax. Severe haemorrhage in cases of spontaneous pneumothorax is rare enough to justify the publication of the notes of the following case

#### Case Record

X Y a man aged 24 had always enjoyed good health. On August 28 1937, he was unscrewing the caps from heavy hydrogen cylinders: this involved considerable strain on the muscles of the chest and arms. He felt no ill effects at the time, but was awakened at 5 o'clock the following morning by a severe pain in the left side of the chest. He got up at his usual time and felt quite well, except that any strain or sudden movement produced a stitch-like feeling in the left side of the chest and some shortness of breath. At that time he felt as if there was some fluid jumping up and down on sudden movement. He was reasonably active during the day, but was short of breath on attempting to play tennis. The following day he became still more short of breath and felt severe and increasing pain in the left side of the chest. He

returned home early and went to bed: the dyspnoea and pain were much relieved by rest. On the same night he felt very faint and his doctor noticed that he appeared to be blanched exactly as if he had had a severe internal haemorrhage. Physical examination of the chest revealed that there were no breath sounds on the left side and a radiograph was taken (Fig 1) which showed a pneumothorax and a considerable quantity of fluid. The patient was seen on September 3, when, in view of his extreme pallor, it was suspected that there had been bleeding into the left pleural cavity. The chest was explored with a needle and blood was found. He was admitted to the St David's Wing of the Royal Northern Hospital and on September 9 34 oz of liquid blood were removed from the left pleura, using a wide bore needle and a rotunda syringe. No difficulty was experienced and the general condition of the patient was good, but it was decided not to attempt to remove more blood at that time because it was impossible to be sure that further bleeding would not take place. The chest was screened on the following day, and it was then seen that a considerable amount of fluid was still present. On September 12 it was decided to empty the chest as far as practicable, and a further 30 oz of blood was removed. The breath sounds were found to have returned over the lower lobe and the percussion note became resonant. The patient was kept in bed for a week and given an iron tonic. His general condition rapidly improved and the chest condition remained satisfactory. He was seen again on September 29, when he appeared to have recovered his health, and an x-ray film (Fig 2) showed complete re-expansion of what appeared to be a normal lung.

#### Discussion

The occurrence of a haemopneumothorax raises several points of importance. In the first place it is almost impossible to imagine it happening in a case of spontaneous pneumothorax unless there had been some previous abnormality in the pleural cavity or some lesion in the underlying lung. In this particular case there was no clinical or radiological evidence of pulmonary tuberculosis, and it seems almost certain that the bleeding must have been caused by the rupture of an adhesion between the two layers of the pleura. It would be possible in this way for a small vein to be opened and for a gradual haemorrhage to result. That the bleeding was gradual is shown by the fact that blanching was not noticed until at least forty-eight hours after the pneumothorax must have occurred.

It is clear that in such cases the blood must be removed as completely as possible from the pleural cavity, but choice of the appropriate time may be difficult. If the intrapleural pressures are interfered with before the bleeding point is sealed off a fresh haemorrhage may be caused, whereas, if left for too long, organization of the blood clot is likely to commence and permanent damage may result. It would appear that an interval of about a week is desirable before the blood is removed. It is interesting to note that in this case the blood seemed to be entirely liquid and there was no evidence of the presence of a mass of fibrin; it was possible to empty the pleural cavity so completely that the film taken three weeks later did not show any trace of residual blood or of pleural thickening.

A recent French Government decree brings into existence the Order of Public Health which is to be awarded to persons who have distinguished themselves in the promotion of health and infant welfare. Of the three grades within this Order the highest is that of Commandeur. The next is that of Officier and the third is that of Chevalier. The decree specifies the conditions under which this honour is to be awarded. It is to replace the honorary medals hitherto conferred on persons distinguished in the field of public health.

## EXTRA-UTERINE GESTATION LIVE CHILD

BY

FRANK STABLER, M.D., F.R.C.S., M.C.O.G.

*Honorary Assistant Obstetrician Princess Mary Maternity Hospital Newcastle upon Tyne*

(WITH SPECIAL PLATE)

Sittner in 1906 collected all the records from the year 1809 of extra uterine foetuses which showed any signs of life and later Hellman and Simon (1935) brought these up to date. In the 126 years 266 such records were tabulated. Hellman and Simon's tables include many cases where the child was not viable and I have rejected these cases. Of the 266 women 179 recovered, eighty-four died and of three the fate is unknown. Of the 266 babies 152 lived for eight days or more, 113 died within this period and of one the fate is unknown. According to Hellman and Simon's abstract in only eighty cases did mother and child survive but I find that this figure should be 110. Probably the authors rejected some cases where the child died later but as all of them will eventually die I have adhered to the standard of survival for eight days. Twenty-eight of the 266 babies are recorded as being deformed to some extent, and of these sixteen lived eight days or more. These figures are probably valueless as evidence of the likelihood of survival for there is a greater tendency to record successful cases than unsuccessful ones.

Since Hellman and Simon's publication Zarif (1935), Krishnan (1936), Futh (1936), Wilson (1936), Woods (1936) and Anderson (1936) have reported cases. It seems to be well established that if the removal of the secundines is difficult or dangerous they may safely be left inside the abdomen, even to the whole placenta and membranes. In the case here recorded removal of the placenta was fairly easy but a great deal of the membranes was left without any harm resulting. Marsupialization with its subsequent sepsis is unnecessary. I have known of a twin placenta which disappeared from the peritoneal cavity in a period of nine months.

## Case History

A woman aged 25 was referred by Dr A. C. H. McCullagh of Bishop Auckland on September 14, 1937, on account of persistent transverse lie. She was an unmarried primigravida and gave a history of amenorrhoea since January 6 which suggested term about October 13. On May 8 she had pain in the left lower abdomen which kept her in bed for a week. She returned to work on May 15 but on May 20 had a sudden intense pain and was in bed for a further fortnight. Movements were felt for the first time at the end of May and since then they had caused her pain which increased in severity as pregnancy advanced. Vomiting began at this period, later becoming worse.

On admission she was wasted and very ill, having a temperature of 97.4 F and a pulse rate of 124. The urine was loaded with acetone but contained no other abnormal constituent. There was pain of a colicky nature in various parts of the abdomen, severe enough to make her roll about the bed and shout, and there were intervals of vomiting. Examination showed the foetus to be lying transversely with the head in the right lumbar region. The foetal parts and movements were unduly easily palpable whilst in the left iliac region was a smooth rounded mass the size of a five months pregnancy. There was considerable hydramnios. Contractions could not be felt over the foetus or over the smooth mass. Per vaginam a fluctuant bulging of the posterior fornix was palpated and the cervix appeared to be connected with the

mass (though later this was revealed as the placenta outside the uterus). Dr D. Ramage took radiographs which showed a normal foetus with in addition a clearly marked oval mottled shadow—half the size of the foetal head—in front and to the right of the first lumbar vertebra (Special Plate Figs 1 and 2). This shadow was unexplained even at operation, but a post-operative radiograph showed it in the rectum and I later received confirmation from her own doctor Dr A. H. Wardle of Bishop Auckland that she had been receiving a bismuth mixture. The radiograph, as taken three days after any bismuth had been given. In the four days before operation her bowels were moved only by enemata and there was considerable gaseous distension of the abdomen. The day after operation her bowels moved repeatedly and the distension ceased. A pre-operative diagnosis of third trimester extra-uterine gestation with hydramnios and intestinal obstruction was made.

On the day of operation she was so ill (pulse rate 100) that general anaesthesia was deemed inadvisable and at 2.10 p.m. on September 18, she was given morphine subcutaneous and hyoscine hydrobromide 1/100 grain hypodermically. At 2.40 p.m. a large Spencer Wells forceps was passed through the cervix for three inches, confirming the opinion that this was not an intra-uterine gestation. With 1 per cent procaine infiltration anaesthesia a midline subumbilical incision was made. The upper 10 inches of the incision revealed tanned "wash leather" yellowish grey amnion and the incision was rapidly extended a further 10 inches above the umbilicus. On opening the membranes a large quantity of liquor was estimated at six to eight pints escaped. The child was extracted as a breech and breathed immediately. It was a female weighing 5 lb 4 oz and showed some lateral flexion of its body and a mild right sided calcaneo-valgus. Both the feet were of a temporary nature and disappeared in twenty-four hours; they would have passed unnoticed in a normal delivery. The membranes were adherent above to the distended small and large intestines and to the omentum but there was no evidence of a talerac where it was possible to strip off the membranes; the naked adjacent structure was left beneath. In front the membranes lay against the anterior abdominal wall and below they covered the bladder and filled the pouch of Douglas, leaving the placenta projecting up into the sac. By separating some omentum access was gained to the general peritoneal cavity and it was found that the placenta was attached solely to the left broad ligament of ovary and tube close to the uterine cornu. The outer half of the left Fallopian tube was outside the sac and appeared normal. The uterus was surprisingly small, being equivalent to a 3 months pregnancy. Removal of the placenta, which showed a haematoma the size of an egg, close to the cord on the foetal aspect was not difficult and needed but three clamps; one clamped the ovarian vessel, one the round ligament and one the ovarian ligament and uterine cornu. There was not much loss of blood. A little nitrous oxide and oxygen was administered during the clamping of the pedicles. About 1/2 of the membranes was removed by tripping, but it was found that this caused some capillary oozing, so the part remaining on the bladder, bowel, pouch of Douglas, omentum and anterior abdominal wall was left *in situ* and the abdomen closed without drainage. At the end of the operation the general condition was quite good though the pulse rate was 170. The patient was returned to bed and a pint of 5 per cent glucose in normal saline was slowly introduced intravenously.

On the following day there was a considerable degree of ileus. Five units of posterior pituitary extract with 1/100 grain of eserine sulphate were given hypodermically followed by a further five units after half an hour. Her bowels moved at least eight times and from then on she made a rapid recovery, only delayed by the dressing of a small area of the wound which required three stitches. The temperature was never above normal and the foetus remained the pulse rate was 80. She left hospital five weeks after operation in good condition. The baby was fed artificially and was thriving for a while, developed an enteritis and was transferred to the Newcastle Babies Hospital under the care of

Dr J C Spence The mother later took charge of the baby, and when it was four months old wrote to say that it was thriving and gaining weight

I have to thank the various medical men named for their co operation, and Drs J F Fraser and W F Hall for assistance at the operation

## REFERENCES

- Anderson, M W (1936) *British Medical Journal* 2, 589  
 Futh H (1936) *Munch med Wsch* 83, 92  
 Hellman A M and Simon, H J (1935) *Amer J Surg*, 29, 403  
 Krishnan, R G (1936) *British Medical Journal* 1, 795  
 Wilson, A S (1936) *Proc 103 Soc Med* 29, 1651  
 Woods E B (1936) *Amer J Obstet Gynec* 32, 155  
 Zarfl M (1935) *Z Kinderheilk* 57, 505

## Clinical Memoranda

### Complications of Gold Therapy

(WITH SPECIAL PLATE)

The following case showing complications of gold therapy may be of interest in view of the widespread and protean nature of the lesions. Among twenty-six cases given thirty-four courses this was the only one which showed a severe reaction, other complications being three of albuminuria and two of very localized dermatitis

## CASE REPORT

A fitter aged 31 had a septic finger with suppurating axillary glands in October, 1935. Five weeks later he began to have vague pains in his heels and subsequently in his knees, shoulders, wrists, and fingers. There was no history of rheumatic or scarlet fever in childhood. On admission to the Newcastle Royal Victoria Infirmary under Dr George Hall on January 11, 1936 his temperature was 100.6° F and his pulse 106, the affected joints were swollen and somewhat red. The gonococcal complement-fixation test was negative and a diagnosis of rheumatic fever was made. Treatment with salicylates was begun, and forty eight hours after admission the pulse and temperature were normal. He was in hospital for seven weeks, and on discharge continued radiant heat and diathermy, which he had had during the latter part of this time. Persistence of the pain in the heels led to a raying of that region, but with a negative result. When first seen by me in May, 1937, he still complained bitterly of pain in the heels, and to a less extent in the small joints of the hands. There was some tenderness on pressure over the heels and slight swelling of the finger-joints, but no heat or redness. Examination of the throat, teeth, sinuses, and urine revealed no evidence of a septic focus, and in view of the considerable discomfort the patient was suffering and the fact that he was very anxious to be restored to normal health before being married, it was decided to begin treatment with lipoion. A course as recommended by Hartfall and Garland (one 0.01 gramme dose, one of 0.025 gramme, one of 0.05 gramme, and nine 0.1 gramme doses) was given, and he remained well throughout. Pain began to improve about the middle of the course and disappeared before the end. His urine was free from albumin throughout. The patient was instructed to return in three months, when widespread lesions were observed to be present. He then stated that two weeks after the termination of treatment his mouth became sore, later his neck became dry (Plate, Fig 1), and his hair began to fall out two months later. His feet then peeled and nail changes were first noticed one week before his return.

On examination his general condition was good. The scalp showed a diffuse thinning, the patient having previously had a good head of hair. There was a diffuse dryness of the skin, with patchy purple lesions on the arms and heels like pityriasis rubra, the trunk showed a fine scaling, and the face a good deal of erythema with some scaling. The palate was the site of small superficial ulcers, and on the buccal surfaces of the cheeks were

sodden lesions not unlike lichen planus in that situation. The nails were in process of being cast, and the growth of new nails was apparent, the photograph reproduced on the plate (Fig 2) being taken some days later. Blood examination gave the following result: red cells, 505 millions, haemoglobin, 86 per cent, leucocytes, 15,000, reticulocytes, 0.4 per cent, platelets, 280,000. The capillary resistance test was negative after fifteen minutes pressure at 75 mm Hg.

When seen in January, 1938, the skin was much improved and the nails were growing again, but there was no improvement in the scalp. The patient remained free from pain in the heels or joints, and was well in his general health.

Since writing the above note I have again seen the patient. He attended on March 28, and I now find that the skin and nail lesions have completely cleared up and the hair is almost restored to normal.

I am indebted to Dr George Hall for permission to publish this case.

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 Newcastle upon-Tyne  
 Medical Registrar, Royal Victoria  
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### Bilateral Axillary Breasts

(WITH SPECIAL PLATE)

The photographs of an unusual case—that of a woman with a pair of axillary breasts—may be considered interesting enough to be reproduced here (see Special Plate).

The patient is a young woman, lactating, with her second baby, aged 2 weeks. Had the photographs been taken some ten days earlier the breasts, which were engorged, would have been seen to be larger still. Each breast is entirely separate from the normal pectoral breast below, and is provided with a small nipple, from which milk runs down the arm during suckling. The areola point towards these nipples. It is not unusual to see a vestigial breast or nipple on the pectoral line below the normal breast, but I believe a complete breast, with nipple, functioning in each armpit must be very rare.

Wang, N Z MOLLIE CHRISTIE, M.B., Ch.B.

### Ether Convulsions with Recovery

The occurrence of ether convulsions has aroused considerable interest recently, and although more and more cases of recovery after different methods of treatment are being reported I feel that one further case is worth putting on record.

## CASE REPORT

A male patient, aged 17, was admitted to the Western Infirmary, Glasgow, on December 16, 1937. His history symptoms, and signs were typical of acute appendicitis, the attack having begun twenty-four hours previously. At operation the appendix was gangrenous and had ruptured close to the wall of the caecum, pus and free fluid being found in the abdominal cavity. The appendix was removed and the abdomen drained. It was noted that the proximal part of the ascending colon, the caecum, and terminal ileum were injected and showed some small petechial haemorrhages. The administration of the anaesthetic—ethyl chloride followed by open ether—was uneventful. After the operation the patient vomited at intervals during the next five days, his temperature ranging from 98.3° F to 101° F and his pulse rate from 90 to 110 a minute, the respiration rate was 24 a minute. It was decided to operate again on December 22, 1937, and the abdomen was opened with a right paramedian incision. At this time the boy was very ill and very toxic, his colour was poor, his temperature 99° F, his pulse 96, and his respirations 24 a minute. Anaesthesia was induced with ethyl chloride and continued with open ether. Oxygen was flowing gently under the mask. The small bowel above the caecum was atonic and distended for a



considerable distance. An enterostomy tube was inserted just above the paralytic part of the bowel.

As closure of the abdomen was begun the house surgeon who was administering the anaesthetic called me over and drew my attention to twitching of the neck muscles. The mask was removed and the facial muscles were found to be twitching violently. The anaesthetic was discontinued and oxygen and carbon dioxide were administered. I prepared a solution of evipan sodium (10 per cent) and by the time this was ready vigorous convulsions had spread to the shoulder girdle and to both arms. They had begun also in the body and lower limbs but less violently though they were sufficiently severe to render closure of the abdomen more or less impossible. One arm was sufficiently controlled to allow of an intravenous injection of 34 ccm of evipan sodium being given; this was just the amount required to control the convulsive movements. The pulse at this time was very poor and the colour pale. Within a minute the pulse improved and with it the boy's colour. Closure of the abdomen was completed without further trouble or incident and no more evipan was required. Cold wet towels were also applied to the head and as a final measure 10 ccm of calcium gluconate were given intravenously.

The patient was returned to bed in fair condition and there were no further convulsive movements. His temperature was taken immediately he returned to the ward and was found to be 103 F. It rose in an hour to 104 F and was charted hourly for the next eight hours the readings being 103.8, 100, 101.8, 102.6, 103, 102, 102.4 and 102 F. Two hours later it was 99 F and although it rose later that day to 101.2 F further progress was at a more or less normal level.

#### COMMENTARY

The abdominal condition naturally caused some anxiety for a few days but the recovery from the anaesthetic was uneventful except for one curious complaint. The boy noticed on the morning following the operation that pulling his hair over the left occipito temporal region caused no sensation whatsoever a phenomenon which rapidly passed off and probably bears no relation to his ether convulsion. He has now made an excellent and complete recovery. I think it is fair to diagnose this as a case of true ether convulsions. The type of patient and his toxic condition the sudden onset late in the operation, the convulsions beginning typically in the face and neck muscles and spreading to the rest of the body and the rapid rise in body temperature make up the usual clinical picture. Chadwick reported a case of recovery after the use of evipan in the *Journal* (1936, 1, 1253) and I have no doubt there have been other recoveries following this treatment since then. Bamford reports five cases recovering after compression of both common carotids simultaneously for five seconds with raising of the head of the patient and lowering of the feet. Cessation of the convulsions has also been reported after the intravenous injection of calcium gluconate (A. S. Hoseason *Brit J Anaes* 1936, 13, 142). Had I known that calcium gluconate was immediately available on this occasion I would have injected it while the evipan was being prepared instead of afterwards when the convulsions were under control. Confirmation (in another case) of the above result would have been very interesting, and would have lent further support to the theory that the condition is due to neuromuscular irritability following diminution of the physiologically active fraction of the serum calcium.

For permission to publish a record of this case I am indebted to Mr M. Logan Taylor to whose wards the case was admitted and to Mr R. S. Kerr and Mr A. I. L. Maitland who performed the two operations.

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## Reviews

### THE THYROID AND ITS DISEASES

*The Thyroid and Its Diseases* By J. H. Means, M.D.  
(Pp. 602, 22s net) Philadelphia and London: J. B. Lippincott Company, 1937.

Although Magnus Levy demonstrated in 1895 the role of the thyroid in gas exchange it was not till twenty years later that the determination of basal metabolic rate emerged as a means of measuring quantitatively the level of thyroid function. Metabolic rate estimations were begun at the Massachusetts General Hospital in 1913 and round the metabolism laboratory as headquarters the Thyroid Clinic has developed. Since the war much clinical and research work has been carried out and with the object of defining the present state of knowledge of the subject Professor Means has been led to write a book on *The Thyroid and Its Diseases*. He has marshalled the facts in a masterly manner and deals openly and judiciously with controversial matters. The first hundred pages are taken up with a discussion of the anatomy, physiology and pathology of the gland and the general symptomatology of its diseases. The nature and degree of the morbid process are assessed through observing signs and symptoms and through measuring bodily functions. Of these the determination of the metabolic rate is of special importance. Some of the newer lines of study—creatin tolerance, iodine and thyroxine content of the blood, thyrotropic hormone content of blood and urine and electrical impedance—may further extend our knowledge. Professor Means and his colleagues have not found much gain from study of the electrical impedance. Viewed broadly the pathology of the thyroid separates itself into a group of morbid processes which may afflict the thyroid much as they do any other organ or tissue—congestion, inflammation and new growth—and a group of morbid processes which are peculiar to the thyroid and have their being in its special structure and function. The latter resolves itself on the functional side into states of increased or decreased secretory activity and on the structural side into hyperplasia on the one hand and hypoplasia, destruction, ablation and atrophy on the other.

In the absence of known aetiology of many of the thyroid disorders classification is unsatisfactory but some sort of classification is necessary to facilitate the study of cases and clarify the indications for treatment. The so-called simple goitre is a well recognized entity due to iodine deficiency where the clinical picture is dependent upon an insufficient production of hormone. Hypothyroid states occur and Professor Means prefers the term toxic goitre to cover all those states of hyperthyroidism comprising thyrotoxicosis, exophthalmic goitre, Parry's Graves' and Basedow's disease. He believes that there is no reason to differentiate two sorts of toxic goitre—exophthalmic and Plummer's toxic adenoma—other than that the type of toxic goitre does not determine the iodine response which in all thyrotoxic patients is essentially the same. The similarity of response is an argument in favour of the essential unity of toxic goitre as a class. The author deals with simple goitre and the hypothyroid states—myxoedema, juvenile myxoedema and cretinism—on a theoretical and satisfactory basis especially urging the distinction between juvenile myxoedema and



disease acquired during childhood, and true cretinism, which is congenital, for the prognosis and factors governing successful treatment are different. There is, too, a distinction to be made between endemic and sporadic cretinism. In the case of cretinism it is pointed out that the success of treatment depends upon the time of life at which it is begun and the adequacy with which it is maintained. Especially in the sporadic cases should the attending physician be alert to detect it early and carry out treatment promptly and persistently.

The iodine response in toxic goitre is one of its characteristic features. An amelioration of all symptoms usually begins in a few hours, and the metabolic response runs parallel, its magnitude and rate can be predicted with fair accuracy. It takes about ten days to reach its completion—that is, to get the patient fully iodinated. Anatomically there is diminished congestion of the gland and involution occurs, there is increased storage of colloid and the epithelium returns to a state resembling the resting. Apparently iodine obstructs the delivery of hormone from the thyroid, but the morbid stimulus to the gland continues to work. The minimum dose of iodine which will produce the full characteristic response is about six milligrammes a day. Larger doses are usually given, as there is no objection and the risk of underdosage is eliminated. Iodine administration is a necessary part of preparation of the thyrotoxic patient for operation. In no toxic case should an operation be done until the patient is fully under the influence of iodine. Iodine is very effective in the control of the milder forms of thyrotoxicosis residual to or persistent after operation. Indeed, in specially selected cases it may be enough to use iodine as a treatment by itself. Such cases are a very small proportion of the total, and in Professor Means's series over the years 1932–5 inclusive amounted to but 1.3 per cent of the whole. X rays are an effective form of treatment in some cases, but subtotal thyroidectomy in the fully iodinated patient is at the moment the best treatment that can be offered. It gives a better chance of prompt and permanent cure than any other therapy now available. In cases coming to operation the importance of adequate preparation, careful anaesthesia, and team-work among the surgeons is emphasized. There is much to be said for preferring the slow, careful, bloodless technique which preserves the parathyroids and nerves by exposing and avoiding them. There are various complications of toxic goitre—cardiac insufficiency, the so-called toxic storms, psychoses, and glycosuria—which crop up in large series of cases in sufficient numbers to allow of generalization. The whole class of nodular, adenomatous goitres is in an entirely different category, their treatment is guided by the presence of thyrotoxicosis, of tracheal compression with pressure symptoms, or of any features suggesting malignancy. Malignant goitre is not rare, and can be cured only by early treatment.

The remaining chapters of this most interesting and instructive book deal with anomalies of the thyroid, thyroid administration in diseases other than those of thyroid origin, and the possibility of affecting the course of other diseases by total thyroidectomy. Readers will find Professor Means's book a mine of information, compiled with judgment and offering a statement of our knowledge which conforms with the most advanced thought of present-day medicine. The author is to be congratulated on the open-mindedness of his conclusions, and he would be the first to acknowledge, indeed to expect, that many of them will be modified as the result of further work.

## PLANT VIRUS DISEASES

*A Textbook of Plant Virus Diseases* By Kenneth M. Smith. D.Sc. Manch. Ph.D. Camb. (Pp. 615, frontispiece, 101 illustrations. 21s.) London: J. and A. Churchill Ltd. 1937.

Dr Kenneth Smith has produced another book on plant viruses, and this one, as its title implies, is concerned with the diseases which these agents produce. Naturally it is not a book which will appeal to the general medical public, it is not intended for them, but for the plant pathologist. And for the same reason it is quite impossible for anyone not possessed of a knowledge of plant diseases to review such a book critically. All that can be done is to give some idea of its scope and to take the facts on trust, seeking comfort in the thought that the author's eminence in this branch of plant pathology is ample guarantee of the book's factual content. One gathers from the preface that Dr Smith was at some pains to arrive at a satisfactory method of classifying these plant viruses. Eventually he decided on the plan of naming them after the host plant most commonly affected—using the Latin and not the popular name—and numbering the different viruses attacking the same host. Thus tobacco mosaic virus becomes *Nicotiana virus 1*, speckled tobacco mosaic *Nicotiana virus 2*, and so on. This method appears to work quite well, and arranged in this way the various plant viruses and the diseases they produce are described according to a common plan. The first part of each section is devoted to a consideration of the characters of the virus, its mode of transmission and its host range, while the second part is concerned with the diseases caused by the virus and such important questions as the geographical distribution of these diseases and their control. Chapter VIII is concerned with the insects responsible for the transmission of these virus diseases, and it constitutes a very valuable portion of the book. The last chapter contains brief references to plant diseases suspected of being of virus origin, and the book closes with an appendix in which the most characteristic symptoms of the various diseases on their more important host plants are given in tabular form.

The book is well printed, contains numerous illustrations, and has both a subject and an authors index. In addition a list of references is appended to each chapter which cannot fail to be of value.

## PHYSIOLOGY

*Physiology in Modern Medicine* By J. J. R. Macleod. Eighth edition. Edited by Philip Bard. (Pp. 1,051, 355 figures, 103 tables. 36s. net.) London: Henry Kimpton. 1938.

The seventh edition of the late Professor J. J. R. Macleod's *Physiology in Modern Medicine* appeared in 1935 shortly before his untimely death. That an eighth edition should have been called for so soon is in itself a testimonial to its usefulness in the past, but with the author's decease his book has suffered a change. Professor Bard, the new editor, indeed states that "little of the seventh edition remains. The greater part of the book has been entirely rewritten, and that by nine individuals. With the great growth of physiology this may be inevitable but nevertheless regrettable. Even in the last edition of Michael Foster's *Textbook of Physiology* much preparatory work was done by others, but the whole bore the imprint of his mind, as unmistakable as the brush-work of an old master. This is hardly possible to-day. But this book

has undergone a further change its original purpose was to serve as a guide to the clinical application of physiology and biochemistry. The present edition makes no pretence of being a textbook of applied physiology. Nevertheless the title is retained because in the editor's opinion the greatest service which physiology can render modern medicine is to continue to solve fundamental problems which are not necessarily of immediate practical concern. The original *raison d'être* of the book therefore seems to have vanished and it must compete with other textbooks of general physiology. Judged by that standard it appears to be a thoroughly competent piece of work while leaving room for another to fulfil the author's original purpose.

## X-RAY EXAMINATION OF THE LARYNX

*Methodik der Röntgenuntersuchung des Kehlkopfes* By Dr Richard Waldapfel (Pp 91 77 figures RM 17 60 bound RM 19 60) Leipzig Georg Thieme 1938

Dr Waldapfel thinks that the majority of laryngologists have not appreciated the work of Thost upon the examination of the larynx with Roentgen rays partly because they believe this is unnecessary and partly because of the indifferent results. He is convinced of its value in the diagnosis of gross disease of the larynx both in demonstrating the nature of the morbid process in such conditions as perichondritis and tuberculosis and also in delineating the precise extent of tumours. His work is magnificently illustrated with diagrams and reproductions of radiographic films and is a convincing proof of the diagnostic value of the method. To those anxious to acquire the technique and to those interested in the interpretation of the results this book can be recommended without hesitation.

## BIOLOGICAL WORKS OF ARISTOTLE

*Parts of Animals Movement of Animals Progression of Animals* By Aristotle Translated by A L Peck MA PhD and E S Forster MA With a Foreword by F H A Marshall CBE ScD FRS (Pp 376 Cloth 10s net leather 12s 6d net America Cloth 2.00 dollars leather 3.50 dollars) London William Heinemann Ltd Cambridge Massachusetts Harvard University Press 1937

This is the fifteenth volume of the works of Aristotle published in the Loeb Classical Library and there is still the *De Coelo* to come. It is clear therefore that the great master is still read although Greek is no longer compulsory. The present volume contains the biological treatises the *De Partibus* the *De Incessu* and the *De Motu Animalium*—treatises which have always appealed to the most cultured minds in the medical profession for they deal with biology with anatomy and with physiology. How and where Aristotle got his immense knowledge is not known. Whales are not common in the Mediterranean yet he recognized that they were not fish but were in a way land animals and water animals they inhale the air like land animals but they have no feet and they get their food from the water as water animals do. The gall bladder too interested him and he knew the creatures which possess gall bladders and those in which they are wanting though his reason for the presence or absence no longer holds good. The essay on the parts of animals is introduced by Dr F H A Marshall FRS Reader in Agricultural Physiology Dr A L Peck University Lecturer in Classics at Cambridge provides an excellent translation in which he acknowledges his indebtedness to the

scholarly version made some years ago by Dr William Ogilby. Mr E S Forster Professor of Greek in the University of Sheffield translates *The Movement of Animals* and *The Progression of Animals*. There is an excellent introduction and an index which is good when one has learnt how to use it. A perusal of the treatises enables the reader to understand why he fascinated such minds as the wizard Michael Scot Robert Grosseteste the greatest of the Bishops of Lincoln and Dr William Harvey who in his *De Generatione* continued Aristotle's work on embryology.

## Notes on Books

*The Management of Early Infancy Puberty and Adolescence* (C W Daniel Company Ltd 2s 6d) is one of the pamphlets issued by the Medical Society of Individual Psychology. Dr Joyce Partridge deals with the management of early infancy Dr H Crichton Miller with puberty and adolescence Dr T A Ross with the psychological approach and the late Dr Crookshank with the neurotic character—a lecture which has been put in to take the place of one of the series on child psychology which was not available. These papers are popular and sufficiently interesting but with nothing very original about them except perhaps Dr Crichton Miller's observation that boys and girls approach puberty with different outlooks so that the former are prone to anxiety states and the latter to hysteria.

The little work entitled *The Healthy Heart and the Diseased Heart* (Rome Istituto Nazionale di Assicurazione 5 lire) is as its subtitle—*A Doctor's Advice*—suggests a popular work which was intended primarily for the members of the Italian Insurance Institute instructing them how to collaborate with the doctor in the prevention and treatment of heart disease. Sound advice is given as regards diet rest occupation tobacco alcohol climate sport travel housing personal hygiene sleep marriage choice of profession and recreations.

*Mothercraft Antenatal and Postnatal* (J and A Churchill 10s 6d) has been prepared for a second edition by Dr REGINALD C JEWELL and it has sections on bottle feeding but excepted (because of their rigid insistence on percentage feeding) it can be highly recommended to practitioners as a guide to the management of infants. The section on the premature baby is particularly good.

Professor ALBRECHT PEIFER'S original contributions to the premature baby are well known and it is therefore a great pleasure to welcome his monograph on immaturity and debility (*Unreife in d Lebensschwäche* Leipzig Georg Thieme RM 6 80). This summarizes recent work especially of his compatriots on small and premature infants and within brief compass gives an excellent presentation of the subject.

*Bienenstift als Heilmittel* by Dr ROBERT SCHUBERT (Leipzig Georg Thieme RM 2 40) is a monograph on the treatment of rheumatic diseases by bee venom. After discussing the history of this treatment which goes back to the earliest days the author deals with the mechanism and mode of action of animal poisons in general and of bee venom in particular and with the methods by which the venom may be extracted. The pharmacology of bee venom is dealt with in detail. The author then discusses the relation between the immunity so produced and its therapeutic action in rheumatism. Finally the indications or application of the various preparations of bee venom in the treatment of different forms of chronic rheumatism neuralgia and neuritis are dealt with. A bibliography is included.

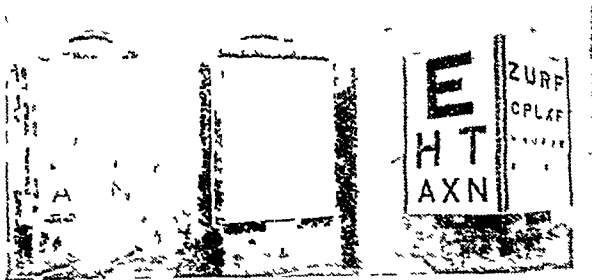
Under the title of *The Eruptive or Exanthematous Mediterranean Fever* (Rome Luigi Pozzi 18 lire) Dr CARLO COSTANZI assistant director of the Policlinico Umberto I at Rome and assistant to Professor Agostino Carducci, who contributes the preface, gives an excellent description of this disease, which is known as summer typhus or boutonneuse fever and was first described by Conor and Bruch in 1910. The text is interspersed with photomicrographs and illustrations, and a bibliography of 166 references is appended.

## Preparations and Appliances

### PORTABLE OPHTHALMIC TESTING UNIT

Dr J HORTON YOUNG (Assistant Medical Officer for Eye Diseases Wolverhampton) writes

I have designed a portable ophthalmic testing unit which may be used for testing visual acuity, for Worth's binocular test and for objective examination of the eyes, as in retinoscopy or ophthalmoscopy. This portable unit is divided into two parts—the carrying case, equipped with handle, lock key and four slide racks to carry extra test types, etc. and the actual testing unit. This may be removed from the carrying case when tests for visual acuity are being done or may be left in the case when it is desired to do Worth's binocular test or to make an objective examination of the eyes. The testing unit itself is internally illuminated and revolvable on a hollow boxed base. The revolving drum, which is freely movable and smooth in action carries four test types (children's and Snellen's standard types 6/60 to 6/45). The retinoscopy or the Worth's binocular test diaphragms may be substituted for the opt test types as required. The hollow box base carries flex, a two-way plug, and a triple faceted power plug, so that it can be plugged into any alternating electric power source. There is also room in the hollow base for Morton's non luminous ophthalmoscope, condensing lens, and loupe.



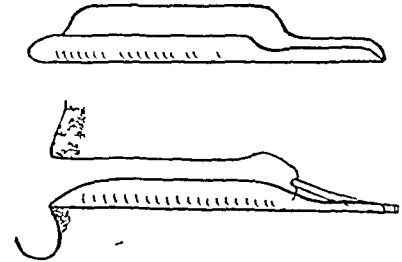
The weight of the combined testing unit is 13½ lb and the overall dimensions of the carrying case are 14½ inches by 10½ inches by 8½ inches. The instrument has been designed primarily for school medical officers but may be used in hospitals for those patients who are unable to leave the ward. I am indebted to Mr Rogers, lecturer in handicraft at the Bushbury Hill School for technical advice and the actual construction of the instrument. Messrs F Davidson and Co of London whose courtesy enabled me to obtain the necessary standard opt test types to specification, state that they would be prepared to make a similar instrument for any other medical officer who may require one.

### SPLINT FOR INDWELLING CATHETERS

Mr JOHN GROCOTT F.R.C.S. (Stoke-on-Trent), writes

Having had many unfortunate experiences with indwelling urethral catheters I attempted to discover a simple yet efficient retaining mechanism. Tape and strapping and sutures and strapping have two main faults: (1) the external meatus and adjoining catheter cannot be kept sterile and (2) the soft rubber catheter tends to curl and to be extruded through a

gap between the tapes. This second difficulty can be overcome by the use of a stiff gum elastic catheter in place of the usual soft rubber variety, but additional urethral trauma is caused by the stiff catheter and it soon becomes incredibly filthy. Other methods as by using rubber bands with studs, have in my experience been worse than useless and decidedly uncomfortable for the patient. I therefore devised a metal splint made of 18 gauge aluminium sheet. The splint is in reality a straight double trough, which can be made in a few minutes.



The splint is sterilized by boiling and applied after catheterization with a soft rubber catheter. From the illustration above it will be seen that there is a gap between the splint and the catheter as it emerges from the penis. This gap can be packed with sterile vaseline gauze and kept completely sterile by covering it with zinc oxide strapping. When the splint is in position the whole is strapped in a continuous spiral from the root of the penis right on to the catheter. This makes a completely airtight joint of penis to catheter and sterility is assured. I have used this method of strapping with complete success. On no occasion has the catheter slipped out and what is more important it seems to be almost an impossibility for a uraemic patient to pull it out. Another advantage is the absence of any marked urethritis even after the catheter has been *in situ* for at least eight days. The splint is very comfortable, and providing the edges of the aluminium are quite smooth no chafing of the penis occurs. The removal of the splint is easy, cleaning and resterilization are very simple, and—an important fact—these splints could be manufactured in varying sizes for only a few pence each.

### NICOTINIC ACID B.D.H.

This relatively simple substance ( $C_6H_5NCOOH$ ) is stated to be the precursor of the pellagra preventing factor in the vitamin B complex, and is now prepared and issued for clinical trial. The dose suggested by British Drug Houses, Ltd is 30 mg by mouth twice daily. Clinical trials in the U.S.A. indicate that nicotinic acid has a dramatic curative action in pellagra. This action will doubtless be investigated intensively in the near future in all countries afflicted with pellagra, and there is in addition the chance that accessory actions may be found which are of service in other diseases.

The introduction of nicotinic acid for clinical trial completes a curious circle, since it was the first substance isolated from the vitamin B complex. This was achieved by Casimir Funk in 1913, and he suggested that 'vitamine B' was nicotinic acid. Research developed along other lines. 'vitamine B' became the vitamin B complex, a series of factors were identified, but nicotinic acid appeared to be of no significance and was almost forgotten. Now at last it has been found to be one of the most important of all the factors in the complex mixture of chemicals that originally was labelled 'vitamine B'.

### A TAR APPLICATION

Tar dermament (Messrs Parke Davis and Co) is a solution representing 6 per cent washed crude coal tar in a mildly analgesic resinous base. It is recommended for a variety of cutaneous disorders such as psoriasis and pruritus.

The simple extension apparatus described by Mr M. D. Sheppard in the *Journal* of March 26 (p. 677) is manufactured by Body's Pharmacies Ltd, 1 Moulsham Street, Chelmsford.

## BRITISH MEDICAL JOURNAL

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FACT AND FANCY IN MATTERS  
THYROID

With this arresting heading Professor J. H. Means opens the concluding chapter of his excellent book on the thyroid and its diseases which is reviewed elsewhere in this issue (p. 781). The thyroid is an internal secretory gland. Its sole function is elaborating and storing its own peculiar hormone and no other substance can take the place of the hormone in the organism deprived of its thyroid. In the colloid of the thyroid there is a protein (thyroglobulin) which owes its peculiar chemical and physiological characteristics to its content of two iodine-containing amino acids. The thyroid alone appears to possess the means of adding iodine to the tyrosine molecule: the iodine-containing amino acids so formed combine with other amino acids to form thyroglobulin which is stored as colloid. One of these amino acids has been prepared synthetically—thyroxine—and was at one time regarded as the thyroid hormone but the evidence goes to show that the activity of thyroglobulin is much more closely related to its total iodine content than to its thyroxine content. The active substance may be a peptide intermediate between thyroglobulin and thyroxine: anyway its action appears to be specific. Iodine then is necessary for the proper function of the thyroid. When there is relative or absolute iodine want hypertrophy of the gland occurs—simple goitre—which may be followed by atrophy when the deprivation continues, or may regress to normal if iodine is given. Hyperthyroidism or toxic goitre too responds in a remarkable way to administration of iodine. There is a striking amelioration of symptoms and reduction in the basal metabolic rate accompanied by involution changes in the active thyroid cells. In both instances the effect is due to the action of iodine on the gland substance altering its function of delivering hormone to the body. In thyrotoxic patients iodine appears to obstruct the delivery of hormone from the thyroid at any time during the course of the disease. But the morbid stimulus to the thyroid continues to work. Professor Means summarizes the position by using an analogy. Giving iodine in toxic goitre

may be likened to putting on the brake in a running motor car without changing the position of the accelerator. The brake is iodine: the accelerator is the cause of thyrotoxicosis. Iodine therefore has no effect on the duration or direction of progress of the disease: it affects at any one time merely its intensity.

The thyroid function thus is linked with the metabolism of iodine in the body. The thyroid hormone is necessary for the growing organism and in its absence the normal development of the body is retarded. In the adult too the thyroid hormone functions by regulating and stimulating the metabolic rate. In the toxic states of exophthalmic goitre it was thought at one time that there was something more active than excess of thyroid hormone and it was assumed that a chemically different hormone was excreted into the blood producing a state of dysthyroidism. A modification of this theory is that while excess of the normal thyroid hormone produces the increased metabolic rate, sweating, tremor and nervous state, a second hormone from involuting thyroid lobules (hormone of degeneration) is responsible for the cardiac symptoms: rapid heart beat and myocardial degeneration. There is no need to assume that there is more than one thyroid hormone or to differ from the view which Moebius stated long ago that states of hypothyroidism or myxoedema are due to insufficiency of thyroid hormone and of thyrotoxicosis (Graves's disease, Basedow's disease) to excess of this hormone being excreted into the blood. In thyrotoxicosis it is the same hormone but produced in excessive amounts by the actively secreting thyroid.

The cause of thyrotoxicosis—the stimulus to excessive function of the thyroid—must be sought therefore outside the thyroid. The earliest theory was that it was a nervous state and one aspect of permanent fright of the exophthalmic goitre patient was adduced as evidence of excessive nervous excitation. Abnormal stimulation from the periphery was suspected but the increased perfusion rate of the tissues and the increased oxygen usage are really the results and not the cause of excess of thyroid hormone in the blood. Recent work has shown that a functioning anterior lobe of the pituitary gland is essential for the normal development and function of the thyroid. The secretory tone of the normal thyroid is kept up by a continual stimulation from the anterior pituitary by means of its secretion—a thyrotropic hormone. When pituitary support of the thyroid is withdrawn the latter continues to function but at a reduced rate and excessive function of the anterior lobe causes the most intense activity of which the thyroid is capable. The increased metabolic rate now

ness, loss of weight, and tachycardia occur in animals in which extract of anterior lobe is injected, and the effect is through the medium of the thyroid, since it does not occur after removal of the thyroid gland. But it is believed that even the pituitary control of the thyroid is within limits, that it is relative, not absolute. Indeed Cope in a recent investigation<sup>1</sup> failed to find evidence that the anterior pituitary gland is usually responsible for the hyperthyroidism of primary Graves's disease. He found the serum of patients with Graves's disease had a depressant rather than a stimulant effect on the thyroid glands of guinea-pigs, and interpreted this finding as evidence against thyrotropic hormone (anterior lobe) being present in excess in the blood serum, rather that the depressant action is due to excessive thyroid hormone in the blood. It is known that thyroxine and thyroid hormone have an inhibitory effect on thyroid secretion. Other workers too have found no evidence that in human thyrotoxicosis there is an increase in thyrotropic hormone in the blood. Nor on clinical grounds is there anything to suggest adrenocortical failure in toxic goitre. A constitutional factor has been postulated, cases of hyperthyroidism occur in families. Since at the onset of so many cases emotional and stress factors are found, hyperthyroidism has been linked back to the hypothalamus and to control by the sympathetic. The thyroid gland itself is plentifully supplied with nerves, both sympathetic and parasympathetic. Within the gland the nerve fibres form dense plexuses—a vascular plexus and an interfollicular plexus, with many communications between the two. These nerves must take some part in the regulation of secretion and storage through the medium of the blood vessels, though evidence is lacking of direct stimulation of parenchymal cells by way of nerve fibres.

Subtotal thyroidectomy in the fully iodinized patient offers at present the best means of dealing with thyrotoxicosis, though removing the thyroid gland does not remove the cause of the condition, which is almost certainly extrathyroidal. Pemberton makes the point that subtotal thyroidectomy must have some more far-reaching effect than merely reducing the output of thyroid hormone, since if the causative factor continues to operate recurrence would be common, and this is not so. Operation may so reduce the amount of thyroid hormone as to break some vicious circle of causative factors, thus allowing in many instances permanent restoration of the patient to a state of health. Nevertheless the present-day treatment will not be, we may hope, the ultimate treatment.

## ELECTRICAL INTERFERENCE WITH WIRELESS RECEPTION

The British Medical Association has lately had under discussion the effect of possible future legislation on the users of various forms of electro-medical apparatus. The object of such legislation would be to suppress excessive interference with broadcasting and other wireless services from various electrical devices, including the appliances used in medical diagnosis and treatment. Whereas the interference caused by generators of galvanic, faradic, and sinusoidal currents can be eliminated by simple and cheap methods, this is not so in the case of diathermy and short-wave machines, which produce etheric disturbances of the same nature as wireless waves. There are two ways in which such interference might be minimized. First by effectively screening the apparatus and patient, and, secondly, by the allocation of certain wave bands, coupled with legislation prohibiting the use of apparatus that does not conform to the requirements.

The cost of effective screening and providing the necessary filters is estimated at £15 to £20 for a room 12 ft × 16 ft × 8 ft high. Having regard to the varied applications of high-frequency currents in the field of medicine and surgery and their special branches, and the varying conditions of practice, screening is in some cases impracticable, and it has been pointed out that to restrict facilities for treatment by electrical methods would be a retrograde step and against the public interest. The apparatus often has to be taken to the patient and not the patient to the apparatus. To comply with the requirements it might thus become necessary to convert certain sections of hospitals or nursing homes, including operating theatres, electro-therapeutic departments, and special wards, into "Faraday cages," and as this would be impossible where the patient's own home is concerned the use of such apparatus in the patient's home might have to be prohibited unless certain specified frequencies were used. Under this alternative method the difficulties, though great, are not insuperable. The reservation of certain bands and the restriction of certain types of apparatus which cause undue interference to certain definite regions is at least a practicable proposition if suitable bands could be determined. Two important questions arise under any such scheme. In the first place it is possible that the definition of the optimum band might have to be modified if it could be shown that better results were obtainable by the use of different wave lengths. Research is at present being carried out, particularly on the Continent,

<sup>1</sup> Cope, C. L. (1938) *Quart. J. Med.* 31, 151

into the effect of different wave lengths in different diseases but no definite conclusions have yet been published. Provision should be made however for any decision as to the most suitable band to be reviewed in the light of further research. Secondly if the use of electro-medical apparatus were restricted as suggested what arrangements could be made for the carrying on of research on lines such as have been indicated above? In this connexion it is probable that some form of screening might provide a solution of the difficulty.

Discussion has taken place between the Government Departments concerned and the professional interests chiefly affected but the British Medical Association would welcome the opinion of any who are interested or who can suggest further methods of dealing with this important problem. It has been suggested that appropriate reservations might be made in the following regions: medium wave 100–200 metres, short wave 10–100 metres and ultra short wave 2–10 metres. A preliminary survey indicates that waves in the neighbourhood of 150 metres, 30 metres and 6 metres might be satisfactory for medical purposes, provided that suitable provision can be made both for research and for revision in the light of further experience. There is considerable doubt whether these particular waves could be allotted but it is possible that a band of 30 kc round about 110 metres and frequencies in the neighbourhood of 2 metres may be available.

The matter plainly deserves serious study. On November 10 last year the Postmaster General was asked in the House of Commons whether he could give an assurance that the necessary legislation to deal with the question of electrical interference with broadcast reception in this country would be introduced during the current session of Parliament. While he was unable to give the assurance that a Bill could be introduced during this session, he said that the proposals to be embodied in a Wireless Telegraphy Bill to deal with the question of electrical interference with broadcast reception in this country were being actively pursued. Readers having information to give should send it to the Secretary, B.M.A. House, Tavistock Square, W.C.1.

### WHAT IS GOUT?

It may seem strange that in the twentieth century such a question can be put concerning a disease known to Hippocrates and graphically described by Sydenham. Apart however from the characteristic acute outbreak in the great toe and the implication of other joints in a similar manner in the later stages there has always been a tendency to

regard other morbid states occurring in patients who have suffered from the acute form as being necessarily of the same origin. We have for example been led to believe in such conditions as gouty iritis and gouty phlebitis. If the patient suffering from iritis or phlebitis has had acute gout at a previous stage in his history it may be difficult to prove that they are not associated with a similar metabolic derangement. Often however the adjective gouty has been applied to such disorders because of their superficial resemblance to cases clearly of gouty origin or because they have appeared in persons of plethoric aspect, thus many ailments and especially those affecting joints and muscles have been diagnosed and treated as gouty in the absence of any stronger evidence. The terms irregular metastatic and retrocedent gout—less often heard nowadays—were used to describe disorders attributed to gout but which had actually no relation to the derangement of purin metabolism which was so ably and clearly described as the basis of gout by Sir Walter Langdon Brown in opening the discussion on this subject at the International Congress on Rheumatic Diseases at Bath last week.

The exact part played by uric acid itself in the production of gout, symptoms is still far from clear but it may safely be said that gout is associated with an excess of uric acid in the blood and its deposition in the form of sodium biurate in the tissues. Upon the demonstration of these features the diagnosis of gout should depend. Modern laboratory facilities are now so readily available that an examination of the blood for the amount of uric acid present should be a routine procedure in its absence or in the absence of definite tophaceous deposits the diagnosis of gout will lack proof. Uric acid may be present in the blood in excess in other diseases such as leukaemia but is deposited in the tissues only in gout. Such deposits may not be easy to find and are detected in probably less than a third of the cases. The amount of uric acid in the blood should not exceed 3.5 mg per 100 ccm in women and 3.7 mg in men though these limits may sometimes be exceeded without the appearance of symptoms of gout. In a small proportion of cases of gout the content of uric acid in the blood is within normal limits and when this is the case other evidence will need to be very clear to justify the diagnosis. It is possible that the rate of deposition may vary widely and that in some instances the excess is quickly deposited and the level in the blood kept at or below the normal whereas in others the affinity of the tissues is less pronounced and the excess of uric acid is removed from the circulation more slowly. For long the question has been

debated whether the excess of uric acid is due to increased production or diminished excretion and whether the fault lies with the liver or the kidney. That the kidney is not primarily at fault is clearly shown by the fact of the increase in excretion during an attack. Sir Walter Langdon-Brown supported the view that normally the uric acid reaches the kidney conjugated with a nucleoside and that its retention may be due to the failure of this conjugation to occur. Many years ago Sir Alfred Garrod observed that the amount of uric acid excreted by gouty persons between the attacks fell far below the normal level in many instances. Deposits of sodium biurate have often been demonstrated in the articular cartilages of persons who have never been the subject of acute attacks, and apart from the formation of tophi it is reasonable to assume that deposition takes place in other connective tissues and is the basis of abarticular gout, though further investigation in this direction is required.

The acute paroxysm is not due, it would appear, to the deposition of uric acid but more probably to its reabsorption under the influence of some other factor. The view has been advanced that the tissue cells in whose neighbourhood deposition takes place are thus sensitized, and in the presence of some allied product of purin metabolism an allergic reaction takes place, resulting in the discharge of biurate into the circulation from these deposits with the production of the local inflammation as well as the constitutional symptoms of the acute paroxysm. Such a view, however, does not explain the symptoms and general characters of the more chronic types of gout as seen in these days. That it may assume forms which differ widely from the classical type is coming to be much more recognized and may lead to a revision of the opinion often expressed that the disease is much less common than formerly. Ludwig, Bennett, and Bauer<sup>1</sup> have reported a case which was diagnosed as rheumatoid arthritis in its earlier stages but which showed definite gouty tophi later, with ankylosis of many joints, especially the fingers. The authors make the following important observation: "Many of the so-called specific therapeutic measures for rheumatoid arthritis such as vaccines, sera, colloidal injections, removal of infected foci, colon irrigations, endocrine therapy, etc., are prescribed and erroneously given credit for curing an attack of rheumatoid arthritis, whereas the patient was suffering from a self-limited attack of gouty arthritis." Many physicians of experience in joint diseases will agree with this statement. It is important that these aspects of gout should be

more generally recognized, for gout may imitate very closely rheumatic fever and gonorrhoeal arthritis as well as rheumatoid arthritis. Tophi may easily be overlooked if not searched for, if present they will furnish the most trustworthy clue available to clinical investigation. Examination of the blood will often reveal an unexpectedly high level of uric acid in cases diagnosed as fibrositis and sometimes in what appears to be typical rheumatoid arthritis. Olecranon bursitis should always arouse suspicion, it is due to gout more often than to any other condition. The authors state that the initial attack of gout only affects the big toe in 54 per cent of cases. Even this figure may be found to be too high on further study. The part played by low-grade sepsis appears to be important, and the variability of the sedimentation rate in cases of gout indicates that a septic infection is often a factor in the development of gouty symptoms of the chronic type. On the other hand, an arthritis may be caused by a septic focus in a gouty individual in whom the presence of uratic deposits may play no part in the production of symptoms. It is at least certain that many cases of so-called gouty iritis have been solely the result of septic infection from teeth or tonsils. The only means of differentiation appears to lie in the specific action of colchicum in relieving symptoms of gouty origin.

The discussion at Bath covered a wide field, and the observers from many countries who took part made several valuable observations. Dr van Breemen of Amsterdam ably summed up the position by remarking that we had accumulated many bricks of knowledge but lacked as yet an architect who could construct a building from them.

### SURGICAL TREATMENT OF DIABETES

Although the history of medical research shows a few instances in which experiments based on insecure generalizations have chanced to be brilliantly successful, the vast majority of such experiments have ended in failure. In research this failure harms only the ill-conceived hypothesis, but when surgical procedures on the human patient are undertaken on similar insecure foundations the result may be harm to the patient. This is nowhere better illustrated than in the attempts which have been made to effect a cure of diabetes mellitus by surgical means. As an apt example, removal of the suprarenal glands may be mentioned. In some animals, but not in others, resection of these glands ameliorates pancreatic diabetes, unfortunately it is also true that fatal "Addison's disease" is produced by the same procedure. It is not therefore surprising to learn that resection of varying amounts of suprarenal tissue in human diabetics has had little if any effect upon the diabetic state but has resulted in fatal Addison's disease.

<sup>1</sup> *Ann Intern Med* 1938, 11, 1248



Sendrail Cahuzac and Garipuy<sup>1</sup> have recently recorded observations on dogs which lead them to think that diabetes mellitus may be benefited by periaarterial sympathectomy performed on the pancreatic arteries. As this operation has not yet been applied to diabetic patients criticism of the experimental results may be timely. The investigation was apparently inspired by Lenche who struck by Allen's observation that manual obliteration of the arterial supply to the pancreatic remnant in a partially depancreatized dog resulted in diabetes asked if augmentation of the flow of arterial blood to the pancreatic remnant would not guard the animal against this disorder. The results of periaarterial sympathectomy of the dog's pancreatic arteries are recorded in their paper. After the operation there was first a short period of hyperglycaemia and then a period in which the blood sugar returned almost to normal. For the next two months there was a gradual rise in the fasting blood sugar level and finally a fall of the blood sugar to subnormal levels which persisted until the animals were killed at the end of a year or so. The changes in the glucose and insulin blood sugar tolerance tests reflect these variations in fasting blood sugar. The authors interpret these variations as being due to corresponding variations in the rate of secretion of pancreatic insulin consequent upon changes in the flow of blood through the pancreas. They claim that the subnormal fasting blood sugar levels which finally persist indicate permanently increased secretion of insulin. Many workers however would not consider these blood sugar levels significantly low but would regard them as the usual levels in dogs which have become habituated to a routine of regular meals and restricted exercise. An attempt has been made to correlate these biochemical changes with the appearance of the pancreas. Immediately after the operative manoeuvres the pancreas becomes blanched. During the next month or two it assumes a 'une teinte violacée' which may be so marked that it may be difficult to distinguish the pancreas from the spleen. Parallel with this increasing cyanosis of the pancreas an increase in weight of the organ occurs so that it may become two or three times heavier than normal. The final stage is reached after two or three months when the cyanosis disappears and the weight of the pancreas returns almost to normal values. It is in interpreting the cyanotic colour of the pancreas as indicative of hyperaemia that the authors may perhaps be in error for cyanosis means not increased but retarded blood flow. It appears more reasonable to interpret the cyanotic colour as indicating a considerable degree of passive pancreatic congestion and this interpretation is supported by the accompanying rapid increase in weight of the gland which can most easily be attributed to oedema. A simpler explanation of their results would then appear to be as follows. The operation is followed by the hyperglycaemia which always follows manipulation of the pancreas. With recovery from operative trauma however the pancreatic function returns and the blood sugar falls. During the next two months scar tissue develops and constricts the veins so that the

pancreas becomes congested increases in weight and appears cyanotic the outflow of insulin from the pancreas is consequently limited so that the fasting blood-sugar level slowly rises. Finally a collateral circulation of veins develops circulation through the pancreas again becomes normal and the blood sugar falls to normal levels. So long as this simpler explanation of the experimental results is tenable it would appear unjustifiable to use the conclusions of Sendrail and his colleagues as a guide to operations of a like nature on diabetic patients.

### PREVENTION OF BLINDNESS

The Prevention of Blindness Committee was established by the Union of Counties Association for the Blind to correlate certain parts of the work of the voluntary agencies concerned with the care of the blind. The committee has done good work. It will now cease to exist for the Ministry of Health has agreed to appoint a standing advisory committee on blindness including the prevention thereof which will carry on the work initiated by the voluntary committee. The committee has issued five reports on the causes of blindness. The fourth publication issued in May 1936 was a notable piece of work. A supplement to this report is now issued which embodies an analysis of a preliminary classification of the causes of blindness and which the committee holds indicates further lines of research and also emphasizes the value of certain regulations for the prevention of blindness and the need for increased facilities for remedial treatment. The report shows that the number of registered blind in England and Wales in 1922 was 34,394 and in the last return (for 1936) it had increased to 67,521. The increase it is stated cannot be interpreted as a growth in the incidence of blindness in the country. It is due to increased benefits available for the blind and therefore to better registration. Analyses of the causes of blindness are given for several thousand cases mostly of persons over the age of fifty. The main causes of blindness in order of frequency are: primary cataract 24.97 per cent, glaucoma 11.09 per cent, congenital defects 10.96 per cent, myopia 10.24 per cent, local infections of the eyes of the eye 5.97 per cent, congenital syphilis 5.12 per cent, acquired syphilis 2.83 per cent, ophthalmia neonatorum 4.91 per cent, trauma and disease 1.39 per cent, other categories 22.52 per cent. In the return received from different places there are remarkable variations these need further inquiry and explanation—for example blindness from myopia in Scotland is put as high as 17.1 per cent. and in Birmingham as low as 4.4 per cent whereas for the greater number of cases from England and Wales the proportion is 10.24 per cent. It is of interest to note that no less than 83.85 per cent of those blinded by ophthalmia neonatorum were born before the regulations regarding the prevention of this disease came into effect and only 16.15 per cent were born since 1914 (the year in which the Public Health (Ophthalmia Neonatorum) Regulations came into operation) and none since 1932. The

<sup>1</sup> Report on an Analysis of the Primary Causes of Blindness in Great Britain by the Prevention of Blindness Committee, 1936.



could be no more emphatic endorsement of the value of scientific measures for the prevention of disease than such figures as these. But all causes of blindness are not so amenable to control as is ophthalmia neonatorum. The work initiated by the Prevention of Blindness Committee has been of great value. We may wish a continuity of success to the new advisory committee of the Ministry of Health.

### INDIGESTION AND PATENT MEDICINES

The commercial make-up of the wireless programmes in the United States of America seldom fails to astonish the newcomer to its shores though impatience with the smooth-tongued announcers' dogmatic advice concerning gastro-intestinal misconduct is often tempered by apprehension of the infinite harm such propaganda might do to the more credulous listeners. The gravity of this problem is brought home by A. B. Rivers in an article, "The Dangers of Treating 'Indigestion' by Advertised Nostrums" in the *Proceedings of the Staff Meetings of the Mayo Clinic* for February 9. His recent survey of the incidence of dyspepsia among a large number of patients attending the clinic shows that nearly half between the ages of 30 and 60 include among their complaints that of indigestion. In men over 40 the most frequent causes of this are listed as follows in percentages: peptic ulcer 23, functional 20, cancer of the gastro-intestinal tract, pancreas, etc., 17, cancer of the stomach 12.2, cholecystitis 9, cardiovascular disease 5. In women over 40 the figures are: cholecystitis 24.5, functional 19.8, peptic ulcer 9.5, cancer of the gastro-intestinal tract, etc. 5.8, cardiovascular disease 4.8, cancer of the stomach 4.2 per cent. In studying this table it is startling to think of the fate of dyspeptic men and women over the age of 40 whose symptoms are temporarily masked by patent medicines so that they procrastinate in seeking medical advice. But in all matters relating to disease, Sir William Osler said nearly thirty years ago, credulity remains a permanent fact uninfluenced by civilization or education.

### COORDINATING MEDICAL RESEARCH IN CANADA

Sir Frederick Banting, Director of the Department of Medical Research at the University of Toronto, has been nominated by the National Research Council as chairman of a new committee to study the organization of medical research in Canada. This action was taken on the recommendation of a conference on medical research held in Ottawa and attended by representatives of all the medical schools, organizations, and institutions concerned in medical research, including the provincial departments of health, the Department of Pensions and National Health and the National Research Council. Four *ex officio* officers are the President of the National Research Council, the Deputy Minister of the Department of Pensions and National Health, the President of the Canadian Medical Association and the President of the Royal College of

Physicians and Surgeons of Canada. To complete the personnel of the committee invitations have been extended to twelve distinguished members of the medical profession, each of whom has specialized knowledge in a particular field and all have a broad general training and comprehensive knowledge of Canada's requirements in medical research. In order to provide continuity and adaptability members will be appointed for terms of two, three, or four years, and will be eligible for reappointment for a further term. Dr. T. H. Leggett, who retires from the presidency of the C.M.A. in June, has been asked to serve as an additional special member so that the committee might have the benefit of his wide experience. It has been suggested by many members of the medical profession in Canada that the formation of this committee on medical research under the National Research Council might well be a first step towards the formation of a medical research council for Canada similar to that which exists in Great Britain. The immediate purpose of the committee is defined in the terms of reference, which are: (1) to receive suggestions for requirements in respect of medical research and in matters related thereto; (2) to consider by whom the investigations required can best be carried out and to make proposals accordingly; (3) to correlate the information when secured and to make it available to those concerned; (4) to do such other things as the committee may deem advisable to promote medical research in Canada. The conference agreed that the scope of the new committee's activities should not be limited to particular subjects, but that it should be empowered to investigate the whole field of medical research in Canada. One of the first steps to be taken will be to make a survey of the work in progress at various centres to determine how the activities of the institutions concerned may be developed to the best possible advantage.

### THE MACHINE AND THE WORKER

In Report No. 82 of the Industrial Health Research Board,<sup>1</sup> Messrs. S. Wyatt and J. N. Langdon, assisted by F. G. L. Stock, describe their investigations on women employed upon various kinds of machine-feeding processes. Such work is pursued, year in and year out, by hundreds of thousands of persons, and its extent is likely to increase in the future as the mechanization of industrial processes develops. The work is inevitably monotonous, so it is of outstanding importance that the degree of monotony should be reduced, where possible, by choosing the most favourable conditions of work. It is only by careful and exact measurements such as are described in this report that the requisite information can be ascertained, and several conclusions of direct practical value have already been arrived at. The authors point out that the outstanding psychological problem is the conflict between mechanical uniformity on the one hand and human capacity on the other. The management tend to run their machines at the highest possible speed in the hope of increasing output but in consequence of this many

<sup>1</sup> H.M. Stationery Office (9d)

operatives find themselves struggling to work it a pace which they are unable to maintain and fall victims to strain and over fatigue. In some instances it was found that a slowing of machine speed improved the output substantially but on the other hand some of the machines were run at too slow a pace and their acceleration was welcomed by the operatives. The most suitable speed naturally varies a good deal in different individuals and it also varies in the same individual at different times of the day according to her state of alertness or fatigue. The most satisfactory method of overcoming these variable requirements is to fit cone pulleys to the machines whereby the operator can at any time change the speed to what she thinks to be best suited to her immediate desires. As the operators are on piece rates there is no likelihood that they will work at too slow a rate. The personal likes and dislikes of the workers were probed by means of questionnaires and the replies were very instructive. The most popular likes of the operatives employed on machine feeding were pleasant working companions, hours of work not too long and good wages while the most frequent dislikes were aroused when the operatives had to wait at the machines for the arrival of material. The adverse effects of noise, monotony and fatigue were not referred to nearly so frequently. Nearly two hundred women employed on belt-conveyors were interrogated. This type of work is less popular than machine feeding and the operatives were much more subject to monotony. This was owing to the simplicity and uniformity of the movements performed and the restraining influence of the conveyor which moved at a uniform rate with very few stoppages from mechanical or material cause.

### SMOKING AND LONGEVITY

Professor Raymond Pearl of Baltimore has not always or even usually been a writer grateful to those who desire to control the amusements of their fellow creatures. The family history records of his laboratory gave a testimonial to the moderate drinker and perhaps members of the anti tobacco league (if there is such a body) or our esteemed colleague Dr J D Rolleston may not have expected much support from the Department of Biology at Johns Hopkins. But eleven years ago Dr J Rosslyn Earp<sup>1</sup> working in the department showed statistical reason for thinking that at least at one college students who smoked did not do so well either in work or play as abstainers. Now Professor Pearl gives life tables from age 30 for 2 094 non-users of tobacco, 2 814 men who smoked tobacco in moderation but did not chew or use snuff and 1 905 men who were heavy smokers but did not chew or take snuff. The non smokers have the advantage slightly over the moderate and greatly over the heavy smokers. Thus 45.9 per cent of the non smokers (it must be remembered that the age of entry is 30 years) live to 70, 41.4 per cent of the moderate smokers but only 30.4 per cent of the heavy smokers. In this sizable material

the smoking of tobacco was statistically associated with an impairment of life duration and the amount or degree of this impairment increased as the habitual amount of smoking increased. This is a preliminary communication and naturally Professor Pearl refrains from drawing aetiological conclusions. He states a correlation but some little distance must be travelled before one can be sure that non smokers live longer than smokers because they do not smoke. However as the financial interests of those who sell tobacco are on the same order of magnitude as those of the vendors of alcoholic drinks and the pipe has inspired almost as much prose and verse as the wine can force words whether had tobacco been in use in the Rome of Augustus, Horace would have surpassed Odes III 21: we may safely predict a lively controversy.

### CHEMOTHERAPY IN VIRUS DISEASES

It has recently been reported by Rosenthal, Woolley and Bauer<sup>1</sup> that prontosil exerts a protective action against lymphocytic chorio meningitis in mice. This observation denotes an entry into the wide field of virus diseases where there was no previous reason for supposing that these drugs would have any effect since viruses differ profoundly from bacteria in many ways including their reaction to destructive chemical agents. There is still no evidence that prontosil or sulphanilamide will influence the course of any virus infection in man unless in the form of reports that the latter will abort colds and since colds may sometimes be due to bacteria such evidence is inconclusive. There is now however another arresting report of successful chemotherapy of virus disease in an animal. Sodium sulphanilic sulphanilate a compound chemically related to sulphanilamide is said by A R Dochez and C A Slanetz<sup>2</sup> to have not only a prophylactic but a well-marked therapeutic effect in canine distemper. This distinction is profoundly important: the intracellular position of the virus in established infection might well be regarded as making it inaccessible to chemotherapeutic agents just as it is to specific antibodies. The contrast between the efficacy of serum in protecting against virus infections and its uselessness in treating them is complete and well known. The authors of this short paper do not discuss this aspect of the matter nor do they discuss the chemical relations of the drug used or disclose the process of reasoning or experiment which led to its choice. Their findings in experimental distemper are supported by the results of treating twenty-eight cases of the spontaneous disease of which twenty-six recovered. The treatment was also found effective in cat distemper. In view of Dochez's almost lifelong interest in virus diseases of the respiratory tract it may be presumed that he will have no opportunity of trying this treatment in influenza.

The King and Queen will pay an official visit to Birmingham on Thursday July 14 to open the new Hospitals Centre.

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## TREATMENT OF FACIAL WOUNDS AND CUT THROAT

BY

JULIAN TAYLOR, M.S., F.R.C.S.

The management of accidental and operative wounds of the face is an attractive task, since as a rule their healing leaves final appearances so pleasing that our patient's satisfaction is often commensurate with our estimated deserts. The normal sound healing of the face and the inconspicuous surgically beautiful scars that are easily attained may be ascribed in some measure to two causes—the abundant supply of blood to the facial tissues and the perpetual exposure of its skin to the beneficial effects of air and sunlight. With wounds elsewhere, in ambulant patients, these latter influences are difficult to maintain as adjuvants to healing, since most of the rest of the body is habitually swathed in clothing that insulates it as effectively as does a surgical dressing. The hands, it is true, are bare, but they are in too constant use and movement to permit us to dispense with protective dressings and even splints, in any but the most trivial wounds. The scalp is in striking contrast with the face in surgical behaviour, for though nowhere is surgical skill more certainly rewarded, the neglected scalp wound may become dangerously and heavily infected unless the hair has been shed, when the chance of healing by first intention approximates to that enjoyed by the face. The hairy scalp, however, is handicapped by the habitual presence of dirt and desquamations, for whereas everybody's face is commonly kept clean, in all classes and in both sexes the condition of the scalp is hardly what Western culture might lead us to expect. Furthermore, once healing has occurred in the head and neck, the later conversion of young and vascular cicatricial tissue into a linear contracted and inconspicuous scar is a much more speedy process than in most other parts of the body. This is partly on account of the influences noted and partly because in the erect or seated attitude those portions are the highest in the body and are thus immune from the effects of venous congestion, which may long delay the whitening of scars of the extremities and lower abdomen and may also be among the causes of stretching of scars in the latter positions. The head and neck being thus favourable for success, it remains for us to concentrate our attention on the methods of securing first-intention healing and narrow linear mobile scars.

### Abrasions

If there is visible dirt in an abrasion it should be gently removed with forceps or mops and anti-tetanic serum given in most cases. Should bleeding be still proceeding it may be checked by light pressure with a mop wet with normal saline water, or a mild antiseptic, and when it has ceased the abraded surface may be left to ooze. The exudate is the best antiseptic, and the scab produced by its clotting is the natural and by far the best dressing. Abrasions so treated heal well and the scab should be left in place until it drops off in days or weeks, according to the depth of the abrasion, when supple skin overlying a minimum of scar tissue is seen to have been formed under it. There

is no need to disfigure the face even temporarily with coloured and irritant antiseptics like flavine, iodine, and picric acid, it should be remembered that any of them may produce a chemical inflammation of the skin, a dermatitis that occasionally may outlast the healing of the wound and even spread from the site of application. Tannic acid is a better application than any of those named, but it is unnecessary, and its blackened ugly coagulum is no improvement on a wholly natural scab. If an antiseptic is desired in the case of a dirty or greasy skin, industrial spirit is as good as any and its effects are fleeting.

In advocating the use of the natural dressing of blood clot we may go further and say that any kind of cotton or gauze covering is prejudicial, partly because it may result in mild suppuration that would not have occurred without it and partly because its removal may result in trauma to the healing tissues, so that a corresponding excessive formation of scar tissue results. Only or greasy applications are still worse, and it may be said in strict truth that the surest and almost the only way to make the face suppurate is by applying some form of dressing, indeed, one may go still further in stating the claims of unimpeded Nature, for when, as often happens, a two- or three day old abrasion is already beginning to suppurate owing to the employment of a mistaken form of treatment, the surest way to check the process is to remove all dressings, ointments, etc., and allow the exuding pus to dry, while to continue their use is very likely to result in the development of an infective and resistant dermatitis.

### Incised Wounds

Where the skin is ruptured the final appearance of the resulting scar depends partly upon the success with which accurate apposition of the cut skin edges has been achieved, partly upon to what degree the underlying facial musculature, closely attached to the deep surface of the dermis, has, if divided, been prevented from retracting and partly upon the attention paid to the niceties of skin suture. The permanent marks of stitches, even where a narrow linear scar has been made, cannot fail to draw attention to what otherwise might have been so inconspicuous as to be almost invisible. Stitches make permanent marks more by slight sloughing of the included skin than by the punctured wounds of needles, which nevertheless, if not very small, do remain visible. It therefore behoves us to use small sharp needles, but these are of no avail if we fail to employ fine and flexible suture material, if we tie our stitches too tightly, or if we leave them in place too long. It is obvious that some of the most perfect facial scars are attained by the methods evolved by plastic surgeons, among these is the use of fine buried catgut for facial muscles, with fine stitches for closing the skin, which are removed after a day or two, the buried catgut then holding the wound closed while the healing of the skin proceeds. Such methods, however, entail not only the possession of special skill in burying catgut sutures aseptically but also of suitable material against an emergency, and thus we prefer to describe simpler ways that are effective and also available for the general practitioner who has not at hand the conveniences of the operating theatre.

### Suture Material

This should be flexible and fine. Silk is finer than linen thread of a similar strength, and is thus preferable but both have the disadvantage of needing prolonged boiling to achieve sterility. Horsehair may be brittle and thus unhandy. Gossamer or ophthalmic silkworm gut natural or synthetic is one of the pleasantest materials in use being strong for its bulk, flexible in adjustment of tension and painless in removal though the natural gut is hard to obtain just now owing to the war in Spain. The worst suture material is probably the ordinary medium or coarse silkworm gut that is found in so many theatres. It is stiff its tension cannot be accurately judged or applied it causes sloughing of the stitch track because even when correctly applied it does not adjust itself to the contents of its loop and its rigidity makes it painful on removal. Indeed the need for the use of a fishing gut with a tensile strength of half a hundredweight is not obvious in any part of the body.

### Instruments

It is well to have fine toothed dissecting forceps and fine pointed artery forceps such as are used for venesection. Needles should be the slimmest triangular pointed ones that will admit sutures or better still the practitioner who likes to be well equipped may keep some of the tubes of atraumatic skin sutures that are prepared for plastic skin surgery and that are employed by Sir Harold Gillies. For use with a holder needles should be curved in the hand small sizes are more convenient if straight.

### Closure of Incised Wounds

Facial wounds that gape at all are better closed by suture unless they pass so obliquely through the skin as to make suture impracticable when the thin flap of skin may be kept in place by pressure maintained by a single layer of open-weave gauze stuck to the skin by means of mastic varnish (for example benzo-mastiche Martindale) but care must be taken to use only one layer of gauze and a minimum of adhesive. A straight incised wound in a patient with self-control may be closed without an anaesthetic but where there is any technical difficulty the practitioner is advised to content himself with the arrest of bleeding and a temporary dressing until an anaesthetic be available though novocain injected round the wound may be all that is necessary. He should remember that although it is a good general rule to deal with compound injuries without delay the exceptional healing capacity of the face gives him a little latitude in action that the final result must be as near perfection as possible and that such an end can be achieved only by an unhurried deliberate and accurate operation. In preparation the mechanical removal of dirt from the skin and the depths of the wound and perhaps the cleaning of the skin with spirit are the only things necessary.

Bleeding is best stopped by pressure maintained for five minutes or so but if it is obstinate spurting vessels may be caught with artery forceps and subsequently either ligated or better still included in the bites of sutures unnecessary buried material in a field of doubtful cleanliness being thus avoided. It should be remembered that novocain is a vasoconstrictor and with the passing of its effect's bleeding may recur under the closed skin. The cut skin edges must be clearly seen and the obliquity of the cut to the surface estimated. As many deep stitches as may be necessary to hold the facial muscles together are inserted through the skin preferably as small mattress

sutures protected by bits of fine rubber tubing but if this last is not available stitches embracing muscles and skin are quite satisfactory provided they are effective and are not tied so tightly as to cause sloughing of underlying skin either immediately or with the onset of the slight inevitable swelling of early healing. Small stitches taking skin only and very close to the cut edge are then inserted so as to approximate the edges of the wound accurately their positions and individual tensions being most easily judged if all superficial and deep sutures are inserted before tying the knots. This is the method that was most commonly employed in the days when carcinoma of the tongue was frequently excised after splitting the cheek and the resulting facial scars of many of them are so perfect that one has to examine them with a magnifying glass to ascertain their presence or extent.

### Removal of Stitches

It is probably unwise to remove stitches holding muscle together at a shorter period than four days but where they are holding only skin they may be safely removed after two days though it is better for the surgeon's peace of mind if on so precocious a removal the wound be held together with a single layer of loose woven gauze and mastic varnish clear of the actual cut as earlier described. Such a dressing does not prevent air drying of the slight exudate that may still come from the wound and stitch holes and though not ideal it is better than leaving *in situ* stitches whose marks the passage of time may make indelible.

### Lacerated and Contused Wounds

Contusion of course causes some swelling but remembering the great capacity for healing that the face possesses we need not hesitate to close a laceration on account of accompanying swelling and ecchymosis. Maximal swelling from contusion occurs in the eyelids and it should be remembered that a wound of the forehead penetrating the frontal sinus causes a subcranial effusion of blood that passes without encountering obstruction into the upper eyelids which may rapidly swell and close the palpebral fissure completely. An early effusion into the upper eyelids only need the forehead area of no suspicion of fractured skull. Lacerated wounds should also be closed according to the same rules as those described earlier and only with the greatest reluctance should skin be excised because it is damaged if an excision be necessary it should be minimal and if possible be limited to the extreme devitalized edge. Where skin has been torn away and lost an immediate Thiersch graft is advisable but if it be in any wise possible to replace an actual detached piece this is the best graft. After suture of facial wounds the process of shrinkage of the cicatrix proceeds rapidly and in small wounds is complete in about a month by which time the scar will have attained its final pale appearance. With larger wounds and lacerated ones or if by any chance there has been suppurative the duration of the final shrinkage and devascularization is much longer and may last six months or more depending upon the intensity of the cicatricial reaction. In these cases it is only at the lapse of such a period that it is possible to judge as to the advisability of secondary excision of a disfiguring scar. A satisfactory facial scar is one which is linear, pale and almost invisible. It is flush with the surrounding skin and neither dimples nor distorts the face with expressional and other movements. The elements that go to make up disfigurement are those of scarring from sloughing, inflammation and inaccurate approximation of

the skin edges, loss of substance resulting in deformities, especially of the eyelids, dimpling, with adhesions of scars to deeper structures due to unsuccessful closure of the facial muscles, partial paralysis of muscles due to section of filaments of the facial nerve, and occasionally swelling due to lymphatic obstruction—the last being seen sometimes in the lips, and also where the nose has been almost detached from its root so that the end becomes bulbous from lymph stasis, a condition fortunately tending to disappear spontaneously

#### Wounds involving the Nares and Lips

In these wounds the test of success is the accurate approximation of the edge of the nostril or of the red margin of the lip. In the nostril this is easy, but where there is laceration the red margin may be difficult to see. It is usually possible to impale a healthy part of the red margin with a small pin on each side of the wound and thus to judge the correct placing of the sutures. If the lip be cut right through into the mouth the mucosa must be closed with catgut before approximating the skin, and owing to the thickness of the muscle of the lip it is usually advisable in this situation to use buried catgut also to close the muscular wound. In the lips and nostrils, where there necessarily is continual wetting of the wound, it is of especial importance to eschew all dressings and to leave the sutured wound uncovered. To keep such wounds partially covered with mucus- or saliva-soaked dressings is to ask for them to be infected, a request that in such circumstances is only too often granted.

#### Wounds of the Face with Compound Fracture

What has been said of closure of facial wounds applies to all, whether associated with fracture or not. Where a fracture is suspected an x-ray examination should be arranged at once, and if, as will usually be the case with a positive result, it is decided to call in surgical assistance it is better to do so as an emergency than to close the facial wound and then arrange a consultation at leisure. The alveolar margins and jaws, the malar and nasal bones, and the region of the frontal sinus are the common sites of fracture. Of these, it is true the jaws can, if necessary, usually wait a day or two for dental treatment without prejudice to the final result, but the nasal and malar bones are often depressed and need elevating, which should be done before suturing the facial wound, and the injuries of the frontal sinus carry with them the real danger of associated injury to the cranial contents, of cerebrospinal rhinorrhoea, and meningitis. The surgeon confronted with a sutured wound over the frontal sinus a day or two after its infliction may find himself in great difficulty, being uncertain how to proceed with the possibility of an already established frontal sinusitis and a possibly open cranial cavity.

#### Wounds of the Neck and Cut Throat

Wounds of the neck should be treated on the lines indicated for the face. Skin stitches that include the platysma, properly applied without excessive tension, give narrow scars that are almost invisible.

Suicidal cut throat is the result of a wound usually made with the right hand, and is thus more extensive on the left side than on the right. The vigour of the suicide is apt to be spent in the length of his incision rather than its depth, and the level chosen is often that of the thyrohyoid membrane, presumably because the thyroid cartilage can easily be felt as an obviously resistant structure under the skin. Less often the wound is made above

the hyoid bone, and rarely it is below the cricoid cartilage. In half-hearted attempts such wounds may be superficial only, but often they penetrate the air passages, in the common subhyoid variety opening the supraglottic part of the larynx, while in the less common suprahyoid wound the vallecula is penetrated, in either case the epiglottis often suffers partial or complete separation. In the subcricoid variety the trachea may be opened. These are the injuries actually inflicted as a rule, though the object of the suicide is presumably to open a large blood vessel in the neck. In the first two varieties, owing to the backward passage of the carotid sheath as it ascends the neck, its contents are in little danger, nor are the superior thyroid, lingual, and external maxillary vessels, though these are nearer the site of injury. Actually the large vessel damaged most frequently, in my experience, is the common facial vein, from which it is possible for a patient to become almost exsanguinated, but in a low wound the thyroid gland and the jugular vein may be involved. Nevertheless the brunt of the injury usually falls on the respiratory passages rather than on the vessels, at any rate in the cases arriving in hospital. An example of this occurred during the great war, when a soldier at the end of his endurance cut his throat one evening and reported sick in the morning holding a towel to his neck. He had divided his epiglottis and had incised his posterior pharyngeal wall, but there was not a great deal of bleeding.

When the thyrohyoid membrane is cut the gash does not open widely, but in suprahyoid wounds the suspension of the larynx is partly lost, so that the wound gapes and the interior of the oropharynx can easily be inspected. Whichever level is chosen for cutting there is danger of asphyxiation from blood or loose fragments of epiglottis and laryngeal mucosa entering and obstructing the airway.

#### TREATMENT

With a closed respiratory passage the superficial wound is treated by ligation of whatever vessels may be necessary and by closure of the wound as described for other neck wounds. It is usually well to drain the deepest part, and this as a rule is in the middle line. With an open pharynx or larynx an anaesthetic is necessary, and when respiration is obstructed preliminary tracheotomy should be performed without hesitation. The upper opening can then be packed with a cocaineized plug and the wound closed deliberately. The first step is the inspection of the interior of the pharynx or larynx and the removal of any loose fragments likely to cause suppuration or obstruct the airway. The epiglottis may be sutured, or if it is so badly lacerated that healing seems unlikely it may be removed with no fear of deglutition difficulty other than a temporary one. Swallowing, indeed, is impossible in any case in the early days after pharyngeal suture, and before closing the wound a catheter must be passed into the oesophagus and brought out through the mouth, where it is fixed by a suture through the cheek or a loop round the auricle. The pharyngeal mucosa is then closed with catgut, but the skin is left widely open except where there is no underlying pharyngeal wound. Closure of the skin carries with it a danger of infection of the fascial planes of the neck from the opened pharynx. If a tracheotomy tube has been used it may with advantage be left in place for a few days until it is certain that there is not enough inflammatory swelling of the upper opening of the larynx to obstruct respiration. A damaged trachea may be closed if not lacerated, after adequate exposure of the operative field, preferably under local analgesia with cocaineization of the tracheal mucosa. It

the condition of the trachea be thought unsuitable for suture a tracheotomy tube should be inserted for a few days the wound being left open and packed with a small plug round the tracheal opening. This will suffice to prevent infection tracking in the fascial planes to the mediastinum and the plug may be removed when a layer of protective granulations is well established. In no circumstances should a sutured trachea be covered by a closed skin wound as not only distressing surgical emphysema but also widespread infection of the neck is the likely consequence.

#### RESULTS

Pharyngeal and tracheal wounds usually suppurate for a time, especially if there has been loss of blood; this if severe may be replaced by transfusion should it be thought advisable to take healthy blood to revivify a suicide. Often a temporary pharyngeal fistula occurs but such openings eventually heal of their own accord in most cases. If healing fails a small plastic closure is easily effected when the fistulous track is completely covered with epithelium.

## TREATMENT OF SYPHILIS

### A SURVEY OF CURRENT METHODS

W. R. Snodgrass and R. J. Peters<sup>1</sup> under the auspices of the Medical Research Council have undertaken a survey of the results of treatment of early latent and mucocutaneous tertiary syphilis. Their report shows not only how these forms of syphilis should be treated but also what results may be expected from treatment—adequate or inadequate—begun in the various stages of the disease. Early syphilis can usually be treated according to a set plan of standard courses each of which should consist of not less than 5 grammes of 914 and about 2 to 2.6 grammes of bismuth metal the whole being given over a period not exceeding fifteen weeks. Treatment is most effective when given early regularly and adequately. Clinical relapse was noted in only 2.8 per cent of the adequately treated cases as against 8 per cent of the inadequately treated. It is the first course which is important for of the cases receiving total adequate treatment those who had had an adequate first course showed a much lower relapse rate than those whose first course had been inadequate. In general for early syphilis one standard course after the Wassermann reaction has become negative represents optimum treatment. An intensive first course gives the best results and the intervals between courses should be reduced to a minimum. It is claimed that the author's intermittent concurrent use of 914 and bismuth gives at least as good results as the continuous alternating method recommended by the American Co-operative Clinical Group. Examination of the cerebrospinal fluid would seem to be unnecessary in the absence of symptoms referable to the central nervous system appearing before the end of the second year.

Intolerance is one of the bugbears of antisyphilitic therapy and a frequent cause of defaulting and inadequate treatment. Specific measures for avoiding it are lacking but care in the preparation of the patient especially the detection and elimination of focal sepsis and in the technique of injection will reduce its incidence. Jaundice occurred in twenty-three cases (4 per cent) in the series in twenty-two of these during the first course but in only three was it severe, one patient died of acute yellow atrophy of the liver. Only thirty-six of 7300 injections

(0.49 per cent) provided skin reactions which in six cases amounted to dermatitis. Though it often lessens the total amount of treatment intolerance often coincides with maximum therapeutic results. Thus 11.4 per cent of unfavourable final results were recorded in cases having intolerance as against 19.7 per cent in cases not showing intolerance out of a total of 570 cases.

### Latent and Tertiary Syphilis

Latent syphilis is defined as syphilis of more than 2 years duration with no clinical signs but showing a positive blood reaction. The question arises as to whether such a case should be treated. The answer is that it should because treatment lessens the incidence of late syphilitic lesions, may prevent conjugal infection by means of the spermatic fluid and prevents hereditary syphilis. Of the cases under review treated and observed for more than two years clinical and serological tests were negative in 50 per cent at the end of that time in contrast to 27.9 per cent in Brunsgaard's series of untreated cases (*Arch. Derm. Syph.* Wien 137, 1909). The former figure agrees fairly closely with that of the combined American clinics. The treatment of latent syphilis is much more unsatisfactory than that of early syphilis though the earlier the case comes under treatment the better the outlook. In general three standard courses were considered sufficient for cases of latent syphilis though in the case of a patient under 40 whose blood test is still positive after two years it is worth while continuing treatment even further since this series showed 5 per cent of clinical relapses after the two years treatment and observation.

Tertiary mucocutaneous syphilis like the latent form responds better the earlier it is treated. Visible lesions heal rapidly and in few cases is there progression to cardiovascular syphilis or neurosyphilis. Clinical relapse was seen in only 2.1 per cent of this series—that is it was practically unknown when adequate initial treatment was given—but intolerance is more common than in early syphilis (4.4 per cent as against 27.7 per cent) and rises with the age of the patient. This and the fact that two years treatment and observation only produce negative Wassermann reactions in 37.2 per cent of patients suggest that it is not usually wise to give long and intensive treatment unless the patient is young and healthy. In such cases many think it is an advantage to employ a quantitative serum test—such as the Sigma<sup>2</sup>—which records results in units—and provided the patient stands treatment well, persevere so long as the blood reaction continues to fall. Generally speaking it was found that two courses of 914 (11.7 grammes) and thirty injections of bismuth (7 to 8 grammes) or potassium iodide orally afforded a very considerable means of protection against clinical or serological relapse. It is doubtful if one can speak of "cure" or any form of late syphilis even if treatment reduces the blood reaction to negative and the patient is clinically free from symptoms; he or she ought to be kept under observation indefinitely. Syphilis of the heart and blood vessels and of the nervous system have not been considered since in the series under review too few cases were observed to warrant analysis.

### Treatment of Early Syphilis

Finally Snodgrass and Peters offer some suggestions on the treatment of early syphilis. The rule of thumb logical relapse is the best single criterion of the value of a drug if only because its incidence is nearly four times as great as that of clinical relapse. Reasoning in this way it is much needed and the question of defaulting becomes large for obvious the more the cases default the more will be the end results. Bismuth and 914 appear to be the drugs of choice and much depends on an adequate first course. It is therefore well worth while making the first course as intensive as possible. In the first 10 to 15 days

<sup>1</sup> Snodgrass W. R. and Peters R. J. *An Analysis of the Results of Treatment of Early Latent and Mucocutaneous Tertiary Syphilis*. Medical Research Council Special Report Series No. 22. Price 2s net. London His Majesty's Stationery Office 1937.

days of the scheme outlined by the two authors 555 grammes of '914' and 26 grammes of bismuth may be given, the first six injections of each being administered twice weekly. Then one month's rest is followed by eight weekly injections of calomel cream with potassium iodide orally. After a further month's rest the combined course is repeated, and then six weeks' rest is followed by ten weekly injections of calomel cream, potassium iodide being taken again orally. After this, two months' rest is allowed before a third combined course. One more combined course should be given after the blood Wassermann has become negative. Thereafter observation, repeated serological tests, and short courses of bismuth or mercury are continued until the end of the second year, when the cerebrospinal fluid should be examined.

Why the authors recommend such treatment is not clear, especially in view of the pronouncements of the League of Nations' experts, who laid down two tried methods—one the "intermittent" and the other the "continuous." If the League of Nations' "intermittent" method was adopted generally it would secure continuity of treatment for those patients who travel about. The scheme suggested by Snodgrass and Peters is open to criticism on the grounds that it has not yet been tried, that the intervals between courses of arsenic and bismuth are prolonged, and that possibly patients might not tolerate well ten or twelve weekly injections of calomel cream, admittedly a somewhat painful remedy. Now that there is in existence a really authoritative statement as to what is the best way to treat early syphilis, it seems a pity to confuse the issue by suggesting a totally different plan, however good it may eventually turn out to be.

## Nova et Vetera

JOHN SHAW BILLINGS, 1838-1913

Bibliographer and Librarian

A quarter of a century has passed since Billings's death, and the echo of eulogy has scarcely died away. Many of those whose tributes were at the time so moving and so eloquent have followed him into the silence. Meanwhile a century has gone full circle, and once again the huge overpowering figure of John Shaw Billings rises before us. To a new generation his features are those of a stranger, and his claims on its remembrance and gratitude must hence be stated afresh. In his life he played many parts and played them well. As virtual creator of the Library of the Surgeon-General of the United States Army he fails to impress the medical student's imagination in this country, so misleading is the official title of the foremost medical library in the world.

### Monumental Achievements

After the Civil War Billings in 1864 was transferred to the Surgeon-General's Office in the War Department, where he remained for thirty years. From a negligible nucleus—in 1865 there were about 1,800 volumes—he built the great library as we know it to-day. By 1880 he had collected 50,000 volumes and 60,000 pamphlets, and in 1895, when he retired, there were over 300,000 volumes and pamphlets and more than 4,000 portraits. In the early days he had no trained assistants, having to rely on hospital orderlies who had served in the Civil War. The work they accomplished is a tribute to Billings's organizing talent. To appreciate the development of his conception of the library as not only a vast storehouse of knowledge but as a dynamic instrument of precision for increasing knowledge and for aiding research we must go back to his student days. For the doctorate at the

Medical College of Ohio at Cincinnati a thesis was required. Billings took as his subject "The Surgical Treatment of Epilepsy." The twenty-two year old student was impressed by the lack of an efficient medical library in North America and of a reliable and comprehensive index to the medical literature. What others might have accepted with regret and resignation Billings translated into a vision of the future, where by sheer force of personality he made it come to life. His thesis, then, was responsible for those monumental bibliographic achievements, the *Index Catalogue of the Library of the Surgeon-General's Office* and the monthly *Index Medicus*. With the former he was in a way lucky, for its publication was financed by the Government, and it is now in its fourth series but the latter had to pass through troubled waters before it became finally merged in 1927 with the *Quarterly Cumulative Index Medicus* of the American Medical Association. The story of the Army Medical Library (before 1922 called the Library of the Surgeon-General's Office) has recently been told by Major E. E. Hume in the *Johns Hopkins Alumni Magazine*, January, 1936, 24, 107-35, and by Colonel H. W. Jones in *Hospitals*, January, 1937, 11, 14-21. The development of the library and its catalogue to Professor William H. Welch was America's most important contribution to medicine, and their father he described as the wisest man he had ever known.

### A Versatile Character

One of the most versatile men of his generation, Billings was librarian, bibliographer, administrator, historian and authority on public health. At one time there was scarcely a hospital of importance in the United States on the construction or rebuilding of which his advice was not sought or accepted. He helped to design the Johns Hopkins Hospital at Baltimore, and suggested the appointment of Osler, Welch, and Halsted to its staff. Retiring at his own request from the Army Medical Library at the age of 57, he became first director of the New York Public Library.

Big both in mind and body, Billings came of Scandinavian stock, and the blood of the Norse Viking fighters was in his veins. That a man of his strength of will and emphatic confidence in his own counsel antagonized those who did not penetrate below the austere surface of the dictator is natural, but at the same time his exuberantly masculine personality made a host of friends by unexpected acts of simple kindness, by his fairness, and his sincerity. As he grew older he became perhaps more mellow and kinder in manner without sacrificing ounce of his virility. His capacity for work was unbelievable, and he attended to the duties of the day with military promptness, seizing upon the essentials. His memory Weir Mitchell compared with the index of a vast mental library. Impatient with verbosity and pretence, Billings's style was clear, precise, forcible, and full of grim humour. Recreation he obtained simply by turning from one form of brain work to another. Books were his true and constant friends. The modern English authors he knew and liked, while his favourite reading was Job, Faust, and Shakespeare. Suffering terribly from insomnia—in his last twenty years he underwent eight operations for cancer of the lip and for calculus—he as a rule read one or two novels at night as 'the best of soporifics.'

Billings has set a standard in medical librarianship which makes the medically qualified librarian play an indispensable part in medicine's daily work. On the occasion of his hundredth birthday—April 12, 1938—it is a matter for regret to find that in this country at least, which is the proud guardian of some of the finest medical libraries in the world, his ideal, both financially and intellectually, remains yet to be captured.

W R B



## THE SION COLLEGE LIBRARY OF MEDICAL BOOKS

The president and governors of Sion College London have decided to sell a large section of the library under their control in order to have funds for the preservation of other sections which they wish to retain. In making their selection for this discard they naturally pick out those books which appear to be and to have been of least use to the Fellows and Members and thus it happens that a very large collection of rare books on medicine and surgery is being sold by auction on behalf of the College on April 21 at Messrs Hodgsons in Chancery Lane. Many of these books were left to the College in two bequests. Dr John Lawson bequeathed a library in 1705 and Archdeacon Edward Waple another in 1712. Lawson was President of the Royal College of Physicians in 1694 and an eminent practitioner in London; he was a friend of Archbishop Tenison on whose account he desired to benefit Sion College. Owing to disuse many of the bindings have deteriorated and most of the covers are broken; the folio volumes have also suffered water stains caused during an overflow of the Thames long ago. Otherwise they are in good condition. Many of the books though old and rather uncommon are not of the superlative age or rarity that means fancy figures in the sale room; it is possible here to particularize only a select few out of the many hundreds that are catalogued for disposal.

### Some Rarities

First must be mentioned a copy of the extremely rare first edition of Harvey's *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus* Frankfurt 1628 lacking (as many of the extant copies lack) the errata leaf and the blank leaf which constitute signature K—proof that the errata leaf has not been torn out but that this copy was of an early printing and there is also a first edition of the same author's *De Generatione Animalium* 1651. Another great rarity is Dr Thomas Bonham's *The Chyrurgian's Closet* 1630. Furnished with varietie and choyce of Apophlegms Balmes Baths Caps Denufrices Gargarismes Pils Quilts Synapismes Trochiscas for the help and ease of young Practitioners in the Noble Science of Chyrurgerie. Just before this in the catalogue is E Roesslin's *The Birth of Man Kinde* edited by T Raynald 1626 the first illustrated treatise on midwifery in English. Even rarer is Alexander Read's *Treaise of all the Muscles of the whole Bodie* 1637 possibly the only copy in existence. Glisson's *Treaise of the Rickets* (translation) 1651 is the first edition in English of that medical classic.

Of the ancient masters there are seven editions of Galen—1538 1625 1537 1546 1530 1544 and 1586 two of Paulus Aegineta—1538, 1556 one of John Gaddesden—1516 and five of Hippocrates. Alexis of Piedmont is represented by an edition of 1568 and Andrew Boorde's *Breviary of Health* by one of 1552. Another interesting book is a second edition (1580) of Monardes's *Joyfull News out of the Newfound World* wherein are declared the rare vertues of divers Herbs Trees Oyls Plants and Stones (of the West Indies). Englished by John Frampton. In this book the curious will find an account of the properties of tobacco the medicinal uses of iron and a suggestion of the use of snow for preserving perishable commodities by a species of refrigeration.

Sydenham Willis Bartholin Vicary Lettsom Hunter Boerhaave, Mead Smellie Bell Cooper Bright are familiar names which catch the eye further on and there are a few items dealing with the early history of the London Hospital St Georges Hospital the Royal Infirmary, Edinburgh and the Bath Hospital.

## INTERNATIONAL CONFERENCE ON RHEUMATIC DISEASES

### FOUR DAY MEETING AT BATH

The International Conference on Rheumatic Diseases which was held at Bath from March 31 to April 3 was attended by members from thirteen European countries, the United States, Canada and Egypt. It followed immediately upon the International Congress on Rheumatism and Hydrology at Oxford and was held in connexion with the bicentenary of the Bath Royal National Hospital, formerly known as the Mineral Water Hospital. Bath once again shewed upon its visitors its usual hospitality and the civic reception by the Mayor at the Pump Room and the banquet given at the Guildhall also brought in the City were noteworthy events even in a place accustomed to generous and dignified entertainments.

### The Empire Rheumatism Council

Lord HORDER, who was President of the Conference delivered a brief address on the evening of assembly. He said that 1938 was a distinct year in the history of rheumatism because it marked the centenary of the Bath Hospital the holding of the recent congress at Oxford and the establishment of the Empire Rheumatism Council. Throughout his medical life said Lord Horder he had always kept the problems of rheumatic disease in the front of his mind and had come to the conviction that there should be a methodical investigation in order, possible factor connected with causation and treatment. Now they had an organization fitted to carry out such investigation. It had already become active and had set up three research units and had made considerable progress in the matter of systematizing and extending therapeutic treatment. He felt that in the future his work would bring about a notable diminution in rheumatic disease and its foundation prove a conspicuous landmark in public health history.

The toll which rheumatic disease exacted from industry could only be estimated from the fact that about 400,000 insured workers in England and Wales were ill from some form of the disease every year to the extent of being unable for the time being to follow their occupations. The total number of sufferers insured and non-insured was at least a million. The British alone treated over some 5,000 cases annually among the poorer classes those suffering from rheumatic disease. The problem of extending the use of the spas among the well-to-do was a matter for their own public organizations and the problem of making spa treatment more widely available to the poorer class was somewhat different. The suggestions at present being explored are the provision of hostels and of approved boarding houses subjected to a certain degree of medical control at spa centres. In both these respects the Empire Rheumatism Council could usefully help by educating the medical profession and by impressing upon public health authorities the value of spa treatment.

### Gout and Rheumatism of Metabolic Origin

The principal discussion at the Conference was on gout. It occupied a whole day and Professor F. R. FRASER presided over the opening session. He said that there had been no therapeutic advance in the treatment of gout since Wollaston in 1797 observed that the uric acid excretions contained urates and attention was directed to nitrogen metabolism in the metabolism of gout. Since the beginning of this century no great advance had unravelled so much with regard to metabolism that the clue to the pathology of gout seemed to be lying before them unrecognized. That was the relation to both acute and chronic uric acid was accepted but the mechanism of the relation was not



quite unsolved and the factors that determined the type and distribution of arthritis and of non-articular rheumatism in the individuals who suffered from gout were also unknown. If the answers to these questions could be given the key to many mysteries in the whole field of arthritis and of rheumatism in general would be forthcoming.

SIR WALTER LANGDON-BROWN, in an opening paper, said that the diminished incidence of gout had naturally led to a diminished interest in the subject. The last time he saw any considerable number of cases of gout was in 1919, when war-time food restrictions were removed, apparently some predisposed individuals had lost their tolerance for a full diet. Some of the diminished incidence was only apparent, and was explained by more accurate diagnosis and the application of more exacting criteria. X-ray examination had shown that cases of alleged gout might be of other forms of arthritis, and the alarming cases of so-called "suppressed" gout were now generally regarded as due to uraemia or myocardial failure. Sir Walter entered upon a consideration of the evolution of nitrogenous excretion in human beings and the factors in the deposition of urates in the tissues. He concluded that some persons suffered from a congenital or acquired difficulty in disposing of their nucleic derivatives, the difficulty being not of destroying but of eliminating purins, possibly due to the loss of power to conjugate them suitably. This led to such an excess of uric acid in the blood that a low-grade arthritis was fanned into intense flame by the deposit of irritating biurate crystals in a structure already involved.

Just as the essential pathology of gout remained obscure, its treatment by colchicum remained quite empirical. In large doses it was an irritant poison, yet, although powerless to avert an attack, its influence on the pain and swelling of an acute gouty joint was often dramatic. Except for the introduction of cinchophen in 1908 there had been no major change in the treatment of gout since the value of colchicum was established in the sixteenth century. The most serious risk of cinchophen was the danger of toxic jaundice. Twelve years ago he reported two fatal cases following the continued administration of some cinchophen preparations. When certain safeguards, however, were observed, such as had been worked out by Graham—who showed that if the drug were given in doses of  $7\frac{1}{2}$  grains three times a day for only two consecutive days in each week the total increase in the output of uric acid was as great as from continued administration and toxic effects were not encountered—there was no reason why patients should be deprived of its undoubted benefits.

Dr MATHIEU-PIERRE WEIL (Paris) followed with a paper on the same lines. The attack of gout, he said, did not manifest itself constantly by hyperuricaemia. The part played by disturbances in the metabolism of uric acid had in any case been greatly exaggerated. An immoderate alcoholic intake, cold, physical fatigue, moral indiscretion, traumatism, simple muscular or even intellectual effort were, to the individual who was predisposed, more likely to be generators of an attack than the absorption of sweetbread, spinach, or cocoa. The speaker discussed generalized acute and chronic "rheumatism of a gouty nature," also mono-arthritis of a similar type, which, he said, was far from being exceptional, and he concluded by quoting a remark that between gout and rheumatism there was the distance that separated the admiral from the first mate. "Gouty rheumatism" constituted the intermediate ranks, of recent times the admirals had become scarcer, but the first mates had multiplied.

### "Gouty Rheumatism"

In the course of discussion Dr J FORESTIER (Aix-les-Bains) took exception to his compatriot's category of gouty rheumatism. Words, he said, were important in

medicine because they tended to direct the therapeutic measures. In France there had been a tendency to regard any patient over 40 with a chronic condition as suffering from gout if there were tophi, and from "gouty rheumatism" if there were not. Dr E P POULTON took up Sir Walter Langdon-Brown's remark that the diagnosis of the gouty diathesis was certain in the presence of a blood uric acid above 3.6 mg per cent and of tophi. He had a patient under his care with blood uric acid of 3.8 who was entirely free from gout. Dr SCHNEIDER (France) drew attention to the peculiar intestinal symptoms which, he said, were found in 80 or 90 per cent of gout cases—namely, a special type of colitis without serious irritation of the intestinal lining.

SIR WILLIAM WILCOX said that since the war dietetic and metabolic factors had played a smaller part than formerly in the aetiology of gout. It had been his experience in recent years that focal sepsis and toxic factors had a good deal to do with gout causation. "Poor man's gout" was often associated with infection. The threshold of uric acid in gouty subjects was very different from what it was in normal persons, and this fact might be of great importance in determining the deposition of urate crystals. With regard to the possible dangers of cinchophen, or atophan as it was sometimes called, it was important to bear in mind that tolerance diminished with increasing years. It had been his experience that the danger of cinchophen was much enhanced in elderly people. He had seen five grains three times a day taken every day for a week prove fatal in elderly patients. The danger was in the effect on the liver, causing degeneration of the liver cells and toxic jaundice, and they were indebted to Graham for his wise advice that cinchophen should be taken for two days only and then withheld, to be repeated later if necessary.

Dr C W BUCKLEY (Buxton) protested against the assumption that the rarefaction of bones in the region of the joints would enable either rheumatism or gout to be diagnosed. He thought a clear idea of gout was only to be obtained by proceeding from the basic proposition that gout was a disease characterized by excessive uric acid in the blood and its deposition in the tissues. It was easy to prove the excess of uric acid in the blood, not so easy to prove its deposition in the tissues, but if such deposition took place then local necrotic changes occurred which were the bases of the production of the symptoms of chronic gout. He believed an attack of acute gout to be an allergic manifestation, there was a pre-existing deposition of urates in the tissues, and owing to some, probably seasonal, variation in the metabolism of purin bases a reaction was set up with characteristic symptoms, sometimes constitutional as well as local.

### An Analysis of Gout Cases

Dr LESLIE C HILL (Buxton) gave a critical survey of ninety-three cases of gout treated during the last three years. A family history of gout was elicited in 45 per cent of the cases and of fibrositis in a further 15 per cent. No one particular occupation stood out prominently, though the relatively high proportion of publicans supported the orthodox attitude towards alcohol as a factor in causation. Only three of the women patients (twenty-one out of the ninety-three) showed symptoms before the menopause. Articular gout was diagnosed in 61 per cent, abarticular gout in 16 per cent, mixed gout in 22 per cent. In more than one-half of the male cases the onset was sudden, in women gradual onset was more common. Most of the initial attacks occurred at night. Spring was by far the commonest season for acute attacks, autumn a poor second. In about 90 per cent of the cases the blood uric acid was 4.5 mg per 100 ccm of blood or over. The association of gout with glycosuria was noted by its absence in this series. He concluded that as the group of abarticular and mixed gout showed the same aetiological, clinical, and biochemical features and the same

WILLIAM E GAUNT JAMES T IRVING AND WILLIAM THOMSON. CALCIUM AND PHOSPHORUS  
DEFICIENCIES IN A POOR HUMAN DIETARY

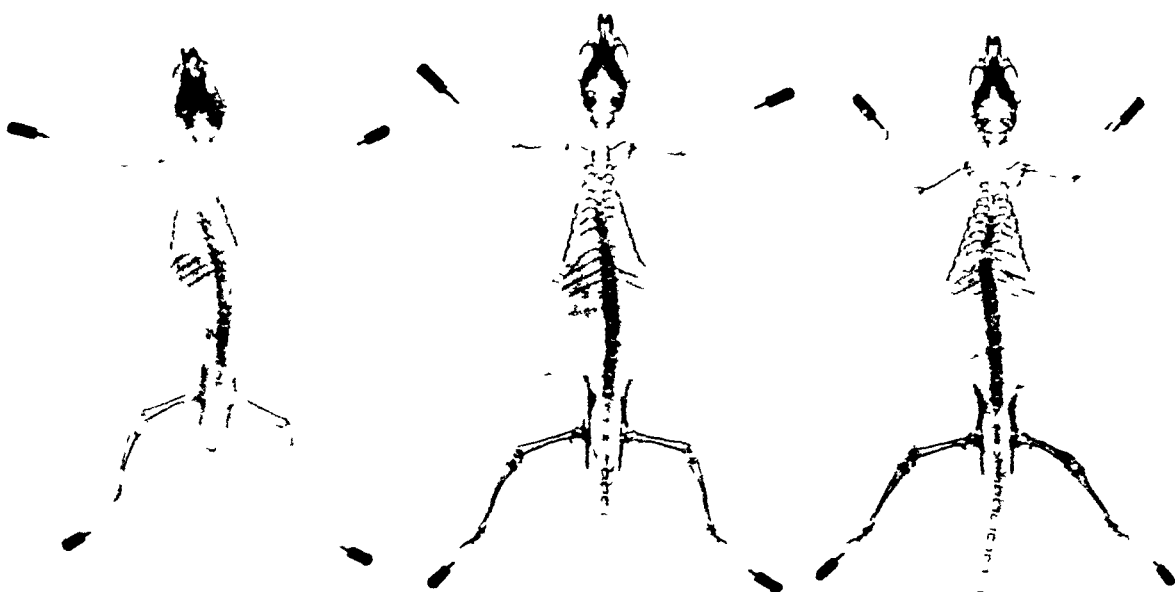


FIG 1 Group 1

FIG 2 Group 2

FIG 3 Group 3

Seventy-day female litter mates (first generation) Note poor calcification in Group 1 good calcification in Groups 2 and 3

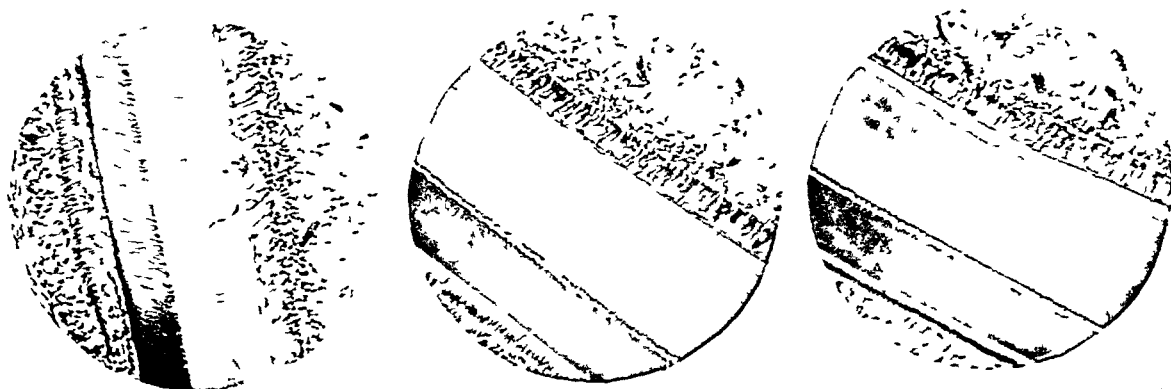


FIG 4 Group 1.—Tooth ash 33 per cent predentin 44.6 per cent

FIG 5 Group 2.—Tooth ash 35.29 per cent predentin 30.12 per cent

FIG 6 Group 3.—Tooth ash 35 per cent predentin 30 per cent

Longitudinal sections of the apical region of the upper incisor teeth of seventy-day male litter mates ( $\times 100$ ) Note that the predentin is wide in Group 1 narrow in Groups 2 and 3 ( $17 \mu$ ) there are vascular inclusions and an irregular calcification line in Group 1 no inclusions and a regular calcification line in Groups 2 and 3

H. A. BRITAIN FRACTURE OF THE NECK OF THE FEMUR

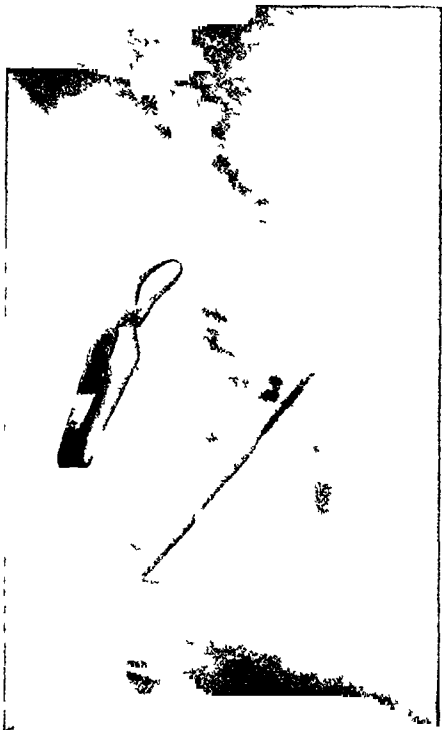


FIG 1—Antero-posterior view of Michel clips and guide in position



FIG 2—Lateral view showing guide in front of neck and Michel clips behind

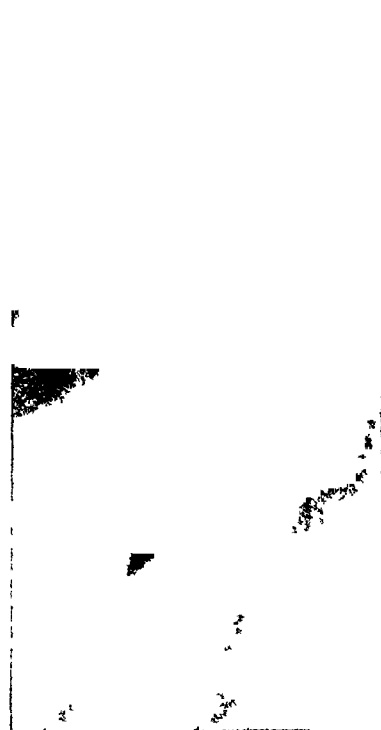


FIG 3—Petrochanteric fracture treated by long nail



FIG 4—Abduction fracture in patient aged 51 with slight displacement treated by rest in bed only



FIG 5—The same patient six years later showing degenerative arthritis treated by arthrodesis



FIG 6—Bilateral nailing in a patient aged 68. Fracture of right femur three years ago, nail inserted by open operation. Fracture of left femur eighteen months ago, nail inserted by closed method. The patient has full movement in both hips and walks without pain in either limb

FRANK STABLER EXTRA UTERINE GESTATION LIVE CHILD



FIG 1—Antero-posterior view of extra uterine thirty seven weeks foetus.

FIG 2—Lateral view Note shadow presumably due to mass of tumour in rectum.

JAMES MAXWELL SPONTANEOUS HAEMOPNEUMOTHORAX



FIG 1—Left sided pneumothorax with fluid level (September 1 1937)

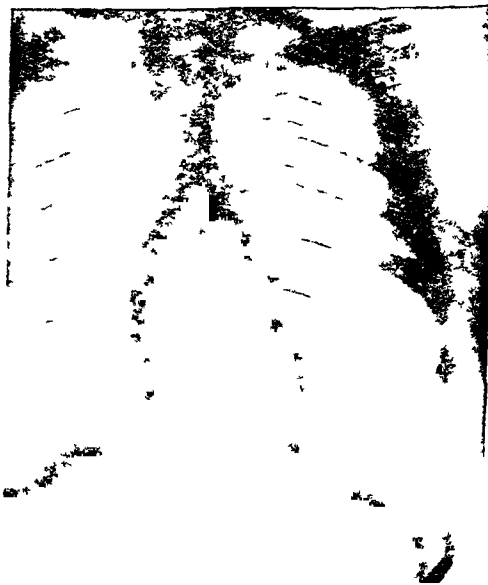


FIG 2.—The lung appears normal and the lower extremities are normal (September 20 1937).

APRIL 9, 1938

T H BOON COMPLICATIONS OF GOLD THERAPY

THE BRITISH  
MEDICAL JOURNAL



FIG 1 —Condition of back of neck

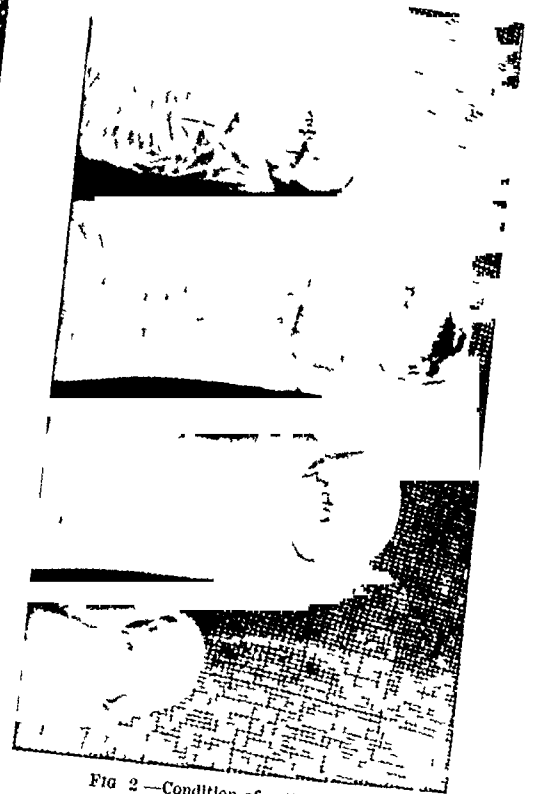


FIG 2 —Condition of patient's nails

R G PROSSER EVANS MALIGNANT TUMOUR OF THYMUS



M CHRISTIE BILATERAL AXILLARY BREASTS



therapeutic response as the more classical varieties there appeared to be no reason to deny a gouty basis for the fibrositis seen in these cases.

Dr HUBERT GIBSON and Dr G. D. KERSLEY (Bath) presented a clinical and pathological study of a series of cases. Of fifty-four cases of true gout 24 per cent had a family history of the same condition. Acute onset with complete remission occurred in 75 per cent; the onset following injury, infection or worry, sometimes the ingestion of particular foods and drinks. The age of onset was most frequently between 40 and 50. Only 24 per cent had tophi. Clinically there were cases grading off into other types of rheumatism suggesting that gout was more a syndrome than a disease. After discussing the pathological findings, Dr Gibson gave it as his opinion that by a consideration of the erythrocyte sedimentation rate, the polymorphonuclear neutrophil percentage, the red-cell volume and the formalin test chronic rheumatic diseases could be placed in the following order of their deviations from normality: (1) fibrositis, (2) osteoarthritis, (3) gout, (4) the gouty basis group, (5) rheumatoid arthritis, (6) spondylitis ankylopoietica. Dr Kersley who had undertaken the clinical part of the investigation said that the criticism would probably be that a number of cases were included which were not true gout.

In some general discussion Dr NOUB FARAH (Alexandria) said that gout was a definite entity tending to disappear with a healthier regime and more physical exercise while rheumatism of metabolic origin was a vague generic expression including many factors concerned with intoxication. Dr FLORENT COSTE (Paris) pointed out how greatly the incidence and clinical character of gout varied from country to country. One point on which the textbooks had made a mistake was in associating the disease with constipation. It was much more often associated with an irritable colon and frequent and urgent motions.

Dr JOSEPH RACE (Buxton) remarked on certain differences between gout and rheumatoid diseases in general from the point of view of heredity and of geography. For example rheumatoid disease was just as prevalent north of the Tweed as south but gout north of the Tweed was practically non-existent. Dr DOUGLAS COLLINS (Harrogate) said that he had aspirated the joint fluid from small and large joints at the stage of an acute gouty attack and had found it as full of polymorphonuclear cellular exudate as in any other kind of infective arthritis except those in which there were actual organisms in the joints. The inflammation was the same as inflammation of any other kind. The reaction it occurred in the synovial tissues gave rise to the proliferative changes which were to be expected and therefore it was no matter of remark that the later stages in the histology of gouty arthritis and rheumatoid arthritis should be similar. Professor ANDRONESCU (Bucarest) called attention to the aetiological factor of insufficient respiration. Failure to breathe properly could be the basis of almost any morbid process and should be considered in the aetiology of rheumatism.

Dr R. J. WEISSENBACH (Paris) and Dr F. FRANÇON (Aix-les-Bains) presented a paper on the radiographic aspect of gouty foot (the thorn foot). In the skiagram in profile the tarsus was spiked on its upper surface with osteoblastic protuberances usually grouped two by two forming a sort of crater. In the seven cases described the gout generally manifested itself in two or three annual typical attacks.

#### Incidence of Gout

At the second session of the Conference presided over by Sir HUMPHRY ROLLESTON several Continental workers gave their experience of gout. Dr GUNAR KAHLMETER (Stockholm) said that only twenty out of 1,000 rheumatic cases in the four great general hospitals of his city were cases of gout and in fourteen years private practice he had seen only seventy cases. Dr J. VAN BREEMAN

(Amsterdam) recalled the names of some famous men who had been afflicted with gout—Frederic the Great, Goethe, William Pitt, Sydenham, Kant among others. In nearly all countries the incidence of gout had declined and when it did appear it was less severe. The modern physician was untrained to recognize its varieties so that a number of sufferers never had their malady identified. In some countries cases of gout appeared to be rampant only by tophi elsewhere there was mere gout without tophi.

A paper by Professor GERONNE (Wiesbaden) was read in his absence by his colleague Dr KERNAT. He pointed out the connexion between gout and other metabolic disorders especially those occurring round about the menopause. One metabolic disorder which should be considered in relation to gout was the imperfect digestion of fats. Another form of arthritis clearly metabolic was alkaptonuria. A connecting link between all these forms of arthritis was that they were hereditary in the same sense as gout. Another distinguished absentee whose paper was read in his absence was Dr ERNST FREUD (Vienna) who contested the common view that gout was a familial disease. Out of 120 cases of gout in 10 years he had met with a familial factor in seven only. In 25 per cent of cases of gout he had found none. During ten years he had seen eleven cases of true gout in women all showed increased uric acid in the blood. Attacks of gout not seldom followed infections such as scarlet fever and diphtheria in which cases an allergic reaction might be assumed. He had found a combination of gout and rheumatoid arthritis in a few cases, one of them a man of 33.

In further discussion Dr PRICE (Bristol) described nine cases of congestive heart failure in which patients had been put on salyrgan and ammonium chloride for oedema. A brisk diuresis followed and each of the patients developed an attack of acute gout. Some of them subsequently had a history of recurrent gout over a long period. A return to oedema and increasing signs of failure occurred after the gout attack followed by death within a period of from one to six weeks.

Dr J. FORESTIER (Aix-les-Bains) said that from statistics published by his grandfather in 1850 it appeared that out of 800 rheumatic cases he had had only seven cases of gout. His colleagues in Aix-les-Bains and himself found a similar proportion to day. Not enough had been said about the influence of alcohol. Half or more than half the middle class patients who came to him for gout were proprietors of saloons. Dr PHILIP HENRI (Mavo Clinic) said that the chief diagnostic criteria were the characteristic patterns of the single and subsequent attacks and the response to treatment. The uric acid index and the presence of tophi were of less importance and x-rays were not of much help. Cinchophen was the subject of much controversy in the State. The truth appeared to be that some needed it and could not get along without it, while for others it had no value. Dr E. P. POULTON said that his colleague Dr W. E. B. LLOYD had found in carrying out certain special methods of examination that in an attack of gout there was a fall in the output of uric acid but a rise out of all proportion to such fall in the uric acid in the blood. Dr RUPERT WATERHOUSE (Bain) referred to a Continental observation that the amount of uric acid in the blood was estimated in the blood corpuscles and the amount of plasma varied at different periods during an attack of gout—that is to say the amount of uric acid in the plasma diminished whilst that in the plasma increased. He had himself repeated this observation and he could not find the figures obtained.

#### Jaundice in Relation to Rheumatism

At the final session of the Conference presided over by Sir WALTER LANGDON BROWN groups of related subjects were taken. The one that excited the

discussion was jaundice in relation to rheumatism Dr PHILIP HENCH (Mayo Clinic) said that when patients with rheumatoid arthritis or primary fibrositis became jaundiced their rheumatic symptoms were rapidly, markedly, and generally completely alleviated for some weeks or months—a phenomenon casually mentioned by, among others, Wishart\* (*British Medical Journal* 1903 1, 252) Dr Hench summarized his observations on thirty-one rheumatic patients who experienced the phenomenon and—of equal importance—on four patients with rheumatoid arthritis and nine with other types of articular and neuritic complaints who were not relieved Symptomatic remissions lasting from 5 to 82 weeks occurred in nineteen cases of rheumatoid arthritis in which intrahepatic or obstructive jaundice lasted an average of nine weeks Remissions lasting 4 to 104 weeks occurred in nine cases of fibrositis in which the jaundice lasted an average of 5.6 weeks The degree of symptomatic relief was complete for all the fibrositic and for almost two-thirds of the arthritic patients The remarks of the patients were significant "When jaundice came in at the front door rheumatism went out at the back" "I would trade my rheumatism for jaundice any day" The phenomenon was apparently more dependent on the quantity than on the type of the jaundice He added that there was no particular rationale for the use of "artificial jaundice" in rheumatic disease, but the history of the therapeutics of rheumatoid arthritis was full of the ghosts of "rational treatments" which should have helped but did not In this instance, thanks to one of Nature's revealing "slips" or "tricks," a return to the empirical might be of use The responsible agent and the mechanism whereby it operated had not, however, been identified He described some work on induced hyperbilirubinemia, it was a rather crude and inconsistent approximation to the more dramatic and complete effect of spontaneous jaundice It was by no means a 'control of arthritis, nor was it a practical procedure, being expensive and inconstant As a piece of research it had its promising features, but to exploit the use of bilirubin and bile salts for the treatment of arthritis at present was unwarranted and undesirable

Dr BARNES BURT (Bath) said that following a letter by Dr E. A. Addison which appeared in the *British Medical Journal* a year ago, suggesting an explanation of epidemic jaundice—namely, the eating of Spanish chestnuts—he procured two sacks of this fruit and tried it on certain rheumatic patients Unfortunately, the only person who developed jaundice at all was the sister in the ward! Professor VEIL (Jena) referred to a case in which the appearance of jaundice in the course of severe rheumatic fever complicated by meningitis was associated with a fall in the temperature and the disappearance of both the rheumatic and the meningitic symptoms He thought the phenomenon could be traced back to something very fundamental that happened in the liver Dr NUJIB-FARAH (Alexandria) thought the explanation might be found in the bilirubin in the blood In typhoid fever he had found the bilirubin low, in certain cases of rheumatic fever high It was a defence mechanism constantly varying according to the nature of the invading organism to be overcome Dr JOSEPH RACE (Buxton) said that the clue might lie in comparing the remissions which occurred owing to jaundice and those which occurred during pregnancy The only link appeared to be that bilirubin was a member of the same chemical group of substances in some others of which in pregnancy, changes occurred, cholesterol was a member of the same group

#### Circulation in Relation to Arthritis

Dr RALPH PEMBERTON (Philadelphia) said that the widely prevalent view which attributed some of the

symptoms of rheumatoid disease to disturbances of the peripheral circulation received support from much clinical and experimental data Important consequences followed from the derangement of the circulation After surveying the wide range of circulatory influences in arthritis, following the decreased rates of exchange of materials between the tissues and the blood as it passed through the periphery, Dr Pemberton said that although therapy should not be directed primarily, or chiefly, to the circulatory deviations, such a consideration should be part of the broad attack which envisaged the patient as a whole provided optimum conditions of rest and nutrition, and removed or controlled precipitating or contributory factors He emphasized the importance of rest "*Requiescat in pace* would do a great deal more good placed at the head of the patient's bed than on his tombstone"

#### Rheumatic Disease and the Voluntary System

The only discussion of a medico-political character took place on an address by Professor STANLEY DAVIDSON (Aberdeen) entitled 'Can the Problem of Rheumatism be Solved by the Voluntary System?' In Scotland, he said, 14 per cent of the invalidity of insured persons was due to rheumatic diseases, with a loss of three million working days a year Recently he had ascertained certain figures as a result of a questionnaire to a number of practitioners in North-East Scotland with regard to the number of new cases If their statistics were representative of the whole of Scotland and the month during which they were taken was representative of the whole year the annual number of new cases was 375,000, being 28,000 of rheumatic fever, acute and subacute, 24,000 of rheumatoid arthritis, 29,000 of osteoarthritis, and 294,000 of muscular rheumatism The only real facilities available were treatment by general practitioners and in voluntary hospitals All would agree that physiotherapy was needed at a certain stage in the treatment of rheumatism, but under national health insurance not even massage was provided, let alone more expensive forms of physiotherapy Nobody would suggest that voluntary hospitals could supply the need They had not an adequate number of men trained in physiotherapy, and many physicians on the staff of voluntary hospitals had little interest in the group of rheumatic diseases In Scotland the radiologist was usually in charge of the physiotherapy department, and however good he might be as a radiologist he was frequently ignorant of rheumatism and the methods of treating it The spas were relatively inaccessible to the large areas of working-class population He pleaded for the provision by local or national authorities of rheumatic clinics in charge of specially trained full time medical officers, and additional institutional accommodation where necessary He added that this did not imply that the voluntary hospital system would not have an important part to play in collaboration with the municipal clinics

Professor R. B. OSGOOD (chairman of the American Committee for the Control of Rheumatism) said that in Massachusetts, with a population of  $4\frac{1}{2}$  millions, chronic rheumatism led all other diseases as an economic, social, and medical problem The legislature had at last consented to give a subsidy to existing voluntary institutions so that a certain number of beds might be provided for the study and treatment of rheumatic diseases Dr J. FORESTIER (secretary of the French League against Rheumatism) said that the League was now recognized as a medical society of public utility which might receive endowments and public grants The French legislature provided facilities for the study of cancer, tuberculosis and venereal disease, and now rheumatic diseases were being included in the same provision

#### Miscellaneous Papers

Before the Conference ended three miscellaneous papers were presented under a "ten minutes rule" One, by

\* In a short note Dr John Wishart wrote 'When jaundice of an obstructive type becomes fully established in the system of a patient suffering from chronic rheumatism rheumatoid arthritis, or muscular rheumatism the pains characteristic of these diseases disappear entirely'—ED, *B.M.J.*

Dr LEVINHAL (Bath) recounted certain serological investigations carried out in the research laboratory of the Royal National Hospital upon sensitization and immunity. Dr W S C COPEMAN described certain toxic reactions to gold injections. Skin lesions had attracted his attention most. These might take the form of an erythema sometimes local and sometimes generalized which in the more permanent lesions might become purpuric. Eosinophilia was an indication that a rash was likely to occur but it was too late to be of any use. Dr GERALD SLOT mentioned some work on the treatment of sciatica. He had found of considerable value the method worked out by Evans and others of epidural injections followed later by manipulation. Under evipan anaesthesia an epidural injection of novocain was given. normal saline might be used instead, but novocain induced a little less pain.

#### Civic Banquet

The Mayor of Bath (Captain Adrian Hopkins) entertained the members of the Conference to a banquet at the Guildhall when the toast of The Conference was proposed by Mr C G MACKAY chairman of the Royal National Hospital who described the developments which are impending whereby the hospital will be re-erected and extended close to the hot springs. The toast was supported by Dr ALDRED BROWN who welcomed the visitors on behalf of the staff of the hospital and the medical profession of Bath.

Lord HORDER, in response, said that it was imperative that the hospital should be rebuilt at as early a date as possible. The conditions under which the medical staff did their work were wholly inadequate. There might be some people who questioned the right of the hospital to describe itself as national but in fact less than 4 per cent of the admissions came from Bath and its immediate vicinity. The patients came from fifty different counties in Great Britain and Ireland. The amount received for the appeal fund stood at £67,000 but this was less than one third of the total required. The lay out of the new hospital was excellent conforming to most if not all of the criteria by which he judged a modern hospital. A site would be available later for a paying patients' annex. No lay out of a modern hospital should be passed which did not provide for those who had been called the new poor.

Professor R B OSGOOD of Boston U.S.A. who also responded said that the exact causes of rheumatic diseases were still unknown or unproved but the effect of many measures of relief perhaps of control was understood. It was the present task to discover and eliminate as many of the background causes as possible. Above all it must be remembered that each case presented an individual problem for which the individual physician must be responsible also that orthopaedic surgery and physical therapy had an important part to play in the preservation of function and again that there was work to be done on the neurological and psychological side. He found great encouragement in the present awakening of widespread interest in rheumatic diseases.

The historical and literary associations of Bath were eloquently woven into the speech of Sir WALTER LANGDON-BROWN in proposing the health of the hosts and the Mayor in his reply touched on the history of the beautiful hall in which the company had met and of the city plate which was prominently displayed. He also mentioned that in 1784 the number of physicians and surgeons practising in Bath was twenty three as against 107 to-day.

Before leaving Bath the visitors attended a well arranged clinical meeting at the Royal National Hospital when cases were shown by Dr Aldred-Brown, Dr J B Bennett, Dr P W McKee, Dr J Barnes, Burt, Dr G D Kerslev, and Mr C E Kinderlev. A demonstration was also given of hydrological methods at the bathing establishment.

## INTERNATIONAL CONGRESS ON RHEUMATISM AND HYDROLOGY

### CONCLUSION OF OXFORD MEETING

The Oxford Congress the first part of which was reported last week (p. 743) continued until March 31 when it was followed by the similar meeting at Bath. The whole of the latter part of the proceedings was occupied with a discussion on juvenile rheumatism. The remarks of the openers have already been briefly summarized.

#### Juvenile Rheumatism Pathological Aspects

Continuing on the pathological aspects Dr G H EAGLES (Lister Institute) said that while various ages it had been suggested from time to time as the causal factor in rheumatism all of them left some element in causation unexplained. All the suggested organisms concerned in including streptococci when tried experimentally on animals failed to repeat the infection. Therefore it seemed reasonable to pursue the idea of a virus. The agglutination phenomenon was obtained with certain suspensions of virus like particles in serum from rheumatic fever, rheumatoid arthritis and chorea but on inoculating monkeys with these suspensions some doubtful clinical signs were produced in only three out of a series of thirty five. Post mortem examination revealed what might have been an Aschoff node but it could not be said that rheumatic fever had been produced in monkeys. The failure to obtain a clinical result despite the serological reaction might be explained either by supposing that these were not true virus particles or that they were virus particles but not capable of infectivity. I do not want to arrive at a conclusion with the idea that I think a virus is the cause of rheumatism said Dr Eagles. I do not know the cause—nor does anyone else.

Dr W H BRADLEY who had co-operated in the experiment said that the agglutination phenomenon was a real one capable of being observed and repeated. Dr Bradley proceeded to describe a case furnishing some evidence that the apparent anaemia and pallor in rheumatic fever was due to an increase in plasma volume. Dr A C LEMMONY (Glasgow) showed histological sections of the case of a woman aged 20 who died of extremely severe rheumatic infection in the seventh month of her pregnancy. In the foetus were found microscopical appearances of a definite though non specific valvulitis. The mother's illness had been of four weeks duration starting with little more than fleeting joint pains as a sequel to a chill. Professor VEIL (Jena) referred to the existence of pre-rheumatic states obscure illness with indefinite symptoms and Professor LOEWENSTEIN (Vienna) mentioned the value of evidence from histological examination of glands in the neighbourhood of the joints affected.

#### Clinical Aspects

In the discussion on clinical aspects with Dr LEONARD FINDLAY and Dr H. GRENET as rapporteurs Dr GERMAN BLECHEMANN (France) commented on the frequency with which an attack of scarlet fever had been followed within a few days or weeks by articular rheumatism often with cardiac complications. Professor C BRUCE PERRY (Bristol) mentioned the frequency of antecedent tonsillitis. Recently adopting a more searching examination of his histories he had found an antecedent sore throat in 75 per cent of first attacks of arthritis or chorea and in 50 per cent of relapses. In chorea such a history was found in 100 per cent. In the case of articular rheumatism such a history was forthcoming in 100 per cent. As for exanthematous diseases as a whole appeared to be more common in females than in males in the West of England at all ages. One sex differentiation was the greater frequency of infection of the aortic valve in boys. This was found in 10 per cent of male cases of chorea and only in 7 per cent of female cases. In opening the discussion Dr FINDLAY said that the evidence on the existence of a rheumatic virus



lesion, but this speaker believed, that there was a genuine, though rare, involvement of the lungs in some cases, and not always as a terminal event, nor to be explained on the basis of congestive cardiac failure

The discussion was concluded by Dr S SIWE (Sweden), who said that quick subsidence and extreme variability in the same individual were features of rheumatic infection in childhood. The sedimentation rate was at present the most convenient means of following the course of such infections, but chorea did not speed the sedimentation rate. Medical opinion in his country still adhered to the value of salicylates, which had more than a symptomatic action. He emphasized the necessity for long and careful supervision, with rest in bed which in children implied hospital and convalescent accommodation

### Therapeutic Aspects

The discussion on treatment was opened by Dr WILFRID SHELDON (London). He opened with a definition of juvenile rheumatism—the proceedings of the Congress had rather pointedly suggested the need for a definition—as embracing three clinical conditions: acute rheumatic arthritis (in this country called rheumatic fever), rheumatic disease of the heart, and rheumatic chorea. A fourth group of symptoms was subacute rheumatism, indicating a pre-rheumatic state, with vague limb pains, often combined with evidence of debility. In the general principles of treatment of acute articular or cardiac rheumatism rest in bed remained the sheet anchor. Since the introduction of salicylates sixty years ago no drug had reached the same popularity. Combined with alkali it should be pushed in acute articular rheumatism, and might be used in smaller doses for the relief of pain in carditis. The effect of aspirin was no greater than that of sodium salicylate, and it had the disadvantage of being incompatible with alkalis. Pyramidon had not gained popularity in this country except in the treatment of chorea. His own experience of sulphanilamide in this connexion was disappointing and the results of vaccine and serum therapy up to date had been inconclusive.

Professor DE HORVATH said that in Hungary juvenile rheumatism was far from being as rare as it was in Northern and Western Europe, but rheumatic disorders were tending to increase and the type of rheumatism was becoming more severe. One unusual complication increasingly noted was hepatitis. Treatment with gold preparations had resulted in no great improvement, and required, especially with children, most circumspect handling.

Dr CAREY SMALLWOOD described the arrangements and routine at the Baskerville rheumatic colony, Birmingham. Did the advantages of colonization outweigh the disadvantages? Children from poor overcrowded homes who had reached the stage of convalescence from a recent acute carditis would reap great physical and educational benefit from long-continued care in a colony, but for the child with a scarred heart, whose rheumatic infection had died down, colonization might be extremely dangerous. Dr L SCHMIDT described a clinic for juvenile rheumatism which had been established at Pistany with the help of the Ministry of Health of Czechoslovakia. He suggested that rheumatism might appear in certain children under slight and confusing symptoms owing to a difference in the reactive power of the child. Very slight symptoms, including rises of temperature of even a quarter of a degree should not be disregarded in a child suspected of a rheumatic tendency. He warned against the indiscriminating use of massage and baths.

### Postural Exercises

Dr WARREN CROWE (London) said that, having seen the work of Goldthwait and Loring Swaim at Boston, he had adopted some of their exercises for a number of patients at the Charterhouse Rheumatism Clinic and elsewhere with good results. In their books a long and com-

plicated system of postural exercises was described, but these could actually be reduced, for most people, to two basal exercises of extreme simplicity, with a third for the narrow-chested, shallow-breathing asthenic type. They were performed lying on the back on a plane surface. Dr Crowe projected a film beginning with some diagrammatic silhouettes showing faulty, improving, and good posture, and passing on to the exercises. The exercises were of a simple type designed to increase the activity of the circulation, to eliminate the lumbar curve and strengthen the abdominal muscles, and finally to expand the thorax and enlarge a narrow costal angle. If these exercises were carried out regularly for two or three minutes night and morning a correct posture was easily acquired. The common attitude, in which the lumbar and dorsal curves were exaggerated, the knees were slack, and the abdomen was sagging, would be gradually replaced by an upright and alert bearing—in Goldthwait's words "Stand tall, weight on the balls of the feet, abdominal muscles contracted, lumbar curve flattened, chest and head up, and chin in." In rheumatic children the exercises should begin at the earliest possible moment compatible with the cardiac condition.

Dr W R F COLLIS (Dublin) discussed "growing pains"—a term in use before the days of scientific medicine. Subacute limb pains occurred in children usually between the ages of 3 and 14, and might be divided into three groups: (1) those appearing in attacks of subacute polyarthritis, (2) those appearing in attacks of rheumatism of the adult type, but not at all uncommon in children, and (3)—the largest group—pains due to debility, including those arising from deficiency diseases. Acute rheumatism really accounted for only one small group of cases of growing pains. Dr E P POULTON was doubtful whether growing pains of any kind could be separated from the rheumatic state. Dr CAREY SMALLWOOD said that in his view 95 per cent of children who had growing pains showed no evidence of heart rheumatism. Often the pains were a psycho-neurological reaction to a bad environment.

Dr GUNNAR EDSTROM (Sweden) mentioned the use of gold therapy. At the rheumatic clinic of the University of Lund sixty-nine cases of rheumatoid arthritis had been treated with gold salts (solganol) during 1937. Of the fifty-nine which received the full treatment (at least 2 grammes of solganol, never in larger doses than 0.25 gramme) good results were obtained in thirty-three and improvement in eighteen. In forty-one cases there were certain complications, including, in five cases, thrombocytopenia or granulocytopenia, but, these notwithstanding, he regarded the treatment as preferable to that with sulphanilamide or with vitamin B.

Dr J FORESTIER demonstrated the orthopaedic treatment given in severe cases of rheumatoid arthritis in children at Aix-les-Bains. By the use of successive plaster casts it had been possible to effect great improvement. A complete cast was kept in position for only eight or ten days, then half the plaster was cut away, retaining the posterior part as a splint. In this way ankylosis was prevented.

### Social Aspects of Juvenile Rheumatism

In opening this discussion Dr F J POYNTON remarked that the incidence of the disease in Great Britain was not known for it was not notifiable, and in view of what had taken place at the present Congress, when it was evident that the experts did not know what it was, he would not advise that it be made notifiable. As for causes, he believed the British climate to be largely responsible, with its swift unexpected variations, and the cold damp, which favoured tonsillitis and catarrh. The disease was more frequent among the poor, but the "poverty complex" did not explain all the facts of causation. Of gross faults of what he called the "microclimate" he mentioned overcrowding, which was held by the late Carcy Coombs to be more important than damp in juvenile rheumatism.

As for nutrition he had not thought that the rheumatic children under his care were in general ill nourished but Sir John Orr's statement that a completely adequate diet was only reached at an income level above that of 10 per cent of the population caused one to revise one's notions. The present push for swimming or bathing pools ought to be watched from the point of view of the rheumatic child who was sensitive to sudden changes of temperature and to prolonged stay in cold water.

After Dr MARIEL ORY and Dr A. VORGAARD had described the social provision in Belgium and Denmark respectively, Dr C. E. THORNTON of the Public Health Department, London County Council described the rheumatism scheme of that authority. The treatment, care and education of rheumatic children cost London £220,000 a year. In June of last year there were under supervision by the school doctors 2,000 children with another 5,000 at the special supervisory centres and 890 actually under treatment in the rheumatism hospitals. The rheumatic area of London followed closely the southern bank of the Thames with some of the poorer areas on the northern bank, the north west was relatively exempt. The seasonal curve reached its lowest in July and was almost the inverse of the sunshine curve for London. The hospital provision made by the Council consisted of 900 beds being 650 for acute cases and 250 for doubtful and convalescent. There were twenty rheumatism centres ten entirely under the control of the Council and ten run in co-operation with voluntary hospitals.

In the course of the session a message was read from Professor Kontchalovsky of the USSR and the Committee for the Study and Control of Rheumatic Diseases in Soviet Russia sent a report specially prepared for the Oxford Congress on the combating of rheumatism among Soviet children. The first clinic for juvenile rheumatism was opened in Moscow in 1934 and there are now clinics in many other cities while in Moscow a special clinic for the rheumatism of adolescence is projected.

## MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY

### Annual General Meeting

At the annual general meeting of the Medical Sickness, Annuity and Life Assurance Society, held at its offices, 360 High Holborn, W.C.1 on March 29, Dr F. C. Martley, chairman of directors, said that the year as a whole had been auspicious and although there was nothing spectacular in the new business figures a steady volume had been maintained. The total life assurances showed a small increase and the sickness assurances a very small decrease but during the present year after the report and balance sheet now presented were closed a really substantial increase in both these classes of assurance had been experienced as compared with the corresponding period in 1937. In the life assurance fund during the year under review the new sums assured had amounted to £500,000, the claims paid had been £14,018 and the premium income had increased to £123,207. The new business in the sickness fund was slightly less than in the previous year but the previous year had been exceptionally good. The benefit paid away during 1937 was greater being explained apart from the increase to be naturally expected by the influenza epidemic during the early part of that year.

Dr Martley called attention to the item Loans on medical practices which as shown in the balance sheet had increased to £225,922—a net increase of just under £40,000 over the previous year. More business than ever was being done in this field, often more applications were received than was altogether convenient especially from the point of view of the time of the staff which was taken up in investigating them. Dr Martley concluded with a reference to the investment policy of the Society. The funds were growing rapidly and stood at over one and a half millions. At the present rate

of growth they would if affairs pursued the natural course be well over two millions by the next valuation. There were anxious times for those connected with the administration of insurance and the directors felt that it was in the best interests of the Society to follow a cautious policy in maintaining a balance between the holdings in good industrial securities and in Government stock.

The report and accounts were received and adopted and on the motion of Dr G. de Becqulre seconded by Dr Fairfield Thomas the two directors who retired by rotation—namely the chairman Dr F. C. Martley and Sir William Willcox—were re-elected. The chairman then proposed that the meeting recommend the payment of an interim bonus of 10% on all with-profit policies for permanent sickness and accident insurance and life assurances becoming claims during the year ending December 31, 1938. This having been agreed to Sir William Willcox proposed a vote of thanks to the staff of the Society mentioning the manager and secretary Mr Bertram Sutton who he said had been with the Society since its inception and Mr Heath and Mr Venus. This was carried with acclamation.

## Reports of Societies

### LUNG ABSCESS DIAGNOSIS AND TREATMENT

At the meeting of the Medical Society of London on March 28 with the President Mr J. E. H. ROBERTS in the chair a discussion took place on the diagnosis and treatment of lung abscess.

Dr JAMES MAXWELL defined lung abscess as non-tuberculous suppuration with cavitation occurring in lung tissue. The causation of lung abscess could be approached in two ways, by animal and by clinical experiment. Most of the animal experiments have seemed to be entirely misconceived. The animals used were naturally quadrupeds, their trachea was naturally horizontal and there was absolutely no guarantee that a result which applied to an albino rat applied to a human being. The cough reflex in humans was a most important way of keeping the respiratory passages clear out in the animal a cough was quite an unusual event—so unusual that in the case of a Derby favourite it was a matter for the 'Stop Press'. Clinical study gave the clue to the causation of abscess. He entered in particular of the condition now becoming well recognized as pyogenic pneumonia an inflammatory consolidation of the lung of a sort. With such inflammatory consolidation the future of the patient would depend not only on the local resistance in the lung tissue but also on the general resistance. Dr Maxwell outlined the position on the following table:

Resistance to Infection		
General	Local	Resons
Good	Good	Pneumonia
Good	Bad	Lung Abscess
Bad	Good	Pneumonia
Bad	Bad	Septicæmia

He was coming to look on pneumonia as the precursor of most of the acute inflammatory lung troubles. It did not really matter how the organism got into the lung, whether by aspiration or the blood stream, the result would be the same according to the extent of the patient. Any condition which caused infection of the lung would cause abscess if the resistance in the lung tissue was not sufficient to overcome the infection. He listed the causes of lung abscess as follows:

- (1) Lesions involving the respiratory tract
- (2) Abdominal conditions
- (3) Sequel to peripheral septic conditions
- (4) Lesions of the nervous group
- (5) So-called primary lung abscess

The diagnosis depended on the symptomatology, the signs, and the results of special investigation. Cough was a fairly common early symptom, for the first week or longer it might result from irritation of the bronchi and therefore be unproductive, but even at that stage there was surrounding congestion and therefore haemoptysis was to be expected. Then there might come a stage when there was sputum, appearing quite suddenly and in considerable quantity. Another symptom which might arise was pain in the chest, this helped to localize the lesion. Shortness of breath was not a very prominent symptom. Temperature varied very little, in some cases there might be a high temperature with rigor, but in many others it was possible to have quite a large abscess with little or no pyrexia. One symptom which was almost diagnostic, especially in an acute case, was that cough was induced by change of position. Among special investigations great help was obtained from bronchoscopy, which would not only make the diagnosis but assist materially in treatment. Radiology of the chest was also most important. Very often the shadow of the abscess was approximately circular and fairly well defined. The presence of a clear zone was perhaps the most important feature in the radiological picture of lung abscess. In the x-ray picture the lateral view was quite as important as the antero-posterior. The tomographic representation was also often of value. One investigation which was dangerous was the needling of the chest. This should never be done without the most serious consideration.

The evidence went to show that deficiency in the cough reflex was one of the factors which tended to promote infection. So far as post-operative lung abscess was concerned, very often pre-operative and post-operative medication was at fault. The giving of morphine, in his view, tended to diminish the cough reflex to an extent which allowed suppuration to occur. A certain number of patients with lung abscess, if left alone, would get rid of their abscess spontaneously, sometimes by absorbing the pus and sometimes by coughing it up. His plea as a physician was that cases should be watched as long as this was reasonably safe, and not operated on until there were definite indications for so doing. An abscess which would not diminish in size as a result of postural treatment seemed to be one in which surgery ought to be considered. While the initial bronchoscopy was extremely valuable, repeated bronchoscopy was a waste of time, because it was likely to be most effective in the same cases as were benefited by postural drainage alone. As to artificial pneumothorax, if the abscess was deeply situated, draining into a bronchus, and failing to resolve, then an artificial pneumothorax might help it to heal.

### Surgical Considerations

Mr R C BROCK said that from the textbooks one was liable to gather the impression that lung abscess quite commonly followed an operation, the inhalation of a foreign substance, or an attack of pneumonia. But in fact almost all critical observers agreed that the so-called primary lung abscess formed by far the greatest proportion of cases. No obvious predisposing cause was to be found. He was unconvinced as to any common association between true pneumonia and lung abscess. The term pneumonitis was a convenient and satisfactory one to explain the preliminary pathology. In the large group of abscesses of uncertain origin he had been impressed with the frequency with which gross oral or nasal sepsis was discovered, and he was quite sure that that was an important causal factor. In the radiological examination he emphasized the importance of the lateral view. In his own experience the commonest site of lung abscess was the apical branch of the lower dorsal lobe. The site second in frequency was the axillary portion of the upper lobe. Abscess of the middle lobe was rarely seen as a primary abscess, though it was not at all uncommon as a secondary one.

The treatment of lung abscess differed in no way fundamentally from the treatment of abscesses anywhere else in the body. The principle was to aid maturation and spontaneous discharge of the abscess by some simple means, but when it was realized that this was not going to take place by such means resort must be had to some form of surgical attack. Postural drainage to many people implied merely tipping the end of the bed, but it was only with an abscess in certain portions of the lower lobe that this device was of any value. Mr Brock indicated the postures which were of use for abscesses in different positions. A great deal of nonsense had been written about bronchoscopic aspiration. It was a valuable form of treatment, but too many people had the idea that it was a magician's wand. External drainage became indicated when it was clear from a study of the clinical and radiological condition of the patient that improvement was stationary or not to be expected.

### General Discussion

Dr F G CHANDLER drew attention to a condition which might be called suppurative pneumonitis, but in which there was no definite abscess, no cavity or definite collection of pus. He asked for suggestions as to how such a condition should be treated. Mr TUDOR EDWARDS said that he had never seen a true pneumococcal abscess of the lung, and he believed the majority of abscesses so described were inhalation ones. The guard of the larynx was not complete, and the cough reflex not entirely satisfactory. At any rate, cases of single, as apart from multiple, abscesses were largely caused by that type of infection. Dr P H MANSON-BAHR drew attention to amoebic abscesses of the lung, either primary or secondary to liver abscesses. Such cases might arise many years after people had left the tropics.

The PRESIDENT said that it had been the custom for many years for lung abscesses to be treated in a most optimistic spirit. Because a certain proportion of cases recovered spontaneously all cases had been kept waiting in the hope that they would make spontaneous recoveries, but during all this time the infection was continuing in the lung and producing irreparable damage. Operative drainage of lung abscess at an early stage was not a very dangerous procedure. He was not advocating indiscriminate operation on all cases, because he agreed that a considerable number did recover spontaneously. The primary treatment of a lung abscess was non-operative—postural, with drainage—but if there was evidence that the abscess was not draining it was necessary to go further. One good piece of evidence that an abscess was not draining was the fluid level in the cavity. If the fluid level persisted for fourteen days it was clear that the cavity was not draining efficiently. Apart from evidence as to the fluid level, if the patient was clinically improving and the radiographical shadow was getting less, then by all means non-operative treatment should continue, but if after a trial of fourteen days there was no clinical improvement or some clinical but no radiological improvement or if after some progress there was a relapse, then it was of no use proceeding with conservative treatment.

Dr BURTON WOOD said that the problem which distressed the physician was not so much the fixation of the abscess as the forms of pulmonary suppuration in which the abscess was much less clearly defined. The introduction of prontosil opened up a new field, and he hoped that some method would be found of dealing with the extensive pulmonary suppurations which constituted a more difficult problem than the abscesses with which the surgeon usually successfully dealt. Dr J G SCADDING joined with Dr Chandler in saying how difficult were the cases in which there was no definite abscess cavity. He mentioned one case which he said was a true wandering pneumonitis. These were the really difficult cases, and as for indications for treatment—well, there were none. Dr E R BOLAND related an interesting case in which a patient had lost his pulmonary abscess by cough

ing as a result of having his stretcher carried up in various tilted positions to the fifth floor of a nursing home.

Dr MAXWELL in reply said that although he had put primary abscess at the end of his table of causes it did not imply that it was the least frequent nevertheless he was surprised at the figure of 70 per cent which one speaker had mentioned. The suggestion he would make to Dr Chandler for dealing with the diffuse type of case he had illustrated was that ultra short wave diathermy should be used. The cases that did not resolve completely with this procedure were likely to break down and form a definite abscess.

Mr BROCK agreed that the treatment of suppurative pneumonia was a most difficult aspect of the problem. The diathermy loop was the most likely method to succeed. As to needling the needling of a lung abscess was very dangerous but in the type of case mentioned in which there was a diffuse black out and in which there seemed to be a chance of saving life if the cavity could be found he thought needling was excusable. The cases he had needled had always had a very resistant pleura, and no question of infection of the pleura had arisen. He had on occasion found a cavity as big as a hen's egg and after draining it the patient had recovered. Operation performed unsuccessfully without any accurate localization might be the most calamitous treatment but if care were taken to localize accurately the external drainage operation might be very simple in procedure and very dramatic in its results.

## THE ITALIAN ARMY IN ABYSSINIA

### Hygiene and Hospital Organization

At a meeting of the Royal Society of Arts on March 30 with Sir HUMPHRY ROLLESTON BT presiding Dr ALDO CASTELLANI KC MG (Hon.) (Count of Kisumu) who was appointed by Signor Mussolini High Consultant and Inspector General of all the medical units in East Africa and the Red Sea described in a lecture the hygienic measures and hospital organization of the Italian expeditionary forces during the recent Abyssinian campaign.

The war began on October 3 1935 and ended on May 9 1936 a few days after the fall of Addis Ababa. During this period the Italian troops on the northern front (Eritrea) and the southern front (Somaliland) numbered about 500,000. It is believed that this was the first time in history that so large a mass of white troops was transported to a tropical zone and in view of heavy losses from sickness in previous campaigns in tropical countries the situation was viewed with some misgiving. In 1890 the French lost in Tonkin more than one eighth of their troops owing to disease. In the French expedition to Madagascar in 1895 disease accounted for the death of more than one third of the army. In seven months of the Boer War (March to September 1900) out of a total of between 150,000 and 200,000 men disease accounted for over 5,000 deaths. During the Great War the East African Expeditionary Force with an average strength of 50,000 lost 6,300 men by disease as compared with 2,374 killed in battle.

It was fortunate said the lecturer that the head of the Italian Government realized immediately the enormous importance of medical preparation in a colonial war. The requests made to him for medical personnel and hospitals were immediately acceded to and in fact even doubled at his express command. Vast supplies of drugs disinfectants serums and vaccines were dispatched to Africa as well as hospital and laboratory equipment of every kind. During the war period the Italian army had 135 base and field hospitals each with medical and surgical wards a bacteriological laboratory and an x-ray department also fifty five small transportable hospitals

thirteen special surgical units fifteen x-ray ambulances four central institutes for special chemical and bacteriological investigation and twelve disinfecting stations. The navy had twenty hospitals and infirmaries along the coast together with eight hospital ships and the air force had twenty two infirmaries. The medical personnel in Africa numbered 2,484 of whom 2,205 were officers in the Royal Army Medical Corps and Militia. All the armed medical officers were required to take a course of instruction at the Hospital for Tropical Diseases in Rome before leaving for Africa. There were 284 nurses serving on board the hospital ships and in the base hospital and 100 hospital nuns also tended the sick while the regular hospital attendants and male nurses numbered 1,500.

### Sickness Prevalence

Malaria gave no serious concern to the Italian army though a number of the zones in which operated were badly malarial. The number of cases of primary malaria admitted to hospital was 1,241 and of relapses 1,075. There were twenty three deaths from pernicious malaria including blackwater fever. Quinine prophylaxis was insisted upon from the beginning every soldier received three tablets a day of quinine sulphate or bismuth chloride each tablet containing 0.2 gramme. At every meal the commander in chief and his staff officers ate an example by taking quinine regularly. The men were frequently paraded and a test of urine made to find out whether quinine had been taken.

The number of hospital cases of dysentery was 4,477 without a death. The great majority of these cases were of amoebic origin. First among the prophylactic measures was pure drinking water. Practically all the officers drank mineral waters which had been obtained in Italy. For the troops the local water was purified by boiling or some method of chlorination. The men were recommended to get into the habit of washing or disinfecting their hands with a 2 per cent solution of lysol or lysolorm after visiting the latrine or before having meals and lysol disinfection was strictly enforced on cooks and others serving in the kitchens. No vaccines were used the reason being that vaccines containing the Shiga-Kruse bacillus gave a severe reaction. With regard to oral vaccines the lecturer had not been able to convince himself that they were really efficacious. On grandmotherly precaution was adopted in the position for each soldier of a flannel abdominal belt to prevent chills.

Not a single case of cholera occurred before during or after the war. The cases of typhoid and paratyphoid infection numbered 48 with 161 deaths. One of the precautions taken was vaccination with mixed vaccine. No cases of typhus were reported thanks to the position of rigorous cleanliness. On the other hand the Abyssinian troops were known to have thousands of cases of typhus and louse infestation was common among them. There were only seventeen cases of relapsing fever with no deaths among the Italian troops but the Abyssinians were said to have had between 20,000 and 100,000 such cases. Small pox also occurred among the Abyssinians in great numbers but there was no case (which recovered) among the Italians. Fleas were almost completely absent—a result of the use of seven deaths—the virtual immunity being due to the effect of the sun under the prohibition of a complete attack except after sunset and the avoidance of travelling wherever possible.

Many cases of beriberi occurred among the Abyssinian troops but not a single case among the Italians during the war though one case developed after the war. Scour was rampant in the Abyssinian front but the Somaliland front but again no cases occurred among the Italians the chief reason for this immunity being that every soldier was given a lemon a day. The ration included a daily allowance of tea and biscuits and

potatoes fruit, beef, cheese, sugar, salt, olive oil, and coffee, with macaroni or spaghetti six times a week, rice once a week, condensed milk twice, marmalade twice, wine daily when obtainable, and brandy once a week. As major diseases were so low in incidence, more attention was paid to minor diseases, as, for example, such conditions as 'prickly heat' (lichen tropicus), for which menthol-alcoholic lotion was used, and dhobie itch, for which the parts affected were powdered with boracic acid.

#### Total Casualties

The total casualty list, for an army of 500,000 men, comprised 1,099 deaths on the field or from wounds and 599 deaths from disease," the term 'disease' including any injury or accident not caused by the enemy.

In conclusion the lecturer quoted statements made by Mr J L Rohrbach, correspondent of the United Press of America, who, after describing the ravages of disease in the Abyssinian army, where, he said, scurvy destroyed the army on the southern front and small-pox the army on the northern, while typhus passed from camp to camp, added, "It is obviously no exaggeration to say that one of the prime reasons for the Italian success was the continued health of their armies, due to the efficiency of their medical service. It also might be observed that medical science made it possible for white people to live in unhealthy climates under adverse conditions and to remain in better health than natives acclimatized by hundreds of years of continuous abode."

## Local News

### ENGLAND AND WALES

#### The Gloucestershire Scheme

A long and honourable period of service has been brought to a conclusion by the retirement of Dr J Middleton Martin from the position of Medical Officer of Health for the administrative county of Gloucester. Dr Martin assumed office in 1903, at first mainly in an advisory capacity, but very soon executive duties began to be added to him, beginning with the Midwives Act and the medical inspection of school children, and continuing through the years as his Council assumed new responsibilities in the field of public health which it was his function as their administrative head to translate into appropriate action. National health insurance, mental deficiency, dental treatment, venereal disease, maternity and child welfare, the care of the blind, and other activities all engaged his attention in turn, but his creative touch has been nowhere more apparent or more happy in its results than in his scheme for the extension and co-ordination of the medical practice of his county, with its chain of services covering the whole county area, based on the three large general hospitals at Bristol, Cheltenham, and Gloucester, and out-stations of hospitals over the county at which treatment is given weekly by the local practitioners and at which members of the hospital staffs attend periodically to give special services to patients grouped for examination. The scheme in its inception was recognized as a model by one of the Consultative Councils of the Ministry of Health. As it developed it established touch with the University of Bristol, and brought within its ambit the treatment of goitre, the rheumatic heart, maternity and child welfare work, and other activities. Orthopaedics is now well organized. In 1936 there were under review by surgeons 1,040 cases of deformity including fifty-nine poliomyelites—the aftermath of an outbreak of that infection during the previous year. Much has been said and written by many on the co-ordination of medical service and much drawn in diagrams

exhibiting circles, squares, and triangles joined by lines which somehow in the end lead precisely back to the point from which they started. But Dr Martin acted. While others studied the gale warnings he launched away and may justly be claimed as the pioneer in this country of a vitally important branch of organized medicine. His professional friends trust that he may long be spared to witness the widening expansion in other English county areas of the system for which he set so excellent a model.

#### Liverpool Tropical School

The thirty eighth annual report of the incorporated Liverpool School of Tropical Medicine (1936-7) constitutes a further record of a wide range of useful work. During the year 145 patients were admitted to the tropical ward of the Royal Infirmary, and many others were treated in the out-patient department. One hundred students from many parts of the world attended the various courses. Those in the DTH classes received additional practical instruction in village hygiene, surveying, and sanitary engineering at the demonstration area at Mellington, where an all-concrete house has been erected, a bore hole type of latrine installed, and a simple type of incinerator, suitable for village work, constructed. The recently inaugurated short courses of instruction in elementary tropical hygiene for non-medical people were attended by nineteen men and women. At the Sir Alfred Lewis Jones Laboratory, Freetown, Sierra Leone, recent work suggests that typhus is likely to prove a disease of considerable importance in British West Africa. Although much progress has been made, this work is still in its preliminary stages, and some time must elapse before even such fundamental points as the type of the disease and the nature of the vector are established with certainty. A research with great practical potentialities is being carried out by Dr A J Walker. This is a study of a disease affecting mosquitos which proves fatal to both larvae and adults. It is obvious that this investigation may produce results of considerable importance in the control of mosquito borne diseases. The laboratory is also responsible for the first ecological rat survey in West Africa, which was carried out during the period under review. The wise provision of long study leave for the West African Medical Staff enables its members to keep abreast of developments in other countries. For example, Dr T H Davey left the colony on study leave after an attack of typhus contracted as a result of his research work. He continued to work on typhus at the Pasteur Institute in Tunis, represented the School at the Medical Congress at Algiers, and prosecuted further studies in Hamburg. The report includes a list of twenty-seven original publications by members of the staff.

#### Industrial Foot Injuries Standards for Footwear

The British Standards Institution has been asked to set up a standard specification for safety footwear. This request was made unanimously at a meeting of manufacturers and users called recently on the initiative of the National "Safety First" Association, in conjunction with the Boot Trades Research Association and the Industrial Welfare Society. The importance of preventing foot injuries is emphasized by an inquiry recently carried out by the Sheffield Industrial Committee of the National "Safety First" Association, which revealed that over a group of fifty six firms the average proportion of foot injuries in non-fatal accidents was as high as 14 per cent, and it is known that proportions of 25 per cent and 30 per cent are not uncommon in individual cases. Over 11 per cent of non-fatal accidents in coal mines are foot injuries. Giving protection for the feet is the most simple and adequate way of avoiding these accidents which have many different causes. Many employers have realized this fact and for some years manufacturers have been supplying special 'safety boots'. These boots are of various types, but the essential feature of all of them is a hardened toecap, which will not collapse even if

a heavy weight is dropped on it. At present there is no standard of performance by which the various boots can be used, so that the new development should be welcomed by makers and users alike. In order not to stifle development the standard will not specify materials and construction but will only state, for instance, that the toe caps must withstand a certain weight dropped from a certain height and must satisfy agreed endurance tests. The maximum weight a man can carry—about 1 cwt.—dropped from his hands on to his toes may be taken as a basis of discussion.

#### Notification of Measles and Whooping cough in London

As stated in the *Journal* of March 5 (p. 534) the London County Council is proposing to require compulsory notification of measles and also whooping cough in London. At present compulsory notification of measles under orders made by the Minister of Health is in operation in eleven metropolitan boroughs only. In all but one of these boroughs notification is partial, being confined to the first case in the same household or institution within a period of two months. In three boroughs it is further limited to children under the age of 5 years. If the figures supplied by eight metropolitan borough councils where notification has been in operation for some years are representative of London as a whole it may be assumed that had notification on the same basis—namely the first case in the same household or institution within a period of two months—been in force throughout the county approximately 94,000 cases of measles would have been notified during the epidemic of 1935-6. The total number of cases therefor must have been far in excess of the 34,200 of which borough medical officers of health were informed during that epidemic. Whooping cough is compulsorily notifiable in five metropolitan boroughs but the notification is limited in two of them. The average number of deaths annually in London during the ten years 1927-36 was 527 from measles and 394 from whooping cough.

The Hospitals and Medical Services Committee in its report to the Council on the subject points out that measles and whooping cough are serious not only in themselves but in the complications and sequelae that frequently arise. Compulsory notification has an undoubted psychological effect on the attitude of the general public towards infectious disease notifiable diseases being regarded more seriously than non-notifiable ones and a greater readiness to obtain medical advice and treatment is shown. It is the opinion of the committee that the Minister should be asked to make regulations to render measles and whooping cough compulsorily notifiable on a uniform basis throughout London. It is not proposed that the regulations should apply to German measles and it is considered sufficient if the notification is limited to the first case occurring in the same house or institution within a period of two months as this will enable the necessary contact to be established with the borough medical officers of health. It is believed that the compulsory notification may result in a decrease in the number of complicated cases requiring admission to the Council's hospitals. The annual cost of the repayment of notification fees is not expected to exceed £8,000 a year.

#### Hospital Services and Boundaries

The special body called the Provisional Central Council, set up to consider and advise how the recommendations of the Sankey Commission can be made effective, has held two meetings. It has issued a letter to the secretaries of the existing regions of the British Hospitals Association, copies of which have been sent to the chairman and secretary of every voluntary hospital in England and Wales. In this letter it is asked that special meetings should be called for the purpose of considering the present boundaries of the region, the adequacy of the service given in it and generally to give information regarding local views and wishes. The Provisional

Central Council's letter outlined what services in its district should be found in a hospital region when normal speaking should be based upon one central or hospital. Members of the Provisional Central Council are willing to attend meetings in the various regions of the British Hospitals Association and discuss with representatives of the voluntary hospitals their difficulties and problems. The address is 12 Grosvenor Crescent, S.W. 1.

#### Bacteriological Investigation of Puerperal Sepsis

Sir Arthur MacNalty, Chief Medical Officer of the Ministry of Health, has issued a leaflet to medical officers of health on bacteriological investigation with reference to puerperal sepsis. He recalls that the Departmental Committee on Maternal Mortality was early impressed with the number of fatal cases of puerperal sepsis in which no source of infection had been traced. Hence the advisability of combining epidemiological and bacteriological investigation more often particularly with a view to defining the responsibility of throat carriers and to elucidating the part played by other possible infective agents in persons in contact with the patient. By agreement with the Medical Research Council investigations were made at a central laboratory over a period of two years and these confirm the importance of carriage of infection in the various forms of puerperal fever due to the *Streptococcus pyogenes*. Since administrative difficulties often arise from bacteriological uncertainty regarding the nature and source of puerperal infections medical officers of health are asked to take every opportunity to obtain help on these points from bacteriologists attached to adequately equipped local laboratories.

On the occurrence of pyrexia in a young woman appropriate measures for the isolation of the patient should be arranged immediately. Steps should at once be taken to ascertain the cause of the pyrexia and where this is found to be due or suspected to be due to uterine infection, swabs should be taken from the cervix, throat and nose. Similar research should be made for any possible source of the infection—for example, one throat tonsillitis, laryngitis, anal or skin infection—in the persons who conducted the labour or were otherwise in contact with the patient during the subsequent forty-eight hours. Swabs from throat and nose and from any obviously infected site should be taken from all contacts, whether or not associated with clinical manifestations of disease. It should be remembered that in contact with patients and instruments is the most likely mode of infection of the genital tract; particular attention should be directed to infections or abrasions of the skin in anyone who has had such contact with the patient. Ordinary diphtheria swabs should be used for taking specimens except from the cervix, where a longer swab mounted on malleable aluminium is preferable. In swabbing the cervix a speculum should be used. The examination of the swabs may lead to the detection of the same bacteriological strain in a patient and in someone who has been in contact with her or to trace and remove the identity of the strain from the cervix with that from the throat or nose of the patient herself. As a result appropriate treatment can be applied and necessary disinfectant action taken to prevent further spread of the infection.

#### 'Family Meals and Catering'

The Children's Minimum Council gave a luncheon on March 30 at the London School of Economics. The menu was based on recipes from the British Medical Association's cookery booklet, *Full Time's a Cookery*, and the cost per head for the 20 guests was 5s. 6d. The meal consisted of soup and onions, a potato salad or mince with rice and vegetables or salad, a fruit cake and mashed potatoes, stewed fruit and custard or plum duff and bread and butter. Soup and onions followed by plum duff seemed to be the most popular combination. Lord Horder, who presided, said that he had just been informed by Sir Ralph Le Fleming that the copies of *Full Time's a Cookery* had been ordered to be



it was ever advertised, and a new edition would shortly be available. In his opinion, the problem of feeding the individual would only be solved by tackling the larger problems of food production and food distribution. Mrs Yates, wife of an unemployed labourer, said she could not even give her family the minimum laid down by the British Medical Association. Her total weekly income was thirty-eight shillings, of which more than sixteen shillings was paid in rent. Only ten shillings a week could be spent on food for herself, her husband, and her child. Miss Eleanor Rathbone, M.P., who is chairman of the Children's Minimum Council, also spoke, and concluded by saying that although the expenditure of the Children's Minimum Council was only £600 a year its funds were nearly exhausted. Unless additional financial support was forthcoming it could not carry on its work for more than a few months.

### Maternity and Child Welfare

A National Conference on Maternity and Child Welfare, organized on behalf of the National Council for Maternity and Child Welfare by the National Association of Maternity and Child Welfare Centres, will be held in the Great Hall of the University of Bristol on July 5, 6, and 7. The general subject of the conference, the president of which will be the Parliamentary Secretary to the Minister of Health, Mr R. H. Bernays, will be "The Child of the Future" and the discussions will be arranged as follows: psychology of pregnancy, in conjunction with the falling birth rate—its effect on the future, the need for closer co-operation between the school medical and maternity and child welfare services, and the need for increased provision of convalescent residential accommodation for children under school age, physical fitness in young children—(a) prevention of postural defects, (b) treatment of minor orthopaedic defects, the place of the voluntary worker in the schemes of local authorities, the parents of the future—(a) parentcraft teaching for senior scholars (boys and girls), (b) simple sex teaching in boys' and girls clubs, (c) individual preparation for marriage, and twenty years of child welfare—retrospect and prospect. The conference is open to all who are interested in maternity and child welfare. The fees for full membership, including the receipt of printed matter, are £1 1s per member. In the case of two members representing the same local authority or voluntary organization it will be 15s each, or in the case of three or more such members 14s each. Applications for tickets, with remittances should be sent to Dr Minett, honorary secretary, National Association of Maternity and Child Welfare Centres, 117, Piccadilly, W 1.

## SCOTLAND

### University of Aberdeen

Among other recipients of the LL.D. degree at the graduation ceremony of Aberdeen University on March 30 were two members of the medical profession, Dr E. J. Butler, F.R.S., Secretary to the Agricultural Research Council, and Dr Gunnar Dahlberg, Director of the Institute of Medical Genetics at Uppsala, Sweden. Professor T. M. Taylor, in presenting the recipients, said that Dr Butler had worked for nineteen years in India as Imperial Mycologist and Agricultural Adviser to the Government, and on his retirement from that post had been appointed Director of the Imperial Mycological Institute, while his experience had recently received further recognition by his appointment as secretary to the Agricultural Research Council. Dr Dahlberg was the leader of a new Scandinavian school of human genetics, who had made contributions to the mathematical analysis of human pedigrees with the object of distinguishing between the action of genes and the influences of environment. He was without doubt the leading human geneticist of the present day.

### Scottish Committee on Nursing

The inquiry into the recruitment and terms and conditions of service of nurses in Scotland was carried a stage further when the Departmental Committee on Nursing at their fifth meeting heard witnesses from eight more bodies. These bodies were the Scottish National Health Visitors Association, the South-Eastern Counties Joint Sanatorium Board, the Royal Samaritan Hospital for Women, the National Association of Local Government Officers, Edinburgh Royal Infirmary, Lanark County Council, Glasgow Western Infirmary and the Royal College of Surgeons of Edinburgh.

### National Institution for Mental Defectives

At the annual meeting of the Royal Scottish National Institution for the care and treatment of the mentally defective at Larbert, held in Edinburgh, Dr T. R. C. Spence, medical superintendent of the institution, said that many wild ideas were held regarding the part played by heredity in the cause of mental defect, but in fact we did not yet know anything about the transmission of defect. A defective child could appear in the midst of a normal family, and an even more striking fact was that the parents of mentally defective children were comparatively rarely themselves mentally defective. In this institution in practice not more than 5 per cent of the patients were found to have a parent who could be said to be mentally defective. The defective was a mental cripple and an innocent victim of misfortune. He was happier and more useful among those who were affected like himself, and he should be given a chance to develop his limited capacities to their utmost under sheltered conditions of life. It was stated at the meeting that the number of cases on the register of the institution was 732. The city of Edinburgh provided for mental defectives by four special schools capable of teaching 400 pupils, and had also an occupation centre with eighty pupils. The institution at Gogarburn had recently been enlarged by fifty beds.

### Massage for Fitness

An extension of the Scottish Clinic and School for Massage and Electrotherapy was opened in Glasgow on March 25. This clinic was founded in 1928, and the number of treatments has increased from 8,562 in 1930 to 42,480 last year. The clinic provides physical therapy for people unable to pay and whom the infirmaries are unable to treat. There is also provision for the practical training of students from the Anderson College of Medicine. Patients are attended only on the recommendation of their own medical attendant, and over 250 doctors regularly send patients to the clinic. Much of the treatment is carried out in the evenings so that patients are able to continue their ordinary employment during the day.

### Edinburgh Maternity Hospital

At the annual meeting of the Simpson Memorial Maternity Hospital it was stated that every effort would be made to have the new maternity hospital ready by October 1, although it was feared that the opening day might be nearer January 1 next year. During the summer the new building in the grounds of the Royal Infirmary would be open for inspection. The annual report shows that during 1937 the number of cases treated was 3,460, while attendances at the ante-natal and other clinics numbered 16,813. The maternal mortality during the year was 8.1 per 1,000 patients treated in the hospital, a decrease of 2.3 as compared with the figure for 1936. Most of these cases were emergency or difficult cases. The report refers to the likely effect of the Maternity Services (Scotland) Act 1937, which may diminish the number of outdoor cases available for the training of pupil midwives and medical students, and which will also involve increased expenditure in the appointment of a number of additional trained midwives at the hospital.

## Correspondence

### Modern Views on Pellagra

SIR—We wish to comment upon several points raised in your interesting leading article<sup>1</sup> under this title and to supply certain information not contained therein.

1 You refer to the results of Elvehjem et al. in treating canine black tongue successfully with nicotinic acid and await confirmation of their findings: this is now forthcoming. We had independently isolated nicotinic acid amide from aqueous extracts of liver before the appearance of Elvehjem's report and have since confirmed the observation that nicotinic acid will cure black tongue.<sup>2</sup> Similar confirmation has been made by at least three other groups of workers in this country.<sup>3</sup>

2 In referring to animal tests of fractions from yeast liver etc., for pellagra preventive activity you suggest that the application of results obtained from tests upon rats and dogs to human pellagra is difficult and uncertain. A distinction should be made here between tests with these two species. It was shown two years ago<sup>4</sup> by one of us that the rat deficiency disease then supposed to be analogous to human pellagra is in fact aetiologicaly different from the human disease and we have recently demonstrated that so-called rat pellagra is not cured by nicotinic acid<sup>5</sup> whereas four groups of workers have now found this substance to be active in curing human pellagra. The canine disease but not the rat disease, therefore resembles human pellagra in that treatment with nicotinic acid is curative. Moreover, throughout the long series of investigations conducted by officers of the U.S. Public Health Service it has consistently been found that foods and preparations active in the prevention or cure of black tongue are also active in the prevention or cure of human pellagra and materials inactive in the one disease are also inactive in the other. This parallelism between the materials which will cure each of the two diseases—extending right to the pure synthetic nicotinic acid—suggests strongly that black tongue and human pellagra are caused by deficiency of one and the same substance. From these considerations we conclude that the results of tests involving the so-called rat pellagra cannot be applied to human pellagra problems at all while the results of canine black tongue tests can be applied with much confidence.

3 The question is raised in your article whether the consumption of trigonelline contained in the bread eaten in rural Lower Egypt has any influence on the incidence of pellagra. We have isolated trigonelline from liver extracts in addition to nicotinic acid amide and have tested its activity in canine black tongue. Six dogs each of about 10 kg weight were given a slightly modified Goldberger No 123 diet<sup>6</sup> and watched until they developed black tongue as judged by inflammation of the mucous membranes of the mouth and throat, loss of weight, excessive salivation, loss of appetite, listlessness, and diarrhoea. As each developed black tongue it was treated parenterally with trigonelline. One animal received a single dose of 120 mg and the others received daily doses of 10, 20 or 40 mg. All the dogs showed increasingly severe symptoms and died within four days after treatment was begun. Controls were provided by other dogs which were allowed to develop black tongue and were then treated with doses of nicotinic acid of the same order as the trigonelline doses. These dogs soon regained their appetites, increased in weight and their

mouths returned to normal. It appears from this observation that trigonelline has no curative power in black tongue and it can be confidently predicted that it will have no curative or preventive power in human pellagra. It has long been known that the dog excretes a part of the nicotinic acid fed to it as trigonelline<sup>7</sup> whether the transformation is a detoxication mechanism for dealing with excessive amounts of nicotinic acid or whether it occurs during the normal processes into which nicotinic acid enters is not known.

You also raise the question of the complication of the current position introduced by Leutsky with his observations on pellagra like lesions in mice.<sup>8</sup> It is probable that this work can at present be dismissed from consideration in this connexion as no evidence that the mouse syndrome is identical with human pellagra has been adduced. When Goldberger first produced a symmetrical dermatitis in rats by means of a dietary deficiency twelve years ago it was reasonable to regard it as analogous to human pellagra but it has since been abundantly proved that the analogy is superficial. In more recent years a dermatitis of chickens has been regarded as rat pellagra. This disease again is really not analogous to human pellagra as it is not cured or prevented by the same materials. Jukes has shown that the factor responsible for cure of the chick disease and human pellagra respectively are differently distributed in natural foodstuffs and we have shown that nicotinic acid will not cure the chick disease.<sup>9</sup> In view of these earlier experiences with pellagra like diseases caution should be observed in calling any animal syndrome pellagra until it has been shown (a) that it can be produced on the deficient diets upon which human beings develop pellagra, (b) that a number of foodstuffs (or one chemical pure substance) known to prevent or cure human pellagra will also prevent or cure the animal disease and (c) if one of the symptoms is a dermatitis it must be shown that the appearance of the dermatitis is dependent upon exposure to light following a period of refeeding on the deficient diet. Leutsky has not established any of these criteria for the mouse condition which he describes. Applying these criteria canine black tongue and the recent described disease in pigs<sup>10</sup> are the only true analogues of human pellagra which we know to-day.—We are etc.

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March 7

#### REFERENCES

- <sup>1</sup> *British Medical Journal*, 1937, 1, 127.
- <sup>2</sup> Elvehjem, C. A., Madden, R. J., Strong, F. M., and W. D. W. (1937). *J. Am. vet. med. Ass.*, 59, 1767.
- <sup>3</sup> Dann, W. J. (1937). *Science*, 88, 616.
- <sup>4</sup> Dann, W. J., and Subbarow, Y. (1935). *Int. J. Priv. Commun. to the A.S.P.*
- <sup>5</sup> Dann, W. J. (1936). *J. N. A.*, 11, 451.
- <sup>6</sup> Fouts, P. J., Helme, O. M., Lepore, A. S., and Jukes, T. H. (1937). *Proc. Soc. exp. Biol. N. Y.*, 37, 10.
- <sup>7</sup> Smith, D. T., Rutenfranz, J. M., and Subbarow, Y. G. (1937). *J. Biol. Chem.*, 109, 211.
- <sup>8</sup> Hassel, A., and Helme, O. M. (1937). *Quart. J. med.*, 107, 1070.
- <sup>9</sup> Smith, D. T., Cooper, C., and Burman, C. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>10</sup> For summary and bibliography see Subbarow, Y., and Dann, W. J. (1937). *Rev. W. J.*, 12, 7.
- <sup>11</sup> Goldberger, J. W., and G. A. L. (1937). *Am. J. Hyg.*, 103, 11.
- <sup>12</sup> Auerman, D. (1937). *Z. B.*, 59, 17.
- <sup>13</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>14</sup> Goldberger, J. W., and L. (1937). *Proc. Soc. exp. Biol. N. Y.*, 37, 10.
- <sup>15</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>16</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>17</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>18</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>19</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.
- <sup>20</sup> L. et al. (1937). *J. Biol. Chem.*, 110, 622.



### Causation of Cancer

SIR—Dr W E Gye's lecture, published in the *Journal* of March 12 (p 551), is an admirable summary of the present position of experimental cancer research, but it is regrettable that in the words of the old music hall song "he cannot see the fields for the houses in between." Dr Gye appears to object to the theory that tumour formation is due to the mutation of genes in somatic cells, not because he can bring forward any facts which disprove it, but because of the means by which this theory has been arrived at. The theory was admittedly formulated by a process of logical deduction, but apart from the argument that if we can arrive at the truth how we get there is a matter of but small importance, the method of logical deduction is often the best way of advancing our knowledge of obscure phenomena, more especially when they involve structures too small to be visible even with the aid of the most efficient microscopes.

In dealing with such problems there are two well-recognized means of investigation open to us: first, by experiment, and, secondly, by deduction from analogy and seeing whether deduced consequences actually occur. Dr Gye is a brilliant exponent of the first method, but it is a pity that he should try to ridicule the second, which in other fields of science, such as astronomy, has given such wonderful results. Most of our present knowledge of the universe has been built up by such methods, and to say that they are unprofitable in advancing our knowledge of things that cannot be directly observed does not seem warranted by the facts. His statement that the somatic mutation theory, even if correct, "offers no prospect of further advance in knowledge" is a curious one to be put forward by a scientist. I have always believed that science is the pursuit of knowledge for its own sake, and that the true scientist is not concerned with the results that may accrue, and which in any event are quite incalculable. Could Newton or Volta have had any idea of the results to which their discoveries would ultimately lead? I am convinced that the somatic mutation theory will prove to be the true explanation of the change occurring in a normal cell which results in malignancy. No facts which disprove this have yet been brought forward, nor does Dr Gye offer any—I am, etc.,

London, W 1, March 30

J P LOCKHART-MUMMERY

### Results of Radiotherapy

SIR—From the letters on radiotherapy which have recently appeared in your columns, a few points emerge which appear to me to need emphasis. One of your correspondents infers that radiotherapy merely converts a painless disease into a painful one. Another quotes excellent results in similar cases but achieved without pain. Now any doctor who has watched his patients die of cancer knows how painful death can be apart from treatment, whereas severe pain caused by radiotherapy is not often seen in expert hands.

It is surely as unreasonable to judge radiotherapy by its worst results as it would have been to judge surgery in its early days. Many operations have now been proved to be useful although at first they were associated with much pain and a high mortality. It seems to me impossible for anyone, however critical, who takes the trouble to visit a few of the chief centres at home and abroad not to be deeply impressed by the remarkable results obtained by leading exponents, and often with little or no discomfort to the patient.

The fact is that at the present time there is a dearth of first-rate radiotherapists. The need for continued research has already been emphasized, but this comparatively new field of enormous promise is not attracting enough of the best type of men. The reasons are various, and include the question of status as well as finance, but until these difficulties are faced and solved there will remain this great discrepancy between the results of radiotherapy obtained at different centres—I am, etc.,

London, W 1, April 5

REGINALD HILTON

### The Mechanism of the New Chemotherapy

SIR—Your leading article on this subject (March 5, p 522) was, I think, unintentionally misleading on one point—a point of some importance. Referring to Levaditi's hypothesis that both red prontosil and sulphanilamide are changed in the body into some more active substance you say, quite rightly, that this was based upon the "fact that the drug is ineffectual in experimental intraperitoneal infections if given by the same route. It saves life only when given by the mouth or parenterally." A recent experiment of my own seems to show clearly that this is not the case, mice can be readily saved by the drug if it is administered intraperitoneally in repeated doses. (It appears from Levaditi's paper<sup>1</sup> that he gave only a single dose.)

*Experiment*—A culture of streptococcus (about 100 mld) was injected into the peritoneum of ten mice. Two hours later sulphanilamide (10 mg) was given by the same route to five of them and subsequent doses (7.5 mg) at ten, twenty-four, forty-eight, and seventy-two hours. The five untreated animals died within thirty-six hours. The treated mice were never very ill, soon recovered, and survived in good condition for twenty-one days, when they were killed. No haemolytic streptococci were recovered from their spleens or peritoneum.

In the light of this result one may well hesitate to accept Levaditi's conclusion without further evidence.

May I make one other slight correction? You state that Trefouel, Nitti, and Bovet "asserted" that red prontosil "is broken down in the body" into sulphanilamide. Actually these authors—to whom all honour is due since we owe to them the introduction of sulphanilamide and many other contributions to this new chemotherapy—only suggested the *probability* of this breakdown of prontosil into sulphanilamide. It was my colleague, Dr Fuller,<sup>2</sup> who brought forward the evidence that it did occur.

In conclusion I entirely agree with you that at the present time the experimental data at our disposal do not warrant any final conclusion as to how red prontosil and sulphanilamide exert their curative effects—I am, etc.,

London, W 6 April 1

LEONARD COLEBROOK

SIR—The medical profession all over the world is to day under the impression that all kinds of streptococcal infections can be cured by prontosil and its derivatives. Experiments in mice and clinical reports agree on this point, but the mechanism of its action has not been determined as yet, the effect is attributed to a certain bacteriostatic action. For the last two years my work has been chiefly an attempt to determine (1) other forms of its action than the bacteriostatic effect, (2) why certain cases do

<sup>1</sup> *Monographies de l'Institut Alfred Fournier* No 5, Paris, 1917

<sup>2</sup> *Lancet*, 1937, 1, 194

not respond to sulphamylamide in spite of large doses and (3) what other factors assist in the success of sulphamylamide therapy.

When, in collaboration with Dr Eva Stuge-Schreiber I synthesized a highly soluble sulphamylamide compound I found the following: (1) Sulphamylamide has a direct action on the body of the bacterium and destroys its structure. (2) In the test tube growth of streptococci in blood of sulphamylamide treated patients is inhibited in protiosol broth growth is not inhibited merely the virulence is attenuated and the toxin production inhibited. (3) Sulphamylamide inhibits the formation of toxin in the organism. (4) Sulphamylamide does not neutralize already present toxins. Consequently we can say that: (1) in the mouse sulphamylamide is highly effective against infection with small doses of strongly virulent streptococci. (2) Sulphamylamide exerts a weaker action against infection with large doses of less virulent strains. (3) It has little effect against streptococcal infections in guinea pigs induced by infection with highly toxic full cultures. (4) Also in these animals sulphamylamide is highly effective in combination with antitoxic streptococcal serum.

Applying these experimental experiences to severe cases of human streptococcal infections with already existing intoxication (as for instance puerperal fever) I observed the following: (1) Sulphamylamide acts only in organisms which possess a certain natural resistance. Therefore its action can only be explained as a co-operation of drug and organism. (2) Cases which do not respond to sulphamylamide may be cured by additional treatment with antitoxic streptococcus serum. The same holds true for cases not responding to serum treatment which may recover by adding sulphamylamide. (3) Inasmuch as the chemotherapeutic agent can only exert its action under co-operation of the natural defence system of the infected organism, this resistance must be supported by all possible means (immune transfusions, vitamins, etc.).

The toxic by effects of sulphamylamide can be avoided by combining serum and sulphamylamide because this combination makes the reduction of the sulphamylamide dosage below the point of danger possible. Since I feel that the combination of two good therapies into a perfect one—instead of substituting one for the other—is a very important factor in our fight against puerperal fever and all other forms of streptococcal septicaemia I should appreciate your bringing this letter to the attention of the medical profession—I am, etc.,

New York March 21

FRITZ MEYER M.D.,  
Prof. Dr. Med.

### "Gonococcus Antitoxin" for Gonorrhoea

SIR—Dr T. Anwyl-Davies (*Journal* March 26 p. 701) seems to forget that what he calls adjuvant treatment is the recognized official and orthodox cure. So that when he says that "at the present time irrigations, dilatation, prostatic massage, etc. are also carried out," he means in effect that patients are subjected to two entirely different types of treatment or cures simultaneously—the orthodox and the specific antitoxin treatment. His comparison of the orthodox treatment of gonorrhoea with the treatment of diphtheria has already been adequately dealt with by me (*February 20 1937 p. 415*) and by E. T. Burke and others (*April 2 1938 p. 755*).

However the important point is that Dr Davies by his dismissal of the orthodox cure as simply adjuvant treatment has failed in the very crux of the matter—the critical comparison of the two treatments or cures.

In his reply to my first letter Dr Davies (March 6 1937 p. 721) admitted that "some of the cases quoted had no other treatment, others were treated along routine lines." This is the way in which my criticism was read and answered. No attempt was made at a critical and detailed comparative analysis nor was any mention made when of its being inadvertently omitted. Therefore I submit that when a confession that irrigations, dilatation, prostatic massage, etc. are also carried out with the end in view although in my preliminary paper this procedure was inadvertently omitted from the text is made Dr Davies's technique is made manifest in all its inadequacy. How can the very kernel of a clinical investigation—that is the evaluation of new methods as against the old—be omitted and disposed of by declaring that the controls were inadvertently omitted. One can pass over the absence of detail but never the absence of essentials. The absence of essentials denotes in my opinion the absence of method and herein lies probably part answer to the discrepancy in the results found by Dr Davies with those recorded by E. T. Burke and the three other investigators (March 19 p. 605)—I am, etc.

Enfield April 2

W. LESTER.

### Treatment of Burns and Scalds

SIR—In the excellent paper on the treatment of burns and scalds by Mr Philip H. Mitchiner (*Journal* January 1, p. 27) a typographical error appears in the paragraph on silver nitrate. I believe the author was quoting from my paper in the *Archives of Surgery* (1937 35 475). He states:

The patient having been given a dose of sedative and the area of the burn being cleaned as already described, the tannic acid treatment the whole of the burn area is painted or sprayed once with a 1 per cent aqueous solution of gentian violet and is thoroughly scrubbed over with a 10 to 15 per cent solution of silver nitrate care being taken that the silver nitrate does not escape over the surrounding skin. The area is now again sprayed or painted with a 10 per cent solution of gentian violet.

This last sentence should read: "with a 1 per cent solution of gentian violet."

One other statement which is somewhat misleading is from the use of this method the American author reports a mortality of 73 per cent. This is considerably higher than that from weak tannic acid solution as might be expected when one realizes that in the case of extensive burns the silver nitrate coagulum does not extend into the deeper damaged tissues. In my article the mortality rate of 73 per cent was based on the treatment of ninety-five patients during the experimental period in which we were changing over from tannic acid to the combination of silver nitrate and gentian violet and working out a new technique. When the hospital routine has been properly worked out the next eighteen patients required admission were treated on the same tannic acid treatment with no deaths. The statement made by Mr Mitchiner that the silver nitrate coagulum does not extend into the deeper damaged tissues explains why tannic acid is rarely if ever necessary with modern combination treatment. Tannic acid cannot be soaked out of the skin as can the silver nitrate-gentian violet coagulum. Thus the removal of the tannic acid does not so help the patient as lands which is left with spread and increased infection grafting unnecessary—I am, etc.

Dr. R. M. C. 19

HENRY E. BUCKLEY

### Treatment of Boils and Carbuncles

SIR—Mr J Hosford, in his article in the *Journal* of February 19 (p 400) on the treatment of boils and carbuncles, mentions a great variety of treatments, including short-wave diathermy. He does not mention infra-red irradiation, which gives excellent results in the treatment of carbuncles and has a marked analgesic effect. Nearly all practitioners using electrotherapy possess some sort of infra-red ray apparatus, which is therefore more easily available for the treatment of boils and carbuncles than the costly and complicated short-wave diathermy machines, which are not standardized as yet. The following case may illustrate the value of infra-red irradiation in the treatment of a large carbuncle.

A man aged 58 was seen on November 17, 1937, with a large carbuncle on the back of his neck. He had no glycosuria. I started to treat him with infra-red irradiation on the same day. He received daily administrations of forty to forty-five minutes each. No other treatment was given, except that the skin around the carbuncle was cleaned with ether before treatment and ung. hydrarg. ammon. dil. was applied round it after the treatment, and covered with a light pad of gauze and cotton-wool. The patient felt immediate relief after the first treatment and his neck movements were more free. The discharge became much thinner after two days' treatment and the core separated on November 25. The wound was almost completely closed on November 29. Considering that the carbuncle was about 3 inches in diameter, the final soft scar a quarter of an inch in diameter represents a good cosmetic result.

I have treated during the last twelve months two other carbuncles, including one facial one, in the same way and with the same excellent results. I do think, therefore, that infra-red irradiation should occupy an important place in the treatment of boils and carbuncles. Its application is simple and not costly, and the results are quick and excellent—I am, etc.,

South Norwood, SE 25, March 27

A FREITAG

### Pasteurization of Milk

SIR—The letter of Dr Halliday Sutherland (March 26 p 704) is like a refreshing breeze in the stale atmosphere of the milk-spoilers. He makes eight points which may well rally the believers in fresh milk. The eighth is expressed as a suggestion that it would be wise to test the effects of pasteurization on the fertility vitamins. Like Sir Leonard Hill, he sees depopulation on the horizon. Pasteurization, he implies, would accelerate it. There is little doubt that the implication is right. The two experiments of E C V Mattick and J Golding at the National Institute for Research in Dairying at Reading University (*Lancet* 1931, 1, 662) revealed that rats receiving raw milk were in their fourth generation at the time of reporting and showed no falling off in their rate of growth, whereas none of the third generation of a precisely similar group fed on freshly sterilized milk lived for more than a day. In a third group receiving sterilized milk which had been kept in a cold cellar for twenty-four hours, none of the second generation lived to weaning. The matter is important. By all means let further experiments be made, as Dr Sutherland suggests—though it is hard on the rats!—I am, etc.,

Holmes Chapel, March 27

LIONEL J PICTON

SIR—Dr C O Hawthorne (April 2 p 753) has missed one point in my letter in the *Journal* of March 26 (p 704). Although pasteurization may not affect the nutritive value

of milk I suggested that it might affect the fertility vitamins. This point could be settled in a few months by feeding and breeding experiments on animals. Lady Lionel Guest in the *Daily Telegraph* of March 10 states that "cats and dogs, unless almost starving, refuse to drink pasteurized milk, even rats will not drink it willingly, and they are not famous epicures." If that be accurate the experiment might be tried on mice. As the population will soon be the most serious problem of our country I hope that someone will make the experiment on at least four generations of animals.

I regret that I misread Dr J Kirkland's letter, but I do not agree when he writes of "death dealing germs that cannot be removed from raw milk except by pasteurization" (April 2, p 754). The tubercle bacillus is absent from the milk of TT herds. Bang's disease (*Br. abortus*) can be eradicated from herds by the agglutination test and the slaughter of reacting animals. In America the Federal Government set up a scheme in 1934 whereby owners of reacting animals were compensated to the extent of fifty dollars each on pure-breds, and twenty-five dollars on grade cattle, provided the animals were immediately sent for slaughter.

As regards infection from human sources whereby both raw and pasteurized milk may be contaminated, this could be obviated, as Dr F R Brown (April 2 p 754) suggests, by the periodical medical examination of all dairy workers and those employed on pasteurization. Yet Dr Brown is in error when he states that a tuberculosis carrier could easily infect the cows as well as their milk. It implies that the cows would develop the disease. Dr Severi Savonen, Director of the Finnish Association for the Prevention of Tuberculosis, refers in the *Tuberkulösläbilet* of March, 1937, to a recent discovery by Dr R Stenius, veterinary surgeon. He found that healthy, tubercle-free cattle when experimentally infected with tubercle bacilli from human sources gave a positive tuberculin reaction without developing the disease. Moreover, he found several cases in which dairy cows had been thus infected by persons suffering from open pulmonary tuberculosis. The cow is thus infected by tubercle bacilli of the human type and reacts to the tuberculin test, but when the consumptive attendant, the source of infection, has been removed from the cowshed the animals lose this acquired sensitivity to tuberculin and cease to react to the test.

The milk of a cow infected from human sources contains no tubercle bacilli unless—and there lies the danger—the milk is subsequently contaminated by the consumptive who infected the cow. By a closer study of tuberculin reactions in cattle it is now possible to distinguish between infection from bovine and human sources. A list of all cattle whose reaction to tuberculin indicates infection from a human source is sent from the State Veterinary Department to the National Tuberculosis Association. Every farm where these reactions have occurred is visited by one of the district tuberculosis officers, who examines and x-rays everyone in contact with the cattle in order that the infectious consumptive may be discovered and removed for treatment. In Britain I had known of search being made to discover a particular cow whose milk had caused the death of children, but never before have I heard of a search to find the consumptive who infected cattle.

The best news about our milk supply is the recent announcement by the Scottish Milk Board that within the next five years the full needs of consumers in Scotland will be supplied from tubercle-free herds. There is no reason why this scheme should not be extended to England. Then all your readers will be able to drink fresh unpasteurized

milk, which possibly some of them have never tasted. Anyone can see the difference between rich fresh milk and the anæmic chalk white stuff in the bottles and any one blindfolded can taste the difference—I am etc.

London W 8 April 2

HOLIDAY SUTHERLAND

## Trauma and Progressive Muscular Atrophy

SIR—For the following reasons it appears unlikely at first that trauma plays any significant part in the aetiology of progressive muscular atrophy.

1 The fact that there is an age group (up to 25 years) in which females predominate, after this admittedly it occurs three times more frequently in males.

2. The fact that the bu bar type of the disease has not been reported to have followed injury—so far as I can ascertain

3 The probability, as emphasized by Dr G F Walker and Mr D Stanley Jones (*Journal* February 12 p 360) that the injury occurs as a result of the negative weakness and muscular cramps which often precede the onset of wasting and objective weakness and the further probability that most patients could recollect an injury of some kind preceding almost any illness.

However in the cases quoted by Dr G E Frederick Sutton (January 29 p 225) the injury would not fall into the last category. It was in every instance a severe injury which might well have caused a molecular disturbance of brain or cord. In such cases one would not necessarily expect any correlation between the site of the original injury and the site of onset of the atrophy. In the cases where such a correlation does exist two explanations are possible.

(d) Thieme's theory that a traumatic ceding neuritis ultimately affects the motor cells. The axonal spread of this instance anterior poliomyelitis might support this but Dr Sutton observes that symptoms of neuritis are conspicuous by their absence in his history of practically all the cases of post traumatic progressive muscular atrophy.

(h) The association may be coincidental and in this connection surely a statistical analysis of say 200 cases which would no doubt be possible at the National Hospital would reveal whether the incidence of conditions associated with or precedent to progressive muscular atrophy gave any significant prominence to injury. Association with previous anterior poliomyelitis is too well known and too pathologically probable to bear dispute but in the case of injury the incidence would have to be high to acquire significance. It would also be very informative to learn whether the bulbar type of disease has ever followed injury. If not why should it be exempt? The nature of the injury in the cases quoted would lead one to expect this type.

I recollect two cases of progressive muscular atrophy in a London ward at the same time one with a history of infantile paralysis and the other with a history of wrist drop due to lead poisoning. In both cases the limbs affected by progressive muscular atrophy were those affected by the previous lesion. Shortly afterwards I attended a necropsy on a case of progressive muscular atrophy which developed rapidly following exposure to a new industrial chemical the potential toxic properties of which were unknown. Here again coincidence has not yet been excluded.

Dr Sutton supports the view that trauma may render the motor cells susceptible to the subsequent attack of an unknown virus or toxin. If this is accepted the aetiological factors might be classified in some such way as the following:

The cells are rendered susceptible by (1) a hereditary predisposition (this might account for the early age group in

which females predominate) (2) trauma (3) previous infection—for example acute anterior poliomyelitis (4) previous infection—for example syphilis (5) previous intoxication—for example alcohol (6) previous infection—for example lead and (6) present intoxication. It is very likely that a number of these factors may be associated with one another and the possibility of which should be (and perhaps are being) investigated.

This still leaves the actual causative virus or toxin to be accounted for and would not explain why some cases associated with a positive Wassermann apparently recover after arrested with specific treatment unless in these cases the spirochaete is the final causative agent of the disease. I believe no pathological evidence—I am etc

✓ 42 na March 3

A. L. CRADDOCK

## Sequelae of War Gas

SIR—The high mortality rate among ex-soldiers in certain age groups as compared with the corresponding statistics for civilians who had had no war service is referred to in the *Journal* of January 1 (p 21).

It is there stated that the mortality rates are from 75 per cent to over 70 per cent in excess of normal in different countries. It has been observed in New Zealand that the mortality statistics for respiratory diseases are 20 per cent above normal in similar groups of ex-servicemen. It was suggested by Mr H. Ramsbottom in the House of Commons debate on the matter that any type of pensioning Acts was impracticable. No such restriction is necessary. What is required is a wider agreement on the recent research work that has been done on the sequelae and its application to ex-servicemen and to those who have had an opportunity of acquiring their views with the clinical evidence.

The idea that all ex-soldiers with gas sequelae have persistent respiratory tract damage with symptoms suggestive of chronic bronchitis does not. Such sequelae are seen principally in those damaged by vesicant gas. Another fallacy is the general belief opinion that all soldiers who developed gas sequelae recovered and sufficient severe symptoms at the time to warrant evacuation as gas casualties. The only evidence of degenerative lung changes without previous exposure is also an unassociated and large unrecognized factor. Phosgene lesions of the alveolar septa have been shown to heart insufficiency often extending into the peripheral. Such cases have a high mortality rate from peripheral disease and will be found to be large factors in the high group mortality rate in question. Perhaps the departments the world over have been slow to appreciate and recognize the different types of gas lesions with the result that they have been outmoded by the most recent statistical developments.

The full extent of the lack of appreciation for this is well illustrated by a brochure recently published by the United States Chemical Warfare Service. On page 1 of the Army Chemical Warfare Service's "On Gas" it is stated that gas produces practically no permanent injuries so that if a man who is gassed survives he comes out better than as God made him. The incidence of fatal effects and civilian casualties among soldiers in the gas-impregnated group in New Zealand is so high that no other explanation is given. Auckland Hospital has come to realize that only the best films will accommodate the increased interest in gas.

11 \ 4=JUT

War Pensions Special Band  
Amended NZ February 1

### Sodium Lactate for Diabetic Coma

SIR,—I have read with interest your annotation in the *Journal* of March 26 (p 683) concerning the treatment of diabetic coma by the use of racemic sodium lactate.

I should like to point out the following error. Referring to Hartmann's article in the *Archives of Internal Medicine* September, 1935, you stated that the third group was treated by 'insulin, glucose, and racemic sodium lactate'. No glucose was given. This was shown in Table I and Chart 3 of the above article. In another of Hartmann's articles (*J. clin. Invest.* 11, No 2) he states "that the conversion of lactate into glucose is apparent from the uniform rise of the latter in the blood". His treatment of diabetic coma or acidosis is as follows:

10 ccm of molar sodium lactate per kilo body weight	
50 ccm of distilled water	
40 ccm of Ringer's solution	
2 units of insulin	

About 1/3 to 1/2 of the above fluid is given intravenously and the remainder subcutaneously or intraperitoneally.

In view of the suggestion as to the meagre possibility of harmful effects from the administration of sodium lactate, I should like to refer to the thirty cases published in the above journal. I have had three years of personal experience with this form of treatment at the St. Louis Children's Hospital, and the results have been extremely satisfactory. A paper giving details of about sixty cases of diabetic acidosis in which this treatment was instituted is soon to be published; no harmful effects were noted from the administration of sodium lactate. In addition to these, Hartmann has also obtained excellent results with the use of sodium lactate in acidosis due to nephritis, diarrhoea, dehydration, infection and many other miscellaneous causes such as salicylate poisoning etc.—I am, etc.,

London E 1 March 26

JACK BASMAN

### Plantar Warts

SIR—The frequency with which the treatment of plantar warts is discussed indicates the difficulty of successful therapy. I write to make a strong plea for surgical treatment by means of the high-frequency electrical current. By such means it is possible to excise warty tissue and surrounding structures and to coagulate and fulgurate the exposed basal area. Small isolated warts can be successfully treated by this method under a local anaesthetic. Novocain 2 per cent, should be injected through a wide needle and the tissue surrounding the base of the warty lesions deeply infiltrated. This will give satisfactory anaesthesia and avoid the difficulties and pain which follow attempts to anaesthetize locally the base of the wart. Larger warty areas are best treated under a general anaesthetic. The previous failure of radium rays, chemical agents and surgical excision makes treatment difficult and causes prolonged disability.

The disadvantage of treatment by high-frequency electrical currents is the long time required for healing of the exposed area. Usually it takes five to seven weeks. High frequency treatment prevents haemorrhage, however, and lessens the risk of infection spreading through the lymphatic and capillary vessels. Healing can be accelerated by exposure to ultra-violet rays. Two days after the warty area has been excised and the basal area coagulated and fulgurated by the electrical current the area is exposed to the rays of the quartz mercury vapour lamp and five normal skin erythema doses are applied. Local irradiation

augments the blood supply, hastens the formation and separation of sloughs, accelerates the formation of granulation tissue, and stimulates healing; it also keeps the wound clean and sterile. Such local treatment is applied at intervals of two to three days until healing is completed. The treatment does not produce much 'after pain' and often patients can be allowed to get up and walk. As a precaution to prevent reinfection of warts I prescribe lin. pot. iod. saponis (B.P.C.) to be rubbed into the skin of the sole of the foot daily—I am, etc.,

— London, W, March 29

ALBERT EIDINOW

### Multiplicity of Special Diplomas

SIR,—A letter from a correspondent signing himself "H. M." appeared in the *Journal* of March 26 (p 704). The letter dealt in general with the inadvisability of multiplying special diplomas in medicine, and the particular association which I represent was especially singled out for attack. We were, however, honoured by being placed in the dock in the company of the British College of Obstetricians and Gynaecologists. Personally, I am in agreement with "H. M.'s" general thesis, but this agreement is purely theoretical. Those concerned with the progress of a particular specialty must take the world as they find it. So long as special diplomas exist which are obtainable by examination, and so long as the profession and the public attach importance to these diplomas, it is incumbent upon any body of men who wish to raise and maintain a particular professional standard to see to it that their examinations compare favourably with those of other bodies. In his argument that examinations are useless "H. M." proves too much, because such a criticism must obviously apply equally to the qualifying degree of which he has apparently such a high opinion. What ever the disadvantages of examinations, no one has yet invented a satisfactory substitute. Examinations in medical subjects are certainly not of recent origin. Very stiff examinations were conducted at the various medical schools in the Middle Ages.

Your correspondent gibes at the original Fellows of both the College of Obstetricians and the British Association of Radiologists. In the case of the latter, foundation fellowships were awarded only to those who had already held the highest offices in the gift of their radiological colleagues, and it could scarcely be said that possession of the fellowship is of personal advantage to them. Your correspondent says that the Association 'sets itself up to re-examine those who already possess a recognized diploma in radiology'. It is necessary to explain that the diplomas in radiology obtainable in this country are awarded after a nine months course of study open to any registered medical practitioner, so that they may be obtained within a year of graduation. These diplomas have fulfilled, and still fulfil, a useful purpose. Twenty years ago it was perhaps possible to acquire a fairly accurate knowledge of radiology, both diagnostic and therapeutic, in nine months. To-day both these subjects have so expanded that it is possible to acquire a ground-work only in such a limited time. Nevertheless it is a fact that many of the smaller centres throughout the country will be permanently unable to support a radiological specialist in each branch of radiology, and the existence of diplomas combining the two will continue to secure that men do not set up in practice in these important lines of work without adequate grounding. When it comes to what we may call the higher walks of radiology such dualism is now rarely practicable. There-

must be specialists in both radiodiagnosis and radiotherapeutics and it is to secure the proper training and certification of such specialists that the Fellowship of the British Association of Radiologists has been instituted. The possession of a diploma is insisted upon because the two years work demanded by the Fellowship is supposed to start where the diploma leaves off. Moreover the examination includes general medicine and surgery and pathology in their special relation to radiology and the Association has been fortunate in securing the services of eminent persons as external examiners. The suggestion therefore that the Association sets itself up to re-examine persons who have already passed an examination of the same standard is an entirely false one. It must be remembered that undergraduate teaching of radiology has so far been negligible. The groundwork which is laid down in for example surgery at a medical school must be laid down in the postgraduate period so far as radiology is concerned.

H. M. says that British medicine alone seems to find a multiplicity of special diplomas necessary. Perhaps he is right as regards the Continent but America appears to be following our example as fast as possible. Within the last decade or so there have been instituted an F.A.C.P., F.A.C.S. and F.A.C.R. In addition to these an American Board of Radiology conducts an examination for a diploma which is obtainable only by those who have done five years approved work after medical graduation. I would point out that this is exactly the total period of approved work after graduation demanded by the F.B.A.R. There are also in America boards of neurology, orthopaedics and other special subjects. Whether or not any of these boards have yet instituted diplomas I do not know but I venture to think it is highly probable that they will do so. In short whether the tendency be good or bad it is one which permeates the whole English speaking world including the British Dominions.

Finally your correspondent seems to feel it a grievance that special diplomas are usually required for important appointments. He should not however mix up the sequence of cause and effect. It is the governors of these institutions who decide that candidates must have certain diplomas and they do so apart from any influence which may be brought to bear upon them by the examining bodies concerned—I am etc.

F. HERNAMAN-JOHNSON  
Warden Fellowship Board British  
Association of Radiologists

London W1 March 28

### Pneumonitis

SIR—I was most interested in Dr A. Morton Gill's paper on pneumonitis in the *Journal* of March 5 (p. 204). That pneumonia occurs in forms which differ widely from the classical descriptions of the disease has been known to all of us for some time. There is no doubt that many of these anomalous forms can be split into well defined clinical and radiological entities and it is surely time that we ceased classifying under the term pneumonia illnesses differing widely in their course and final outcome. Credit must therefore be given to Dr Gill for his admirable description of the clinical and radiological entity to which the name pneumonitis may be given. Dr J. G. Scadding too should be congratulated on his definition of chronic diffuse bronchopneumonia and disseminated focal pneumonia (*Journal* November 13 1937 p. 926). One more scrap heap which has encumbered the progress of medicine is being removed.

Exception must be taken to Dr G. S. Erwin's letter in your issue of March 26 (p. 703). He gives as his address the Brompton Hospital and therefore it might be thought that his opinions carry an especial weight. Actually however he chooses several very minor points in Dr Gill's paper and subjects them to rather nebulous scrutiny. Nevertheless it is criticism such as this written once in a while in a rather carping spirit which can do a great deal of damage to an excellent piece of work. It is to be noted that Dr Erwin has no objections worth offering to the general substance of Dr Gill's paper.

The following are the details of a case of pneumonitis recently seen in the out-patient department of the Hospital for Sick Children Great Ormond Street. I am indebted to Dr Lightwood for permission to record in this case.

A female infant aged 14 months was seen at the beginning of December 1937 with a history of an irritating cough for the previous two weeks. There had been no fever and the child had never been confined to bed. On examination she was a healthy looking child with no respiratory abnormality. Her weight was 20 lb and the rectal temperature was 99° F. The chest showed some dullness at the left base where breath sounds were weak and there were some crackles. Examination of the other systems revealed nothing abnormal. The Mantoux test (1 in 1000) was negative. A radiograph of her chest taken at this time showed marked shadowing at the left base. A simple linctus was prescribed. When seen again a week later the mother said the child was very much better. One week after this the abnormal physical signs had cleared and a second radiograph showed that the opacity had completely disappeared. The child did not cough and gained weight rapidly.

The points which I would emphasize are: First the fact that there was never any question during the whole of the illness of admitting this child to hospital. She was treated quite satisfactorily as an out-patient. Second though a 1 in 1000 Mantoux test only was done yet this coupled with the rapid subsidence of the condition in my opinion definitely rules out any question of tuberculosis—I am etc.

London SW18 March 28 C. HARDWICK M.R.C.P.

SIR—I was most interested to read the admirable paper on pneumonitis by Dr A. Morton Gill. That condition exists as a clinical entity in children in my opinion cannot be disputed by anyone who has had experience in paediatrics. In adults the condition would appear to be a rare one. The following report may be of interest therefore.

On February 10 I was called to see a female diabetic aged 55 who was complaining of cough and exhaustion. On examination she had a temperature of 99° F, a pulse rate of 90 and a respiration rate of 20 with some rales in the periphery. There was impairment of the percussion note at the base of the right lung but the breath sounds were normal. Many rales were heard. She was put to bed and given medicine to control the cough. On the following day she had a severe haemoptysis. Evening physiotherapy continued for 3 days and then subsided. At the end of the first ten days signs were much less marked. Fourteen days after the onset she was quite free of all signs and symptoms. During the illness her only requirements in food were 100 g of food to 20 units daily but returned to her normal diet. No tubercle bacilli were found in her sputum. She remains well.

The association of malaise, cough, evening pyrexia and haemoptysis strongly suggests tuberculosis in a patient of this type. However the complete and rapid recovery has led me to conclude that this was a case of acute pneumonitis—I am etc.

Glasgow L. Ch. 29

D. C. REAVEL, M.D.

### Aetiology of Acute Appendicitis

SIR—In an article by Dr A M Spencer in the *Journal* of January 29 (p 227) it is stated that in the villages of India appendicitis is unknown. I am a beginner at surgery, but I can select from my records of civil surgical practice twenty eight cases of appendicitis proved at operation in persons from Indian villages and small country towns. All the appendices were pathological some were removed with difficulty owing to old standing adhesions others were perforated. All the patients were persons living on purely Indian dietaries and some were vegetarians. I have excluded cases of appendicular abscesses and cases occurring in those natives partial to European foods—I am, etc,

Coorg South India March 16

R D MACRAE  
Captain I.M.S.

SIR,—Dr A M Spencer in his paper on the aetiology of acute appendicitis in the *Journal* of January 29 (p 227) states that acute appendicitis is very common among the inhabitants of Tristan da Cunha. He also states that the diet of the inhabitants has an exceptionally low cellulose content. I have visited Tristan da Cunha twice and have made an examination of the inhabitants for H.M. Office of the Crown Colonies. From information obtained in the island it is very unusual for anyone to have symptoms suggesting acute appendicitis. When such symptoms do occur the only treatment that can be given is a dose of castor oil or Epsom salts. I was unable to obtain any facts regarding a death suggesting a perforated appendix.

As Tristan da Cunha has never had a resident physician a true diagnosis of any illness has never been obtained, so Dr Spencer's statement is made without proof. Regarding the diet the staple article is potatoes. Fish is plentiful, and during the nesting season penguin and albatross eggs are obtained in great numbers. Turnips, carrots, and cabbage are to be had but are not plentiful—I am, etc,

E F D OWEN  
RMS *Empress of Australia* at Sea March 22

### Chronic Litrtritis

SIR—In the *Journal* of March 26 (p 703) Dr R C Webster has replied to some of the points raised in my letter on chronic littritis (March 12, p 594), but it is disappointing that he has not commented on the fundamental difference which exists between our respective views on the production of this condition. I submitted that "acute infection of the glands of Littré, in varying degree is commonly associated with acute urethritis, and reference to *Gonorrhoea and Its Complications* (3rd edition Bulliere Tindall and Cox, 1922), in which the pathology of acute urethritis is authoritatively described by Georges Luys will confirm this statement. It is therefore logical to conclude, as I have done that the production of chronic littritis is dependent on failure to promote and maintain adequate drainage of the infected glands and ducts.

Dr Webster has explained his interpretation of the production of chronic littritis in the following statements, extracted from his original paper (*Journal* February 26 p 448) (1) The essential factor in causation appears to be improper treatment—that is treatment in which the urethra is exposed to fluids at high pressure', (2) 'the patient using a hand syringe can readily produce very

high intra-urethral pressure", and (3) 'in many cases from six weeks to three months' use of the hand syringe is sufficient to produce chronic littritis'. Surely the correct interpretation of the latter time limits depends on the fact that chronic littritis can only be diagnosed after the acute urethritis has abated. This theory of high pressure implies that infective material is forced into the ducts and glands of Littré, and although I cannot disprove this statement personally Luys states 'The organisms within them (the glands of Littré) defy all irrigations, injections, and instillations, as the fluids used fail to reach these recesses'. This explanation by Dr Webster of the production of chronic littritis is in opposition to the known pathology, contains no practical proof that the patient using a hand syringe does actually produce very high intra-urethral pressure, and, to my mind at least, is unconvincing.

When cases of acute urethritis are properly and regularly irrigated with suitable solutions by means of a douche—chronic littritis seldom develops, as the regular lavage and distension of the urethra prevents obstruction of the ducts and thus allows satisfactory drainage of the infected glands. Dr Webster admits that "the capacity of the ordinary syringe is relatively small, so that the urethra is washed with small quantities of fluid at a time," and it is this fact which explains the high incidence of chronic littritis in patients who treat themselves with a hand syringe. I am convinced that high intra-urethral pressures are not produced by the patient irrigating himself with a hand syringe and the results of the following experiment on a cadaver may be of interest in this connexion.

The urethra was tied off immediately anterior to the membranous urethra to represent the action of the sphincter in life and the horizontal limb of a T-shaped glass cannula was introduced into the urethral canal so that the perpendicular limb projected through the urethral wall three inches from the meatus. A manometer, which recorded the intra urethral pressure by supporting a column of water was attached. The pressure obtained by irrigating the urethra from a douche containing two pints of water fixed at a height of three feet above the urethra was compared with that obtained with a 10 ccm hand syringe the diameter of the nozzle being the same in both cases. The mean of three estimations was recorded for each instrument and the hand syringe produced a pressure of 16 inches while a pressure of 27 inches was obtained with the douche can. On all occasions the junction of the nozzle with the meatus was perfect and in the case of the hand syringe the piston was forced down as strongly and as rapidly as possible.

It appears justifiable to compare the figures obtained although no value is claimed for them is absolute estimations, and it is safe to say that the pressure obtained with the hand syringe in these experiments was higher than that which could be achieved by the patient himself, due to the difficulty which he must experience in manipulating the piston and concurrently maintaining an efficient junction between the nozzle and the meatus.

Dr Webster misquotes me when he credits me with the statement, "Failure to promote and maintain adequate dilatation of the urethra," and I seriously question the accuracy of his reproving remark that "the normal function of the urethra is to pass fluids at low pressures hence the use of high pressures in treatment is unphysiological." If this statement is true it must be "unphysiological" on our part to tell patients suffering from gonorrhoea to drink as much water as possible, for the normal stream of urine on micturition even through a littré-meatus, in patients in whom the water intake is considerable is not suggestive of a low intra urethral pressure—I am, etc,

Liverpool, March 31

SYDNEY M LAIRD



## Weil's Disease

SIR—Dr R Nuttall (*Journal* March 19 p 621) in describing a fatal case of Weil's disease mentions the widely different figures for fatality rates and suggests that these differences might be accounted for by difficulties in diagnosing atypical cases: this is undoubtedly true. How far the prognosis can be influenced by the use of anti leptospiral serum is another important speculation. The paucity of records bearing on this question suggests that serum is not largely used. It would appear however that when used prophylactically or in the early stages of an infection experimentally or clinically the serum now available is of the greatest benefit against the strains of leptospira met with in this country although in the later stages of the disease the evidence of its value is perhaps not so clear. Nevertheless now that anti leptospiral serum can readily be obtained it seems worth while in view of the difficulty of forecasting the course of any case of Weil's disease urging that specific serum be used as early as possible in every case of this infection—I am etc

London W1 March 28

F MURGATROYD

## Foreign Colleagues in Distress

SIR—In your issue of March 26 (p 705) eighteen British medical men comment on the situation in Austria and urge colleagues in all countries to watch the progress of events with the closest attention and to do all in their power whether by public protest or by public or private assistance to stand by any members of our profession who may suffer hardship under the new regime.

It is not I fear too cynical to hold that the two words I have italicized in this quotation are the only ones of value. More eminent men than even our eighteen colleagues have produced not less eloquent protests during the last five years. The feelings of the eminent authors have been relieved perhaps our feelings have been vicariously relieved that is all. The relief of misery requires personal sacrifice. Perhaps the time will soon come when a conflict of professional self interest and Christian charity may be rather grim but there is an intermediate stage. The Society for the Protection of Science and Learning (formerly Academic Assistance Council) has worked for the salvation of oppressed scholars and scientists during the last five years. Medical scientists have formed a considerable proportion of our clients and as we do not concern ourselves with practitioners but with displaced academic workers questions of mere professional competition do not arise. No patriot can truthfully accuse us of taking bread out of an English mouth to fill the belly of a foreigner. What we have done has been to help persons well fitted to advance medical knowledge to continue to do so. Most of our subscribers have been themselves academic workers or teachers in schools, few of whom have news value and fewer still pay supertax. They have not written to the Press but they have sacrificed money and convenience. It is much easier to write letters than to fit a stranger guest into one's department to beg here and there to try to interest an influential but indifferent A or a very busy B in some piece of work, intrinsically good enough but not made the best of by a shabby, anxiously ridden foreigner speaking broken English.

Although I am writing a begging letter (of a strictly unofficial kind) I shall not follow the time honoured practice of describing harrowing cases. In the first place they might be identified and if so the emotional cruelty of a child wielding the strength of a giant might be employed

to torture in some petty way the relations of known persons. In the next place I dislike being more emotional than I can help in public. To avoid that danger I will be flippant with G K C.

I know you vetoed at Earl's Court  
That brutalizing Billiard Show  
Quite so yes yes this o-called sport  
Yes so-called Christian strikes a blow  
Yes o-called Twentieth yes I know  
Degraded postures a player kicks  
The billiard marker with his toe  
—But will you lend me two and six?

Few of us who can read and none of us who have been working for the cause these five years need to be urged to watch the progress of events with the closest attention. What we need is to be given (no lent) two and six. Even postage stamps (saved from letters or post addressed to you and other editors) would be thankfully received by the Society for the Protection of Science and Learning 6 Gordon Square WC1—I am etc

April 2

MAJOR GREEN 1907

## Corporal Punishment

SIR—A letter from Mr Victor Bonney appeared in the *Journal* of April 2. Was it to invite comment? The letter begins on one page and ends on the next and as you turn the page you pass from thought which is proper to 1938 to that which characterized the ethics of perhaps the Stone Age. A brutal criminal has injured an individual and offended against social order. Can we seriously believe that the victim of such a crime would be pleased or helped or suffering by imagining the corporal punishment of his aggressor? Happily men have long ago realized that personal revenge has no place in a civilized community and the community as a whole has taken in trust the interests of those who are wronged. In discharge of this trust we have inflicted corporal punishment up to the present time. If the best informed opinion now tells us that it should be abandoned we ought to be thankful that our more merciful feelings are sanctioned and we should direct our aggressive action towards breaking down the social conditions which produce crime. I am not a lawyer but is there not some confusion in Mr Bonney's letter between the administration of justice in civil and criminal proceedings respectively?—I am etc

London W1 April 4

GRACE NICOLE

The Council of the Royal Society of Arts (John S. C. Adelpy W.C.2) give notice that the next award of the Society Prize for a work on medical jurisprudence will be made on January 1939 the ninety fifth anniversary of the death of Dr Swiney left a sum of money to the Royal Society of Arts for the purpose of presenting a prize on the first anniversary of his death to the author of the best published work on jurisprudence. The prize is a cup of value £100 and money to the same amount. The award is made by a joint committee of the Royal Society of Arts and the Royal College of Physicians which appoints special assessors. The prize is offered alternately to general and general jurisprudence but is at present reserved to the former. It is to be given to the author of the best published work on jurisprudence. Any person desiring to submit a work in competition or of recommendation for the consideration of the judges should do so by letter addressed to the Secretary of the Society not later than November 6.



## Obituary

### T A McCULLAGH, M R C S

By the death of Dr Thomas Alexander McCullagh J P, DL at the age of 85, South Durham has lost an outstanding personality. The son of a distinguished Wesleyan divine—the Rev Thomas McCullagh—he received his medical education at Guy's Hospital. After qualification as M R C S, L R C P and a brief period of work in Liverpool and Swinton he went to Bishop Auckland in 1877 where he joined Dr Jobson as junior partner, subsequently continuing in the same practice until 1923 when he retired from active work, though he continued his appointment of medical officer of health, held for many years until 1937.

His interests were very numerous—riding, hunting, shooting, racing, golf, and walking—but in addition to these pursuits of the country doctor he was a great reader with a wide knowledge of general literature. Tall, of distinguished appearance and gentle manner, his was a great presence in the sick-room, and his reputation extended far beyond the area in which he worked. His practice included attendance on many county families in the more prosperous days of Durham county, and he was thus brought into contact with many distinguished figures in various walks of life—political, social, artistic—of whom he had many reminiscences. He was Deputy Lieutenant for the County of Durham under Lord Londonderry, and also one of the oldest members of the Bishop Auckland magisterial bench. In his early days he joined the old Volunteers as regimental surgeon and continued in that capacity as brigade surgeon lieutenant-colonel until that force was merged in the Territorial Force, in which he held the rank of lieutenant-colonel. He received both the Volunteer and Territorial Long Service Decorations. With his passing yet another of the old school of county doctors has gone, a type that is unhappily disappearing. Courteous, gentle, erudite, and yet with interests which enabled him to meet on their own ground any type of patient in his wide area, it was a privilege to meet him and an honour to know him well.

G H

The Bishop of Durham (Dr Hensley Henson) writes

When I came to live in Bishop Auckland nearly eighteen years ago I made the acquaintance of Dr McCullagh who had just retired from the active exercise of his profession and was living hard by the Castle Gates. We soon became fast friends and frequent companions. He was wont to take his "constitutional" in the Castle Park, and I often joined him. His interests in books, birds and politics largely coincided with my own, and his long and intimate knowledge of the county gave a special interest and value to his conversation. He often borrowed books from me, and, unlike many borrowers, he always returned them. He was an omnivorous yet discriminating reader. More than most men whom I have known he combined the urbane manner and tolerant habit of a man of the world with the genuine piety and religious habit of a true Christian. He was indeed both. His long acquaintance with "all sorts and conditions of men" had made him take an indulgent view of normal humanity but it had deepened his belief in Christianity as the deepest truth for man. His neighbours, very various in social type and condition regarded him with affectionate respect. He was everywhere greeted with

something more than normal heartiness. Bishop Auckland was proud of the stately old man, whose presence added dignity to the rather drab aspect of the town. His absence will be felt and lamented.

### J LOCKHART LIVINGSTON, M D

We regret to announce the death on April 2, after a long illness, of Dr John Lockhart Livingston of Hursley, near Winchester. He was the senior partner in a firm practising at Hursley, Southampton, and Eastleigh, and had long been a prominent worker in the British Medical Association, enjoying the confidence of all his colleagues over a wide area.

After studying medicine in Belfast and Dublin Dr Lockhart Livingston graduated with honours in 1886 as M D, M Ch, and M A O of the Royal University of Ireland, and won a clinical gold medal at the Ulster Hospital for Children and Women. He was then house surgeon for two years at the Bristol Royal Hospital for Sick Children and Women before settling in Hampshire, where he held for many years the appointments of medical officer and public vaccinator for the Hursley Union, medical officer of health under the Hursley Rural District Council, and medical officer to the Post Office. During his earlier years of practice he contributed clinical notes to these columns and elsewhere.

Dr Lockhart Livingston joined the British Medical Association fifty years ago, and served, with one break, as representative of his Division at the Annual Representative Meetings from 1920 to 1935 inclusive. He was president of the Southern Branch in 1920 and chairman of the Winchester Division in 1922-3 and again in 1927-9. He had also been president of the Southern Branch of the Society of Medical Officers of Health.

Dr FREDERICK THRESHER GRIFFIN, who died on March 17 at his residence in Southampton at the age of 75, was the son of the late Dr R W W Griffin of Southampton and grandson of the late Dr Richard Griffin of Norwich and Weymouth, who was a pioneer in the founding of the Poor Law Medical Officers' Association. After leaving Epsom College he received his medical education at the University of Edinburgh, where he graduated M B, C M in 1892, and after his father's death began to practise in Southampton. During the war Dr Griffin was attached to the staff of the military hospital at Highfield. He was for many years medical officer to the Southampton Dispensary and to the Southampton Seamen's Orphanage for Boys. After the war he was actively engaged in work under the Ministry of Pensions, and for a time was chairman of the Medical Board for the Southampton area. A very keen sportsman in his earlier years, he was for long a member of the Hampshire Cricket Club, and had once the distinction of catching Dr W G Grace in the deep field on the County ground. He had also played Rugby for Hampshire and the Trojans. He was an original member of the Old Shirley Golf Club and of Stoneham Golf Club. More recently he took up bowls, becoming a member of the County Bowling Club. He was a member of the Southampton Medical Society. Keenly interested in old china, he amassed a valuable and well-selected collection at his home in Winn Road. He leaves a widow and one son.

Dr SAMUEL MOORE, one of the oldest medical practitioners in Leeds and a former member of Leeds Corporation, died at his home in Headingley on March 20. He was born at Newtownards, Co Down, in 1863, and studied medicine at Belfast, graduating M D of the Royal University of Ireland in 1885 and M Ch with honours in 1886. After a short period as assistant at Denholme, Bradford, he moved to Leeds, and was appointed district

medical officer for Holbeck Union in 1897. Dr Moore was a member of Leeds Corporation from 1910 to 1913 and had been deputy chairman of the Highways Committee. He joined the British Medical Association in 1889 and was chairman of the Leeds Division in 1922. For ten years he was vice president of the Leeds and District Ulster Society. His son Dr John Moore has been in practice with his father for some years.

Dr JAMES WOOD, deputy mayor of Brighouse, Yorks, died on March 26 at the age of 68. He was mayor of the borough in 1915-6. Dr Wood was born in Scotland and received his medical education at the University of Edinburgh, graduating M.B. C.M. in 1895. He had practised at Brighouse for forty-one years and was medical officer to the Smith Orphan Homes. He held office as chairman of the Health Division of the British Medical Association in 1927-8. At the funeral on March 29 medical men and members of the Town Council acted as bearers and representatives of public bodies and many organizations attended the service.

Dr RICHARD REGINALD SLEMAN, who died at his residence in Norwood on March 26, had a most distinguished record during the South African and the last war. He received his medical education at Cambridge and St Mary's Hospital, qualified L.S.A. in 1888 and obtained the Durham M.D. in 1906. In the South African War he was surgeon major (senior medical officer) in the City of London Imperial Volunteers in 1900 and was present at the battles of Zand River, Dornkop, Diamond Hill and Fredericksburg. He received the South African Medal with four clasps and the Freedom of the City of London was conferred upon him. He had been an instructor in the Voluntary Ambulance School of Instruction and received the proficiency certificate of the Army Medical Training School, Aldershot, with special mention in 1897. He served with the rank of lieutenant colonel in command of the 1st City of London Field Ambulance and was A.D.M.S. of the 28th Division B.E.F. He was an Officer of the Order of St John of Jerusalem and had been awarded the Volunteer and Territorial Decorations, the Order of the White Eagle of Serbia (1917) and the Order of the League of Mercy in 1919. He was Deputy Director of Medical Services of the Malta Command in 1914 and 1915. Dr Sleman was a vice-president of the League of the Order of Mercy and an inspector of hospitals for that League. He had been a member of the British Medical Association since 1891.

Dr ARCHIBALD WILLIAM WALLACE DAVIDSON died on April 1 at his home in West Kilbride, whither he retired two years ago. He was born in Glasgow on May 28, 1875, the son of Alexander Davidson and from Avon Academy went to study medicine at the University of Glasgow, graduating M.B. Ch.B. in 1900. For more than thirty years he practised at Salcoats, Avonshire, in succession to his uncle, the late Dr Wallace, and was parochial medical officer for Stevenson. When he left Salcoats in 1936 the townspeople gave him a testimonial.

We regret to record the death in London on March 27 of Dr HENRY REYNOLDS BROWN of Maldon, Essex. Born at Dunoon in 1868, the son of the Rev. George Brown, he was educated at the Lycée de Pau in France and the University of Edinburgh, where he graduated M.A. in 1890 and M.B. C.M. four years later. He proceeded M.D. in 1901. His earlier appointments included those of house surgeon to the Edinburgh Royal Infirmary, junior assistant in the pathological department of Edinburgh University and assistant physician to the Crichton Royal Institute, Dumfries and Mavisbank Asylum. During the war he held the commission of captain in the R.A.M.C. and served in France from 1914 to 1917. He subsequently practised at Maldon, where he was medical officer of health of the urban and port sanitary districts and medical superintendent of the isolation hospital. He was also a J.P. for Essex. Dr Brown had been for

forty-six years a keen supporter of the British Medical Association. He was honorary secretary of the Mid Essex Division in 1922-3 and chairman in the following year. He was a representative at the Annual Meeting of the Association in Portsmouth in 1923, president of the Essex Branch in 1929-30, and a member of the Rural Practitioners Subcommittee from 1931 to 1937 and of the Distribution Committee from 1936 onwards.

The death took place at his residence, Burnvale, West Calder, on March 28, after a short illness of Dr WILLIAM YOUNG, O.B.E., J.P., one of the best known practitioners in the Lothians district. He was born in 1856 at Bathgate and taking a medical course at Edinburgh University graduated M.B. C.M. in 1880. After periods of residence in Glasgow Royal Infirmary and in the Royal Maternity Hospital at Glasgow and postgraduate study at Vienna and Paris, he began practice at Addie Well and later settled in practice at West Calder. There he continued in active work for fifty-two years. In addition to the cares of a large general practice, Dr Young took a great interest in local public affairs. He attained the rank of major in the R.A.M.C. (T.A.) held the Volunteer Decoration and in recognition of his services during the war received the O.B.E. He was also for many years keenly interested in education and was a member of the West Calder school board and later of the Midlothian education authority from 1895. Joining the Midlothian County Council in 1910, he acted for some time as chairman of its public health committee and served on a number of its other committees until his death. He also did much to encourage a local pipe band. On completing his jubilee in practice two years ago, Dr Young was presented by his patients and friends with a cheque for £300 and a silver salver. He is survived by his wife, four daughters and two sons, of whom one is an administrative medical officer under the London County Council.

The death is announced of Dr MAGNAN of the Collège de France. He had for many years specialized in the study of flight and its application to the physiology of aviation.

## The Services

### HONORARY PHYSICIAN TO THE KING

Lieutenant-Colonel L. T. POOL, D.S.O., R.A.M.C. has been appointed Honorary Physician to the King in promotion to the rank of Brevet Colonel, vice Lieutenant-General James A. Hartigan, K.C.B., C.M.G., D.S.O., who has retired.

### ROYAL NAVY MEDICAL CLUB

The twenty-fourth annual dinner of the Royal Navy Medical Club will be held at the Travancore Restaurant (Empire Suite), Piccadilly Circus, W., on Friday, April 22, at 7.0 to 8 p.m. Particulars can be obtained from the honorary secretary (Surgeon-Commander M. B. Macleod, R.N.), Medical Department Admiralty, S.W.1. Medical and dental officers from the Royal Navy or Royal Naval Volunteer Reserve are eligible for membership of the Club.

### DEATHS IN THE SERVICES

Surgeon Rear Admiral DONALD TEMPLETON HASKIN, R.N. (ret.), of Achnitry, Somerset, died at Exeter on March 26. He was educated at University College, London, and took the M.R.C.S. and L.S.A. in 1879, the L.R.C.P. in 1882 and the M.B. Lord. in 1887. He held the post of assistant surgeon at University College Hospital in 1889 and entered the Royal Navy in February 1890, rising to the rank of Surgeon Rear Admiral on August 7, 1917, and retiring in 1917. He was surgeon of HMS Curlew on the Australian Station. He received the thanks of King's College and the Government for services of the wounded at Apia in the Samoan rebellion in 1898. He also served through the war of 1914-18, receiving the medals. At the time he held the post of senior commander of medical services in the British Overseas Command, the Ministry of Pensions.

## Medico-Legal

### THE TITLE "DOCTOR"

The Medical Act, 1858, imposes a fine upon any person not on the *Medical Register* who wilfully and falsely pretends to be, or takes the title of, among others, a physician, doctor of medicine, or surgeon. The question of whether an unqualified medical practitioner who holds a genuine degree, awarded by a reputable university, of doctor in some other subject than medicine may call himself "doctor" has never been fully argued before the courts. In March, 1936, the Brighton magistrates, at the instance of the Medical Defence Union, convicted an unqualified practitioner who called himself "Dr Deacon," but he had no good claim to the title. Recently the Union wrote to Miss Ethel Mellor, who practises osteopathy in Welbeck Street, as follows:

Dear Madam—My attention has been drawn to a card on which appears your name with the description or designation "Dr" preceding your Christian name. In view of the recent decision which was secured at Brighton in the Deacon case I should be glad if you will advise me that you will in future refrain from using this designation, which has been held to be an infringement of section 40 of the Medical Act, and which can be confusing and misleading to the public. Many other unregistered practitioners who are practising as osteopaths have already indicated their willingness to come into line with the recent decision and have amended their plates and notepaper accordingly.

Miss Mellor sued the Union for libel, pleading that it meant by that letter, and by others which followed, that she had no right to her title of "Dr" and was unlawfully, wilfully, and falsely using it, implying that she was a doctor of medicine or a registered medical practitioner, that she was dishonourable, had no learning, qualifications, experience, or credentials, was actuated by base motives, and used the title of "Dr" for fraudulent purposes. She conducted her own case and proved that she was a doctor of science of the Sorbonne University in Paris and a doctor of osteopathy of an American college. Her doorplate bore only her name and the prefix "Miss," but she used a descriptive card which bore the name "Dr Ethel Mellor, A.R.C.S., D.Sc., D.O., Osteopathic Practitioner," and her address. She did not allege that the letters of which she complained had been "published"—that is, brought to the notice of any third party other than the office staff of the Union—but complained that they were on the file for others to see. Mr R. P. Croom-Johnson, K.C., for the Union, submitted to the Lord Chief Justice, who tried the case on March 28 and 29, that there was no case for him to answer, and Lord Hewart agreed. He said that the words complained of were not reasonably capable of a defamatory meaning, but even if they had been, on Miss Mellor's own admission they were published on a privileged occasion, and there was no evidence of any malice on the part of the Union. The action therefore failed, and it is difficult to see why it was ever brought. The question of whether the plaintiff's use of the title "Dr" is within the Medical Act or not remains open, but on the face of it there seems to be nothing about her descriptive card which could mislead anyone into thinking she is on the *Medical Register*.

### A TESTATOR'S MENTAL STATE

A testator may suffer from serious mental disability and yet make a valid will. The working of the law in such cases was well illustrated recently when Mr Justice Langton pronounced in favour of a will made by a testator whom he found to have suffered from a marked delusion on a certain subject striking out only a part

of one codicil which he held to be tainted with that delusion.<sup>1</sup> In a still more recent case heard by Mr Justice Henn Collins, the brothers of a testator put forward a will for probate and his son sought to show that it was invalid on the ground that, owing to arteriosclerosis and cerebral haemorrhage, the deceased was not of sound mind, memory, and understanding, and did not know and approve the contents of the will.<sup>2</sup>

The family doctor said that four days after the will was executed he found the testator in a very confused mental state, with a childish manner, and diagnosed cerebral thromboses. Almost every time he saw the testator his conversation was abnormal; he thought he was in the thick of the Abyssinian war and that he was back in his soldiering days. He was very suggestible. Dr J. G. Porter Phillips, stating his opinion on the evidence he had heard, said that persons suffering from cerebral thrombosis were able to pull themselves together and focus their attention on the subject matter before them. He thought the testator's mind was, until two days after the will was made, disordered by arteriosclerosis and not by thrombosis. Dr R. D. Gillespie, also giving evidence of opinion, said that the symptoms during the three months preceding the will showed a progression of the disease, and that he did not think he would himself have witnessed the will, but he would have been swayed by the circumstances of the testator's instructions and manner at the time. The testator might have formed a warped judgment and yet have understood what he was carrying out. The brothers, on the other hand, brought evidence to show that the testator had displayed considerable acumen in the matter of the will, had focused his attention on its terms for a full hour and had dealt lucidly with the questions which the solicitor had raised. He had said that he was making no provision for his son because his son was already provided for. There had been an unfortunate quarrel between father and son, and the father had formed the view that the son had taken a grasping attitude towards some of his property.

The learned judge pointed out that the question to be determined was one of fact and degree, and came to the conclusion that the testator knew and approved of the contents of the will. He was satisfied that the testator's view that the son was amply provided for was not an insane one. The real cause of the son's disinheritance was the quarrel; the son had taken a line which would have antagonized any father in the testator's position. There had been justification in the testator's mind other than a reason produced by disease, and he was satisfied that the testator was of sound disposing mind when he executed the will.

### A LEGACY TO PROVIDE AMUSEMENT

In leaving money to charity it is as well to make sure that the institution chosen for the gift not only exists but is also capable of using the gift in the intended way. In a case reported in these columns some time ago<sup>3</sup> the testator made a substantial gift in his will to a non-existent institution. Recently a gentleman left £1,000 each to the Royal Hospital and Home for Incurables and the National Benevolent Institution, and directed the governors to use the income to provide some form of amusement to be settled by a committee of five patients.<sup>4</sup> The Royal Hospital, answering a summons in the Chancery Division to determine the validity of the gifts and that they were prepared to accept the legacy and carry out the testator's intentions. The treasurer of the National Benevolent Institution, however, declared that it did not possess any hospital or almshouse but provided small pensions for persons who lived in their own homes and could not be described as patients. Mr Justice Simonds said that the question was one of construction. He felt justified in saying that the gift

<sup>1</sup> *Re Bohrmann*, *British Medical Journal* 1938 1 43 (February 19).

<sup>2</sup> *The Times* March 16 and 17. *North v North*.

<sup>3</sup> *British Medical Journal* 1935, 1 809.

<sup>4</sup> *Re Hovenden decd*. *The Times* March 16.

was made to a charitable institution and indicated a general charitable intent on to which is added a particular intention which could not be carried into effect by the National Institution. The gift prevailed though the condition could not be fulfilled. No question arose out of the gift to the Royal Hospital.

The court will always apply what is called the doctrine of *cy pres* in a case where there is a general intention to benefit charity although there may be a difficulty about the particular application of the terms in which the gift is made. It will carry the testator's intention into effect as nearly as possible. No one can doubt that in this case the learned judge took the wise and obvious course.

## Medical Notes in Parliament

In the House of Lords on March 30 the Royal Assent was given to the Blind Persons Act, the Population (Statistics) Act, the National Health Insurance (Amendment) Act, the Housing (Financial Provisions) Act and to other Acts.

The Housing (Agricultural Population) (Scotland) Bill was read a first time in the House of Lords on March 30. In the same House on March 31 the Street Playgrounds Bill was read a second time and the Dogs Amendment Bill a third time. Six Lords were appointed to a joint committee of both Houses on the Collecting Charities (Regulation) Bill.

On April 3 on the motion of Viscount Gage Lord Addington and other Peers were appointed to join with a committee of the House of Commons to consider the Food and Drugs Bill.

The Army and Air Force (Annual) Bill was brought from the Commons on April 5 and read a first time. The Rating and Valuation (Postponement of Valuations) Bill passed through committee. The Administration of Justice (Miscellaneous Provisions) Bill was read the third time and passed.

The House of Commons this week again discussed foreign affairs and also read the Coal Bill a third time.

The Nursing Homes Registration (Scotland) Bill to provide for the registration and inspection of nursing homes in Scotland and for purposes connected therewith was presented in the House of Commons on March 31 by Sir Douglas Thomson supported by Major Neven Spence, and was read a first time.

### The Medical Services in Army Expansion

The Parliamentary Medical Committee meeting at the House of Commons on April 3 with Sir Francis Fremantle in the chair discussed the British Medical Association advertisements in favour of pasteurized milk. The Committee also considered the Infanticide Bill, the Food and Drugs Bill and the Contraceptives Bill. Draft Aircraft Regulations to prevent the communication of infectious diseases by air came before the Committee.

General W. P. MacArthur, Director General of the Army Medical Service, then spoke on that Service and on the medical side of Army expansion. He said the application of the scheme recommended by the Warren Fisher Committee for short term medical commissions in the Army was working most satisfactorily. Of the first contingent of temporary officers all had applied for permanent commissions and twelve out of fifteen had received them. The medical services of the Territorial Army were being brought back to full strength with three field ambulances to a division. This proportion had previously been reduced to one. Provision was being arranged for other medical dental and nursing services to the Territorial Army. In addition twenty nine Terri-

torial General Hospitals were being organized and the necessary provision of material and personnel was well advanced. Difficulty was encountered in fitting in the Territorial provision with the medical side of schemes of air raid precautions under the Home Office. Other problems of co-ordination were satisfactorily adjusted by a co-ordinating medical committee under the Committee of Imperial Defence.

The Parliamentary Medical Committee then discussed with General MacArthur questions of nutrition of food and of recruiting standards. They learnt that one proposal—never put into effect—from the Army Medical Reorganization Committee of 1902 was that the Director General of the Army Medical Service should have a seat on the Army Council. This appeared no longer to be a special need because the Director General of Medical Services was constantly present at informal consultations with the heads of the War Office and had the direct right of approach to the Secretary of State for War. The Committee was also told of new arrangements for provision of water lorries and water purifying plant for troops.

### Alleged Wrongful Detention under Mental Deficiency Act

On March 28 Mr. LOGAN asked the Minister of Health if his attention had been called to the case of a married man aged 31 Territorial who was arrested at the Ministry of Labour Office, Bootle, by two plainclothes officers who informed him they had orders to detain him until an order arrived from the asylum in which he had been detained fourteen years ago on the grounds that he had not been subject and amenable to proper supervision during the five years he had been at liberty and that on the first day was taking to have the case reviewed. Mr. BERNARD replied that the Minister of Health had caused inquiry to be made in this case. There was a reference to an institution for mental defectives on July 11, 1921, on the authority of an order made under the Mental Deficiency Act, 1913. He was allowed to leave the institution on licence on December 22, 1926. The periods were extended from time to time until May 11, 1934, when the licence was revoked on the ground that its conditions had been broken. The patient was then treated as an escape from licence and was eventually brought back to the institution on February 3, 1935. He was again allowed to leave the institution on licence on March 3. The Board of Control had reviewed the whole of the circumstances of the case and as a result directed the transfer of the patient from the order under the Mental Deficiency Act to a special hospital in respect of him.

Mr. LOGAN: Is it not a fact that the patient has been at all along and that he was released in a week only because the question being raised in the House the examination had not taken place only during the week? Is it not a fact further that this man has been at liberty on an institution for twelve years that he is considered to be perfectly sound and that the Territorial officers under whom he has been working say that he is perfectly sane? Will the Minister say what inquiry he intends to make if a man is considered to be insane and sent to an asylum and treated as a lunatic and what compensation he intends to pay?

Mr. BERNARD: Special reports were made in August last about the case and the special is a man who was not a proper person to be detained in an institution. It was within the discretion of the Board of Control to recommend or not and in fact they did not do so.

Mr. LOGAN said that in view of the outrage on public opinion he would raise the question of the removal of the patient from the House.

### Workmen's Compensation Act Inquiry

On March 29 Mr. TINKER asked the Home Secretary if he was aware that the present proposed amendments under the Workmen's Compensation Act did not take into consideration the injured workmen and that a suggestion was suggested in the report of the Departmental Committee set up to inquire into the Workmen's Compensation Act and

when he intended to announce the conclusions of the Government on the report

Sir SAMUEL HOARE replied that the committee's recommendations involved important changes in the present system which could not be carried out without legislation and he could not foresee sufficient time this session for legislation of this character. It would be an advantage to allow more time not only for the Government but also for industry and for members of Parliament to consider the recommendations of the committee before legislation was formulated.

#### Bill to Regulate Sale of Contraceptives

Mr R. J. RUSSELL in the House of Commons on March 30 introduced a Contraceptives (Regulation) Bill to regulate the public display in shops of contraceptives and matter descriptive thereof to prohibit street trading in such articles and to restrict the public advertisement thereof. He said he had found that of 280 chemists' shops only seven did not stock and distribute contraceptives. In addition a large number of shops dealt with contraceptives only. In one district he found thirty-six of these stores apart from the chemists' shops. In addition there was growing up through the country the custom of buying these things through slot machines outside chemists' shops, outside factories, and elsewhere. Inside factories and workshops touts furthered the sale of these articles. Country districts were infiltrated, and in almost every village someone acted as a tout for the display and sale of these articles. The Bill made it an offence to notify or sell these things to unmarried persons under 18 years but there was nothing in it to stop the sale by chemists or from other stores conducted in a proper manner of contraceptives to those who needed them.

Mr THURTELL opposed the Bill and a division was called but not pressed. The Bill was then read a first time. Its backers included Sir Francis Fremantle, Sir Joseph Leech, Sir Henry Morris Jones, Major Neven-Spence, Dr SALTER, and Dr HOWITT.

#### Health on the Training Ship "Caledonia"

Mr DUFF COOPER stated on March 30 that the number of cases of scarlet fever and rheumatic fever among boys in the *Caledonia* [which is moored at Rosyth] since May 10, 1937, when the first entries were made, were seventy-four and thirty-one respectively. The number of cases of middle ear disease to December 31, 1937, was twenty, since then there had been thirty cases of ear trouble but how many were of middle ear disease was not known. Seven boys suffering from rheumatism with heart complications had been sent to civil hospitals on shore. These numbers were not greater than were to be expected periodically in institutions of the type and size of the *Caledonia*. The amount of sickness there was declining. The position was carefully watched and all the usual precautions to limit the spread of infectious disease were in force. Conditions on the *Caledonia* were modern.

#### Medical Officers in the Navy: Marriage Allowances

In reply to Sir John Anderson who asked about the extension to officers of the medical branch of the Royal Navy of the privilege of marriage allowances, Mr SHAKESPEARE said on March 31 that it had now been decided that there was no reason for making any difference in the case of these officers. It had just been announced to the Fleet that they would receive marriage allowances under the same conditions as other naval officers.

#### Psychotherapy for Convicted Persons

Sir RALPH GLYN on March 25 drew attention to a case on March 15 at Lewes Assizes when sentences of imprisonment were passed on two persons in spite of medical testimony on the need for these persons to have psychological treatment. Sir Ralph asked whether the Home Secretary would consider, after consultation with alienists, an institution where cases could be dealt with which were aggravated by prison

treatment. Sir SAMUEL HOARE replied that psychological treatment of prisoners had been the subject of a special investigation by his medical advisers during the last few years. They hoped shortly to present a report. When this report had been received he would be in a better position to consider the general problem.

#### Foot-and-Mouth Disease

On April 4 Mr W. S. MORRISON replying to Brigadier General Clifton Brown said that the recent outbreaks of foot-and-mouth disease began in October 1937. The disease was successfully eradicated by the middle of January in the group of outbreaks affecting Wiltshire and adjoining counties. Fresh centres of disease appeared in Wiltshire (Calne district) on March 26, in Glamorgan (at Pengam) on March 27, and during the week end at Birmingham and Nottingham and in Northamptonshire. There was reason to suppose that infection might have been present in and distributed from Banbury market on March 24 and if this was confirmed a serious situation would have arisen in view of the extensive distribution of stock from that market.

*Notification of Measles*—Sir KINGSLEY WOOD replying to a question on March 22, said that his attention had been drawn to the fact that during the ten years from 1927 to 1936 there was an annual average of 527 deaths from measles in London alone. The question of making all cases of measles compulsorily notifiable had recently been under consideration by the London County Council and he had informed them that he would be prepared to entertain an application for the making of regulations in regard to the notification of measles in London.

*Nursing Profession: Conditions of Employment*—Sir KINGSLEY WOOD told Mr. Bull on March 24 that the information at his disposal did not enable him to state the pay, the arrangements for the provision of uniforms and board, the usual bathroom accommodation, the number of paid holidays, and the days off and week ends enjoyed by each class. These were among the matters under investigation by the Interdepartmental Committee sitting under the chairmanship of the Earl of Athlone and would be fully dealt with in that committee's report.

*Supply and Disposal of Skimmed Milk*—Lady ASFOR asked on March 24, whether Mr W. S. MORRISON knew that the Food Council in a recent report condemned the waste of six and a half million gallons of skimmed milk. In view of the stress laid upon its value as a nutritive food by the Advisory Committee on Nutrition she asked what action was contemplated to avoid this waste in future. Mr MORRISON replied that he knew of the statement by the Food Council but thought the estimate of gallons should be accepted with reserve. The supply of skimmed milk was inconstant since it depended upon the varying quantities of whole milk available for manufacture into butter and cream and it was in greatest supply when the overflow of whole milk from the liquid market was largest. Moreover, many manufacturers had no facilities for converting skimmed milk into a product which could be conveniently stored, handled and transported. The problem was largely one of finding a steady sale for a highly fluctuating quantity and no satisfactory solution had been found. If skimmed milk were sold for liquid consumption the price would be almost as much as for whole milk. The Ministry of Agriculture desired that people should drink whole milk, not skimmed milk.

*Attested Herds Scheme and Beef Cattle*—Mr PRICE inquired, on March 24, if any assistance would be given to owners of beef cattle in connexion with the scheme for eradicating tuberculosis from the herds. Mr MORRISON answered that under powers conferred by the Agriculture Act 1937, it was proposed to extend the present Attested Herds Schemes as soon as practicable to enable payments to be made in respect of herds maintained primarily for beef production.

M. I. Borz.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended March 26 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease are for (a) The 125 great towns (122 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	43	6 4	11 3	3	2	28	2 2	6 2	2	—		
Diphtheria Deaths	1,404 27	155 8	235 12	63 1	37 1	966 27	111 3	190 3	35 2	34 1	1,144	180
Dysentery Deaths	92	19	70 —	—	—	14	1	6 —	—	—		
Encephalitis lethargica, acute Deaths	3	— —	1 1	—	—	7	— —	1 —	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	13 1	2 —	3 —	1 —	—	20 1	8 —	9 —	2 —	4 1	22	—
Erysipelas Deaths		—	74 1	6	6		1	80 1	5	4		
Infective enteritis or diarrhoea under 2 years Deaths	47	18	6	4	2	48	9	6	7	2		
Measles Deaths	67	23	1,495 36	2	80* 12	9	1	214 1	—	—		
Ophthalmia neonatorum Deaths	93	15	62	—	—	95	9	31	—	1		
Pneumonia influenzal & Deaths (from Influenza)	1,254 78	122 9	7 5	14 —	14 1	1,181 98	99 17	18 8	1 5	4 7	1,532	153
Pneumonia primary Deaths		25	235 34	6	23		28	226 27	3	12		
Polio encephalitis, acute Deaths	1	— —	—	—	—	1	1 —	—	—	—		
Poliomylitis acute Deaths	3	— —	—	—	1	3	— —	1 —	—	—		
Puerperal fever Deaths	2† —	2 1‡	17	2	—	27	3 1‡	14	1	—		
Puerperal pyrexia Deaths	189	16	30	—	5	99	13	25	—	1		
Relapsing fever Deaths	1	—	—	—	—	—	—	—	—	—		
Scarlet fever Deaths	2,167 6	200 3	355 2	70 —	74 —	1,530 3	167 1	325 2	87 1	42 —	1,910	275
Small-pox Deaths	2 —	— —	— —	— —	— —	— —	— —	— —	— —	— —		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping-cough Deaths	13	1	94 1	1	7 —	33	7	563 20	4	4 —		
Deaths (0-1 year) Infant mortality rate (per 1 000 live births)	391 65	76 62	72	36	36	452 72	63 52	98	53	18		
Deaths (excluding stillbirths) Annual death rate (per 1 000 persons living)	4,994 12.3	991 12.5	660 13.5	205 13.8	163 14.4	5,531 13.8	1,051 13.1	715 14.6	293 20.0	178 17.0		
Live births Annual rate per 1 000 persons living	6,769 16.7	1,239 15.6	927 18.9	385 26.0	278 24.6	5,728 14.3	1,071 13.3	825 16.9	354 24.1	250 23.9		
Stillbirths Rate per 1 000 total births (including stillborn)	283 40	31 24	—	—	—	259 43	40 36	—	—	—		

\* 76 cases in Belfast alone

† After October 1 1937 puerperal fever was made notifiable only in the Administrative County of London.

Death from puerperal sepsis  
‡ Includes primary form in figures for England and Wales (Administrative County) and Northern Ireland



## EPIDEMIOLOGICAL NOTES

## Diphtheria

Notifications of diphtheria in England and Wales show a decided drop since last week—1,404 cases against 1,446—while the deaths in the 125 Great Towns fell from 41 to 27. London did not share to any extent in this decrease, and the deaths rose from 5 to 8, similarly in Scotland while the notifications fell from 261 to 235 deaths rose from 8 to 12. In Ireland about the same levels of the previous week were recorded. Scarlet fever appears to be decreasing in England and Wales the notifications having fallen from 2,307 to 2,167 while in London they rose from 189 to 200. Despite these decreases, both diphtheria and scarlet fever are much more prevalent in England and Wales than during the corresponding week in the previous nine years.

## Pneumonia

Notifications of pneumonia (primary and influenzal) in England and Wales have fallen since last week—1,409 to 1,254—but in London there was an increase of 12 in the week over 110 reported in the previous week. The figures are below the median value for the last nine years in both England and Wales and London. Deaths from influenza in the Great Towns and in London and Scotland show slight increases.

## Measles

In the 125 Great Towns there were 67 deaths from measles compared with 66 in the previous week, of these 23 (18) occurred in London, 3 (3) in Liverpool, 3 (6) in Manchester, 3 (6) in Plymouth, 2 (2) in Sheffield. The figures in parentheses denote the deaths during the previous week. The London epidemic continues, although possibly the peak has just been passed. 2,477 cases were reported from the LCC elementary schools compared with 2,456 last week and 2,521 in the previous week and the average daily admissions to the LCC fever hospitals were 103 against 94 last week and 101 in the previous week. The number of cases of measles under treatment in the LCC fever hospitals on March 25 was 2,284 compared with 2,079 on March 18 and 1,892 on March 11. On March 25 there were in these hospitals 1,182 (1,211) cases of diphtheria, 844 (830) cases of scarlet fever, 312 (271) cases of whooping cough. The figures in parentheses refer to the figures in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notified were for the week ended March 26 1,315 (1,317) distributed in the different boroughs thus: Battersea 136 (142), Bermondsey 94 (60), Finsbury 28 (30), Fulham 53 (81), Greenwich 112 (111), Hampstead 105 (68), Lambeth 322 (377), St Pancras 171 (143), Shore-ditch 38 (31), Southwark 202 (204), Stepney 54 (70). The figures in parentheses denote the numbers for the previous week. In Scotland 1,495 cases were notified compared with 1,547 in the previous week, the figures for Glasgow were 893 (1,037), Aberdeen 210 (107), Dundee 132 (115), Edinburgh 78 (90), Paisley 51 (55). The figures in parentheses refer to the numbers in the previous week. During the week there were in Scotland 36 deaths from measles compared with 24 in the previous week, of these 27 occurred in Glasgow and 1 in Edinburgh. In Northern Ireland there were 80 cases of measles, of which there were 76 in Belfast alone compared with 106 and 98 respectively in the previous week, while the deaths were 12 of which 11 occurred in Belfast, compared with 8 (6 of which were in Belfast) in the previous week. During the week there were 2 deaths in Eire, both in Waterford.

## Small-pox

In the week ended March 26 there were 131 cases of small-pox in Hong Kong and 131 deaths, compared with

276 cases and 192 deaths reported in the previous week. In the four week period ended March 26 there were in Hong Kong 766 cases of small-pox compared with 632 and 219 in the two immediately preceding periods. Over the same periods the figures were in Bombay 874 (+91), 940 (+45) and 608 (303) respectively, in Calcutta 840 (+61), 431 (273) and 192 (146) respectively, and in Madras 204 (+57), 243 (81) and 301 (82) respectively. The figures in parentheses refer to deaths in the same period.

## Typhus

In the week ended March 19 there were in Morocco 372 cases compared with 411 in the previous week, of these 78 (70) were at Casablanca, 122 (56) at Marrakesh, 20 (47) at Rabat, 6 (19) at Agadir. In the same week in Tunisia the number rose from 41 to 74 and in Egypt there were 85 cases reported compared with 68 in the previous week.

## Medical News

The House of the British Medical Association including the Library will be closed for the Easter holiday from 5 p.m. on Thursday April 14 until 9 a.m. on Tuesday April 15 (Library 10 a.m.).

The offices of the National Fitness Council have been transferred to 1 Queen Anne's Gate Building, Dartmouth Street, SW 1. The telephone number is Whitehall 9060.

The Health and Cleanliness Council (Tottenham School WC 1) has arranged a luncheon to be held at the Horn Restaurant WC on Wednesday April 15 at 1.15 p.m. Lord Horder will be the guest of honor and Dr G. F. Buchanan, President of the Council, will preside.

The jubilee dinner of the Metropolitan Police Staff Association will be held at 7 p.m. on April 28 at the Holborn Restaurant with the president, D. Percy B. Spurgin, in the chair. Among those who have accepted invitations are Sir Philip Game, Commissioner of Police, Sir William Wilson, Mr. Kenneth Marshall, Stipendiary Magistrate at Westminster, Mr. P. B. Skeels, H.M. Coroner, Mr. La Verne, Vice D. G. C. Anderson, Secretary B.M.A. and the Headquarters Medical Staff at New Scotland Yard. Metropolitan police staff can obtain tickets from the hon. secretary, D. A. R. 17-4, Bowson Road SE 17 or Dr. W. G. Jones, M.C., 11 Statham Hill SW.

The Glasgow University Club London will dine at the Trocadero Restaurant W on Friday, March 27 at 7.15 p.m. with Professor E. P. Crichton in the chair. The Glasgow University men who though not members of the club desire to attend are requested to communicate with the honorary secretaries, 62 Harle House, London NW 1.

The annual meeting of the Industrial Health Education Society will be held at B.M.A. House, Tavistock Square WC on Tuesday, April 12 at 4 p.m. The chair will be taken by Mr. Sidney Walton and the speaker will be Dr. R. H. Arthur Greenwood, M.P. (Minister of Health 1947-48).

In our advertisement columns this week the Board of Control invites applications for an appointment as Controller of the Board's staff. The salary commences at £50 per annum rising to £1,200 per annum.

A meeting of the International Society of Medical Hygiene was well attended at Learning on March 10. Under the chairmanship of Dr. Frank Clayton several interesting papers were read by Dr. Collins and Mr. Woodman (Harrogate), Professor Roemer (Germany), Professor Poleski (Poland), Professor Loebl (Austria), Dr. Reinhardt (Czechoslovakia), Dr. N. J. F. (Egypt), Dr. Vassil (Germany), Dr. Loring (U.S.A.) and Professor Phocas (Greece). The guests were entertained at luncheon in the corporation of Learning on Spa and in the gardens and gardens during the afternoon.



On April 6 Dr Edith Summerskill (Soc) was returned as Member of Parliament for West Fulham in the by-election caused by the death of Sir Cyril Cobb. Dr Summerskill polled 16,583 votes and her opponent Mr C J Busby (Cons), 15,162.

The Swiss Society of Internal Medicine will hold its annual meeting at Basle on May 14 and 15 when discussions will be held on Graves's disease and hyperthyroidism and treatment of syphilis of the central nervous system. Further information may be obtained from the President, Professor G Bickel, Rue Saint-Leger 2, Geneva.

The German Association of Internal Medicine held its fiftieth congress from March 28 to 31 at Wiesbaden under the presidency of Professor Assmann of Königsberg. The subjects dealt with were the testing of cardiac function, disorders of the suprarenal capsules and acute inflammatory conditions of the central nervous system. One day was devoted to papers and discussions on vitamins B<sub>1</sub> and B.

The fifty-first Congress of the French Society of Ophthalmology will be held in Paris from May 16 to 19, when M Hambresin of Brussels will read a paper on shock treatment in ophthalmology. Further information can be obtained from M Rene Onfray, 6, Avenue de la Motte-Picquet, Paris VIIe.

In view of the great attention which is being paid at the present time to the disinfection of houses and furniture from the bed bug the Royal Sanitary Institute will hold a further course of instruction in disinfection work, beginning on Monday May 16, and lasting for two weeks. Particulars can be had from the secretary of the Institute, 90, Buckingham Palace Road, SW 1.

On March 26 Queen Mary laid the foundation stone of the new hospital which the Surrey County Council is building at Carshalton to meet the needs of the St Helier housing estate. The hospital is to contain 862 beds, and will cost £1,000,000.

Dr Edward W Archibald, formerly head of the department of surgery, McGill University of Montreal, recently received the honorary degree of doctor of medicine from the University of Paris at a ceremony at McGill.

The Privy Council has nominated Sir Walter Langdon-Brown M.D., and Professor W J Dilling M.B., of Liverpool University to serve on the Council of the Pharmaceutical Society, in succession to Sir Humphry Rolleston and Professor J A Gunn, who have retired.

The Council of the Harveian Society of London has chosen 'The Value of Periodic Medical Examination in the Detection of Disease in Middle Life' as the subject for the Buckston Browne Prize, which consists of a medal together with the sum of £100. The prize is open to any member of the medical profession registered in the British Isles or Dominions and is limited to candidates under 45 years of age. Essays must be sent in by October 1, 1939, to the treasurer of the Society, Mr Cecil Wakeley, 14, Devonshire Street, Portland Place, W 1.

A gold medal is awarded annually by the Hunterian Society for the best essay written by a registered general practitioner resident within the British Empire on a subject set by the society. Competitors—men or women—must be engaged in general practice. The essay must be unpublished and original and be based on the candidate's own observation but it may contain excerpts from the literature on the subject provided reference is made to the articles from which they are taken. The subject for 1938 is 'The Management of Inoperable Malignant Disease in General Practice', and for 1939 'Treatment of Obesity in General Practice'. Candidates should obtain a copy of the rules governing the competition from the honorary secretary Mr Arthur Porritt, 27, Harley Street W 1 before sending in their essays, which must reach him by December 31. The gold medal for 1937 was awarded to Dr J Wilson Reid of Anglesey for his essay on 'The Prognosis and Care of Heart Disease in General Practice'.

The Save the Children Fund (20, Gordon Square, London WC 1) which is engaged in the promotion of child welfare at home and abroad, announces that its panel of honorary medical advisers has been enlarged and now consists of the following: Sir Francis Fremantle, M.P., M.D. F.R.C.P., Dame Louise McIlroy, M.D., F.C.O.G., Eric Pritchard, M.D. F.R.C.P., and Matthew B Ray, D.S.O., M.D. Mrs Susan Isaacs, D.Sc., the psychologist, has become associated with the Fund as a vice-president, and Dr Ray also fills this office as well as being an honorary medical adviser.

Gifts amounting in all to £6,000 have been received in aid of a scheme for a fracture clinic at the Hull Royal Infirmary. The scheme is the outcome of an address given at Hull by Mr Rowley Bristow on the modern treatment of fractures. To complete the organization a further sum of £4,000 is needed.

In order to meet the need for leaders of physical recreation, the Central Council of Recreative Physical Training has arranged a three months course for women at Anstey College, Birmingham, from April 29 to July 22, a three months course for men at Loughborough College summer training camps for men to be held at the Sir William Dunn Camping Ground, Downe, Kent, from July 30 to August 6 and from August 6 to August 13, and at the Heswall Camp, Cheshire, from August 20 to August 27, and a summer school for women to be held at Milton Mount College, Crawley, Sussex, from July 29 to August 13. Further details can be obtained on application to the Secretary of the Council at Abbey House, Victoria Street, London, SW 1.

At the beginning of this year the *Journal of the National Institute of Industrial Psychology* was issued in a new form as a quarterly under the title of *Occupational Psychology* at the price of 5s. It includes among other things an article by Dr Charles Myers on 'The Mental Hygiene of Intellectual Work,' and one by Dr A H Davis on 'Some Aspects of the Problem of Noise.'

On April 22 the thirty-fifth anniversary of Dr Smith Eli Jelliffe's editorship of the *Journal of Nervous and Mental Diseases* will be celebrated at the New York Academy of Medicine by a neuro-psychiatric symposium in the afternoon and a dinner in the evening. Dr Adolph Meyer will open the symposium, and the other speakers are Drs Earl D Bond, George Draper, Frederick Tilney, Oskar Diethelm, and Karl Menninger. Dr Foster Kennedy will preside at the dinner, and tributes to Dr Jelliffe as psychiatrist and psychoanalyst, as a man, a neurologist, and a bibliophile will be paid by Drs A A Brill, Louis Casemajor, Henry Alsop Riley and Richard H Hutchings.

The February issue of the *Bulletin de l'Office International d'Hygiène Publique* contains articles on typhus in the United States, Morocco, Tunisia, Czechoslovakia, and Soviet Russia, infantile mortality in the Argentine and Yugoslavia, public assistance in Italy, and the demography of the native population in the Belgian Congo. A special supplement is devoted to the demography of the French Colonies.

On April 2, at Kettner's Restaurant, Sir Henry Gauvain, the medical superintendent, was entertained to dinner by the past and present R.M.O.s of the Lord Mayor Treloar Cripples' Hospital, Alton, to commemorate the silver wedding of Sir Henry and Lady Gauvain and the thirtieth anniversary of the hospital. Dr C E M Jones, who has been a R.M.O. for nineteen years, was in the chair.

A National Institute of Nutrition has recently been founded at Buenos Aires under the Ministry of Foreign Relations.

On April 1 a law came into force in Germany by which parrots and similar birds kept for profit or pleasure are to be registered and wear a ring on their claws with the name of the owner. Those that are sick or suspect must be killed. Offenders will be punished with imprisonment not exceeding three years and fines not exceeding RM 10,000.

The Paris Académie des Sciences has nominated Dr Lericq, professor of surgery in the Strasbourg faculty of medicine to fill the chair of medicine at the Collège de France rendered vacant by the death of Charles Nicolle.

## Letters, Notes, and Answers

All communication in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

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## QUERIES AND ANSWERS

### Purity of Water

T. G. P. writes: The water supplied by a company is obtained from deep wells sunk in the chalk and is softened by Clarke's process. Occasionally it is of a milky appearance with a deposit on standing. This occurs more particularly when repairs are made to the mains or when a large quantity is drawn off by the fire hydrants. Is this deposit likely to be injurious to the health of consumers? Some of them appear to think that it may be.

### "Lower Critical Temperature"

Dr G. A. FERRABY (Worthing) writes: I am told there is a lower critical temperature below which the automatic temperature regulating centres cease to be effective as it does above 105° F. or a little over. I have been unable to find out what this lower critical temperature is. Can anyone give me the correct figure or a reference to the literature?

### Painful Heel

SIR MORTON SMART writes in reply to D.C.'s inquiry (March 26 p. 712): The fact that the x-ray examination shows points of calcification suggests that the condition is similar to that which arises from a true os calcis spur, the pain of which is usually brought about by bruising of the tissues of the heel on the spur. Many cases of os calcis spur exist but cause no pain until the underlying tissues are damaged by a blow or by jumping on the heel. Even the most painful heels from this cause can be cured by wearing a special support which I designed and which is made to fit the particular case by Mr P. Frantz, 55 Catherine Place Westminster SW.1. It must be realized that the support may have to be worn for some weeks before complete relief of pain results as the object of the support is to prevent pressure on the tissues of the heel and thereby allow the traumatized tissues to recover.

### Income Tax

#### Semi domestic Expenses

YARRUM'S household consists of himself his wife and his working whole time in the practice and a cook and housemaid. Hitherto he has claimed as a professional expense only one-half of one maid's wages. His accountant suggests that he should claim the whole of her wages plus 20% a week for board for the reason that the wife is in practice and therefore the extra maid is employed because of this and is an expense of the practice.

\*\* Assuming that there are consulting and waiting rooms on the premises and that the maid attends to callers and

the telephone we agree that our correspondent is entitled to deduct most, if not all of the wages and board of one maid but it is inadvisable to put forward the remaining suggested above. There is a judicial decision that the cost of a domestic servant necessary to relieve a wife for teaching work was not a deductible expense—it was not incurred in carrying out the teaching duties. That case was argued under Schedule E but the principle seems to apply to Schedule D also and would no doubt be relied on to refuse Yarrum's claim if made on such grounds.

## LETTERS, NOTES, ETC

### Herniation of an Inflamed Appendix

Dr N. CARWARDINE COOPER (Somerset) writes: The following case of appendicitis occurring in a female child is of interest on account of the patient's age. A 10-year-old girl was admitted to the Weston General Hospital with a diagnosis of strangulated right inguinal hernia. The hernial swelling was definitely irreducible but not tense. The child was crying loudly and it was therefore difficult to tell whether the swelling was tender or not. The temperature was normal but the pulse rate was 160. An operation was performed through the usual femoral incision and on opening the sac a certain amount of clear fluid escaped. The lower part of the caecum and appendix were in the sac and were oedematous. The appendix had been swollen and tense and was removed; the gut was returned to the abdomen and the hernial sac ligated. The child made an uneventful recovery. On opening the appendix the mucous membrane was plum-coloured and definitely in an acute stage of inflammation.

### Swallowed Safety-pin

Dr L. ELWELL-JOHNSTON (Wimbledon) writes: Received 1 day a 3-months old infant that had swallowed a safety pin twenty-four hours previously. On inspecting the throat the safety end of the pin could be seen below the uvula at the tip of the left tonsil. An attempt to remove it with sinus forceps failed. The infant cried loudly and the pin descended to a lower level and as careful with the substituting fingers for forceps the pin was held firmly against the lateral aspect of the throat, they grasped with forceps. As the pin was seen it was in the act of being forced forward through the mouth, so it was pushed up behind the soft palate and the other end pulled out. Thus the delivered the safety pin rusted and one end a quarter of an inch long no injury was apparent. While the pin was in the throat the baby had had one difficulty in swallowing and was tussling during the night. The mother had been holding the baby on her lap the day before she had swallowed this pin in her blouse. At intervals when she was asked if she could not find it. Doubtless the pin had dropped into the infant's open mouth.

### Sodium Salicylate Tolerance

Dr C. TRIST GASKING (Harrogate) writes: Sodium salicylate probably still occupies the first place among drugs in the treatment of rheumatism. The following case is of some light on the question of dosage and the duration of treatment. In 1924 I was consulted by a patient in a poor condition and found him extremely deaf. He had been early sixties and into me he said that ten years earlier he was working at Woolwich Arsenal he had been severely attacked of muscular rheumatism. A friend had told him that sodium salicylate was a cure for rheumatism and he had taken upon that advice and finding relief he had continued to take it until he was 50. But even then the rheumatism returned and the preparation was used for ten years. After that time he was almost stone deaf and completely unable to hear. He remained well and quite free of rheumatism for many years.

### Nelson's Seal Cases

A. F. H. writes: In the *M. A. J. W.* this section Nelson in his paper on the history of the seal case in 1850 (March 26 p. 64) the only case of the seal case is a graph letter in the *Post* edition of the *Seal Case* from HMS. *M. J. W.* on April 21 1851 to Nelson's Seal Case the British envoy to Copenhagen made a seal case and it was so intended as a seal case and it was so intended as a seal case and it was so intended as a seal case.

### Swedenborg Stamps

To commemorate the 250th anniversary of Swedenborg's birth which was noticed in these columns on January 29 page 239 Sweden has recently issued two dignified and pleasing stamps, a violet 10 ore and a greenish 100 ore. The design is by the artist Torsten Schonberg after a portrait by Per Krafft the Elder. A laurel branch roofs the legend Emanuel Swedenborg, 1688-1938. A variety of the 10 ore stamp is perforated all round and is described as scarce.

### Toxic Foci

Dr SYDNEY PERN (Ballarat Australia) writes: The appearance of a letter entitled Toxic Focus with Ophthalmic and Deimic Reactions by Dr J E Martin in the *Journal* of July 10 1937 (p. 88) has prompted me to make these few remarks. It is an astounding thing that after so many years of knowledge of this subject so many of these foci are overlooked. I would like to mention a few traps that many fall into. First as regards apical infection of teeth x-ray films are not reliable evidence of infection. It has been shown that 98 per cent of all dead teeth with no signs of apical infection on the film show definite infection on culture. In other words all dead teeth can be accepted as infected. This fact ought to be known to all medical men and dentists. The only evidence of gingival infection that can be relied on if in doubt, is to take cultures from pockets however small with a platinum wire. Unerupted wisdom teeth are often overlooked and are always infected. Broken roots, usually infected are found with surprising frequency in edentulous jaws as are granulomas which have broken off from extracted teeth the finding and removal of which often yield astounding results. As regards tonsils, a casual glance at an anaemic-looking tonsil is usually enough to pronounce it uninfected when it often contains virulent organisms. Frequently no attempt is made to retract the anterior pillars and if no tonsil is visible it is passed as not being a source of infection. If there is any tonsil tissue visible cultures should be taken from the centre, preferably with a capillary glass tube and if this is done sufficiently often it will be found that practically all tonsils are infected because if not infected they naturally atrophy. Sinus infection is more often overlooked than any other. I found that in my out-patient clinic 25 per cent of the patients were so infected. It is comparatively easily diagnosed by a chronic dropping of mucus from behind the palate because where there is pus there must be infection. Morning headaches and liability to frequent colds are usually present. X-ray films can be misleading. Bad headaches often occipital without any discharge may mean locked up pus. Infected gall-bladders are often the cause of many troubles and may present very few symptoms. Pyelitis is commonly overlooked as is prostatic infection. Cervical infection in women does not get nearly the attention it should. These are the usual sources of infection, and if carefully examined will nearly always yield results. It is very unwise to be content with finding only one focus of infection as they are frequently multiple and unless all are removed improvement cannot be obtained.

### Insulin as a Suicidal Agent

However secure their position in relieving the burden of suffering humanity few medicinal agents are exempt from being misused by criminals or by writers of fiction when murder or suicide demands efficient weapons. This is true of insulin. In Dr W Stanley Sykes's story, *The Missing Moneylender* (1931) a doctor kills his victim with an overdose of insulin after his death injecting enough sugar intravenously to restore the blood sugar to its normal figure and thus to abolish the only possible clue. The first case in the literature of attempted suicide by insulin was reported in 1934 by J T Beardwood jun (*Journal of the American Medical Association* 102 765). The patient was a diabetic, and the dose employed was 390 units. Two other cases are briefly mentioned in this paper one of which was a Philadelphia physician. A fourth case is now described by D Donald and L J Foster in the December number of the *Journal of the Michigan State Medical Society* (36 967). The story however both in its clinical and biochemical aspects is complicated by acute alcoholism. A man aged 26 (non diabetic) had heard from a doctor that it was presumably possible to kill a person with insulin without leaving a trace of the cause of death. While in a state of intoxication he took an overdose of 200 units. Admitted to hospital

in coma he remained unconscious for nearly three days but finally recovered. The persistence of coma for forty-eight hours after the blood sugar had returned to normal was probably due to alcohol. He had made a previous attempt at suicide by slashing his wrist with a razor blade.

### Treatment of Parasitic Conditions

Dr F G CAWSTON (Durban South Africa) writes: Clonorchis infection has fortunately not been recorded from South Africa and would seem to be confined to Sino-Japanese areas where fish is eaten raw but reported success in treating this parasitic disease with a gold preparation suggests that the same drug might be of service in allied conditions such as schistosomiasis. Though this line of treatment was suggested to me some time ago I have not heard that it has been attempted. In 1922 I treated hydatid disease successfully with emetine hydrochloride. Judging from the analogous conditions emetine would seem to hold out the greatest promise of success in the treatment of hydatid disease other than by surgical measures but I can find no reference to its use since I brought the treatment to the notice of medical men in Cyprus and Australia where cases were being encountered. In 1927 Bougenault suggested that antimony in the form of an ointment might be employed for the treatment of bilharziasis occurring in children with inconveniently small veins. The typical rash from the use of antimony ointments is readily controlled and does not occur when the drug is introduced into the rectum. Success has been said to follow the introduction into the bowel of large doses of tartar emetic, but as with other alleged cures the reports do not record the recovery of antimony in the urine or an increasing proportion of dead ova escaping with the excreta. Evidence is still wanting to show that enough of a drug can be absorbed by skin or mucous membranes to cause the death of large blood parasites but an early effect on schistosomes by the oral administration of carbon tetrachloride or antimony applied to the skin and bowel wall, suggests that some new line of treatment may yet be devised which will render a course of intravenous injections of tartar emetic or even intramuscular injections of anthiomaline unnecessary. Due consideration of the elimination of antimony supports the use of intravenous therapy for adult blood parasites. The drug may be very rapidly eliminated and I have noted marked discoloration of the urine within a few minutes of injecting the oxyquinoline derivatives.

### Strychnine Poisoning

'B. L. T.' writes: A girl of 20 was brought to me at 2.30 a.m. one night with the story that she had just swallowed a chocolate she had herself filled with strychnine. Gastric lavage was begun soon after 3 a.m. immediately after the first emptying of the stomach which seemed to contain very little, great difficulty was experienced owing to burning of the tube by the patient. This prevented any further lavage and was thought to be due to the girl's obstinacy until, with dramatic suddenness she became quite rigid in a strychnine convulsion. She was hurried off to hospital where at 3.40 a.m. I gave her 10 ccm of sodium evipan intravenously. At once she relaxed into a quiet narcosis. By 4 a.m. she was again having single convulsions which by 4.15 were again becoming tonic so that at 4.20 another 10 ccm of evipan were given. At 5.25 a third dose of 10 ccm was necessary. A smaller dose would have sufficed, because the injection was followed at once by exceedingly shallow respiration for about five minutes. However when the effect of this last injection of evipan wore off there were only occasional violent twitches. The next day there was a little pyrexia but no muscle stiffness such as might have been expected after such violent contractions. The patient brought me later a little talc powder corresponding to the amount she thought she had taken from a bottle of strychnine nitrate in a laboratory to which she had access. A comparable quantity of strychnine nitrate was found to weigh 35 centigrammes, and this the girl had put in the interior of a chocolate cream and had swallowed on an empty stomach so that, allowing for a considerable margin of error one can presume that she had taken a fatal dose.

British Drug Houses Ltd (Graham Street City Road N1) have issued a booklet summarizing recent advances in knowledge of the vitamins with particular reference to their own products. Any reader who has not received a copy can have one free of charge postage paid on application to the firm.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 286 Late Effects of Infantile Rickets

M. LANGE (*Dtsch med Wschr* December 17 1937 p 2022) states that too many cases of undetected rickets occur in spite of two decades of prophylaxis and treatment. Correct diet and enough sunshine are the most important factors in the prevention of the disease. Rachitic changes in the skeletal system require attention during infancy; otherwise permanent changes may produce backache, lowering of the capacity for work on account of scoliosis or flat feet, coxa vara and valgus and an increased tendency to arthritis deformans. In adolescence care must be taken not to overtax the strength of patients affected by late rickets. Static conditions should be improved by suitable boots and exercises. Arthritis deformans can thus be prevented or at least stayed off for a considerable period.

### 287 Daily Vitamins

A. SCHELVERT (*Med Klinik* January 14 1938 p 37) points out that since avitaminoses are most common in spring the diet should be carefully regulated in regard to vitamins from late autumn to the end of the winter. The minimal daily requirements of vitamin B<sub>1</sub> have been worked out at 300 international units. Brown bread (wholemeal) is the best source of this vitamin. 100 grammes of wholemeal bread contain 100 units, 100 grammes of vegetables contain 50 units, 100 grammes of potatoes 40 units. As the vitamin is water soluble the water in which vegetables are cooked should not be thrown away. Vitamin C is present in fresh vegetables and fruit on storage much of it is lost. The daily requirements of vitamin C are 25 to 30 mg. Cabbages and potatoes contain much vitamin C. 1200 grammes of cabbage contain 270 mg. of vitamin C. 100 grammes of potatoes 20 mg. (November) and 10 mg. (May). Vitamin C is water-soluble and easily oxidized. Vitamin A being less easily oxidized and fat soluble is not quite so much affected by cooking. Green vegetables and carrots are its most important source. The daily requirements are 4200 international units. 100 grammes of spinach yield 10000 units and butter, heart, kidney, liver, and animal fats are all good sources of supply.

### 288 Thrombosis and Embolism

E. LOMMEL (*Dtsch med Wschr* February 4 1928 p 151) draws attention to the statistically demonstrable increase in the frequency of thrombosis and embolism in Germany since 1923. He does not regard the increasing popularity of medication by intravenous injection as in any way contributory to this increase but attaches much importance to the growing incidence of heart disease and to the rise in the average age of the population. Another factor which in his opinion plays an important part is the increase in the average weight of the community for during the lean years of the great war and the inflation period the frequency of thrombosis declined only to rise again after 1923 with a more generous national dietary. Post mortem observations made in Jena, Basle and Berlin from 7380 patients, 898 of whom had suffered from pulmonary embolism showed that the average weight of the males suffering from embolism was 20 kilos more than the average weight of the male controls; for women the difference was 12 kilos. At his clinic in Jena Professor Lommel has for some time weighed all his male patients between the ages of 15 and 70 and has found marked overweight in 75 per cent of some 1200 persons weighed. He also found that 15 per cent of his male patients

between the ages of 40 and 59 weighed more than 10 per cent over the normal. As for the influence of the average age of the community on the frequency of thrombosis and embolism he notes that in Germany in the period 1901-10 the average duration of life was 46.52 years, the corresponding figure for the period 1922-4 was 61.26 years. Yet another important factor would seem to be the relaxing effects of modern civilization on the muscular tone of persons who amble gently through life instead of strain at daily giving their muscles tonic exercises which are distinct from the violent exercises of youth.

### 289 Nervous Complications of Undulant Fever

P. P. F. ORIOL (*These Paris* 1927 No 831) has recorded seventy-nine cases in patients aged from 10 to 65 years, that nervous sequelae are relatively frequent in undulant fever, any part of the nervous system can be affected. Examples having been recorded of meningitis, poliomyelitis, radiculoneuritis and encephalitis. The most typical complication however is involvement of the meninges which is almost invariably present. In chronic or subacute cases the disease is nearly always an alteration in the cell content of the cerebrospinal fluid.

## Surgery

### 290 Tube colostomy of the Knee

T. WALHEIM (*Hygiea Stockholm* January 19 1938 p 11) gives an account of 143 cases of tuberculous disease of the knee treated in a hospital in Stockholm in the period 1921 to 1924. Of the 125 cases in which the diagnosis was confirmed by question thirty-nine were male. The disease was bilateral in three cases, right-sided in eleven, left-sided in thirty-one. Every age was represented from under 2 years to 69 years, and as many as fifty-eight patients were under the age of 15. A history of trauma was given in thirteen cases, the interval between it and the first appearance of symptoms ranging from two days to three years. In seven cases the disease began as a polyarthritis. In 10 per cent of his cases Pirquet's reaction was negative. The Mantoux reaction was invariably positive but only after it had been repeated with negative results in tuberculin. Guinea pig reactions showed negative results in 40 per cent of cases and in the case of the guinea pig tests were both negative and positive, tuberculous bacilli were found by exploratory excision. A comparison of the results of conservative and operative treatment in 102 cases showed a recovery rate of 71 per cent in cases treated surgically, whereas it was only 38 and 39 per cent in those treated conservatively.

### 291 Fractures of the Neck of the Femur

KAPPEL (*Dtsch med Wschr* January 19 1938 p 151) of the University Surgical Hospital in Würzburg states that the important advances made during the last decade in the treatment of fractures are most noticeable in the treatment of fractures of the neck of the femur. He stresses the painful evolution of the non-operative treatment of these fractures up to the time when Whitman and Lohrer achieved general acceptance of the method of prolonged immobilization. With this method patients are plastered for two to four months and allowed to walk bearing for about a year. Under this system about 60 per cent of such fractures healed, but even then with good functional results. Recently Lohrer has had similar good results in 74 per cent of his cases and in both Whitman's and Lohrer's results patients have been cured of apoplexy and disease of the heart and

lungs have been less frequent in spite of prolonged immobilization than when patients were hustled about early. But though there has been a vast improvement in the conservative treatment of these fractures, Professor Kappis confesses to having wavered and then finally gone over to operative treatment with pegging as carried out by Sven Johansson. The wavering was as recently as 1932, when a survey of the patients operated on in 1923 and 1924 at the Wurzburg Hospital revealed a disquieting proportion of failures. Since then there has been such a marked improvement in operative technique and material that it can now be claimed of the Sven Johansson operation that bony union will be achieved in 90 per cent of cases, and that 90 per cent of the patients surviving the operation will again enjoy the normal functions of the joint. After referring in appreciative terms to the Pauwels operation, Professor Kappis concludes that even old fractures can be satisfactorily dealt with by the Sven Johansson or Pauwels operations provided the choice is made after a complete survey of the situation by a competent surgeon.

## 292 Trigeminal Neuralgia

F C GRANT (*Ann Surg* January, 1938, p 14) points out that although trigeminal neuralgia does not endanger life it may interfere with eating or drinking sufficiently to cause loss of weight and strength. The question of surgical treatment is discussed and the different methods which may be used are described. The transtemporal approach to the sensory root through the middle fossa was employed in 949 operations upon 925 patients with thirteen deaths, an operative mortality of 1.36 per cent. The death rate has decreased steadily in recent years. Trigeminal neuralgia is a condition which appears late in life, and this accounts for the fact that seven of the deaths were the result of cerebral vascular accidents such as embolism. The type of operation to be undertaken depends on the individual case. If pain is not referred to the first division a subtotal avulsion, preserving part of the fibres to the ophthalmic branch, is indicated, but when the trigger zone exists in the second or third division of the sensory area a subtotal sensory root section will relieve pain. The two most common post-operative complications are keratitis in the ipsilateral eye and facial paralysis. A suggested cause of the paralysis is that the stripping of the dura from the floor of the skull just in front of the ganglion damages the petrosal vein or nerve. A partial facial paralysis occurred in 3.4 per cent of cases, but the majority of these recovered completely. There were thirty-five instances of keratitis and it was seen that this complication was not nearly so common after a subtotal section of the sensory root as after a complete root section, nor was it so severe. Paraesthesias were complained of in 130 cases but of these ninety-eight were of the mild type. There were seven cases of recurrence in 359 cases of complete sensory root ablation and forty-four among 590 patients in whom partial section was done. It is obvious that subtotal section of the sensory root with preservation of the motor root is the procedure of choice.

## 293 Perthes's Disease and Osteochondritis Dissecans

A HAAS (*Zbl Chir* December 18, 1937, p 2873) describes what he believes to be the first recorded case of the transformation of Perthes's disease into osteochondritis dissecans of the hip. It was possible radiographically to trace over three and a half years the cure of Perthes's disease in the right hip with at the same time the appearance of the sequestal scale of an osteochondritis dissecans on the head of the femur at the beginning of the observations when the boy was aged 5, x-ray evidences of the latter condition were also visible in the left hip, possibly relics of antecedent Perthes's disease on that side. Dissecting osteochondritis is much more common in the knee and elbow than the hip, where only fourteen cases, it is said,

have been reported. Haas agrees with those who trace a connexion between osteochondritis dissecans and all the so-called aseptic osteochondritic necroses, as seen in Perthes's disease, Osgood-Schlatter disease of the tibial tuberosity, Kienbock's necrosis of the os lunatum, and calcaneal apophysitis, and with Schneider in attributing them to disturbances of metabolism and vitamin assimilation rather than to mechanical influences.

## Therapeutics

### 294 Complications of Chemotherapy

H SAPHIRSTEIN (*Urol cutan Rev* February, 1938, p 101) states that since the introduction of sulphanilamide a number of untoward effects have been reported, such as sulphaemoglobinaemia, methaemoglobinaemia, haemolytic anaemia, leucopenia, agranulocytosis, cyanosis, acidosis and depression of hepatic function. He reports the first case on record in which administration of the drug gave rise to hepatitis and a toxic erythema followed by desquamation. The patient was a man, aged 29, under treatment for gonococcal urethritis, who in addition to local treatment was given in divided doses 40 grains of sulphanilamide daily, and then 20 grains daily for six days. After he had taken a total of 460 grains he developed a generalized maculo-papular rash, yellow discoloration of the sclerotics and skin, and bile appeared in the urine. Seven days after the administration of the drug had ceased generalized desquamation occurred and lasted twelve days. The clinical picture closely resembled that often seen after injections of salvarsan.

295 G RICHARD (*These Paris* 1937, No 842), who reports twelve illustrative cases in patients aged from 7 to 40, states that sulphamido-chrysoidine, though it has given good results in the treatment of streptococcal meningitis, has also given rise to severe complications.

### 296 Malarial Treatment of Gonorrhoea

K BRUDER (*Dein Wsch*, February 5, 1938, p 133) reports the result of malarial therapy in 122 women suffering from acute subacute, and chronic gonorrhoea. The treatment resulted in a complete cure in 86 per cent of cases. The results were somewhat better in acute and subacute than in chronic gonorrhoea. The author considers the effect of the malarial infection akin to that of a non-specific protein shock. The treatment was generally well tolerated, cardiac stimulants were not needed in a single case. In one instance the treatment seemed to be responsible for the development of a psychosis which lasted four weeks. Of the cured cases 41 per cent became re-infected; these were mainly prostitutes, and the value of malarial treatment in such patients is questionable.

### 297 Treatment of Psoriasis

H W SIEMENS (*Munch med Wsch* January 7, 1938, p 5) has investigated the action of different preparations of chrysarobin in a number of cases of psoriasis. The patients were divided into groups of ten, and each group was treated with one compound at a time. The investigation showed that chrysarobin-vaseline is not superior to chrysarobin paste, but its irritant effect is three times greater. The addition of salicylic acid only slightly improves the curative effect of chrysarobin paste but it intensifies the irritant effect of the chrysarobin. The addition of liquid soap to the chrysarobin paste renders the preparation entirely inefficient and non-irritant; the chrysarobin is probably changed chemically by the alkali in the soap. It seems that the toxic, irritating pyrogallol cannot be replaced by lenigallol in the treatment of psoriasis though in two cases out of thirty lenigallol was more effective than pyrogallol.

## Ophthalmology

### 298 Prevention of Blindness in the Tropics

A F MACCALLAN (*Brit J Ophthalmol* February 1938 p 65) reviews the history of ophthalmology in Egypt and gives the present day causes of blindness in that country. Acute conjunctivitis has a distinctly seasonal variation closely related to temperature, humidity and the breeding time of flies. Trachoma probably originated in Mongolia spreading westward with the Mongol invasions. The vast amount of blindness due to small pox has been abolished by vaccination. Industrial causes of blindness are infrequent in Egypt and India but keratomalacia is common in India. Squint is a frequent cause of blindness. Means of prevention include the proper provision of ophthalmic hospitals with facilities for pathological and bacteriological investigation. Schools must be inspected and treatment provided in them and children's dispensaries and ophthalmic welfare clinics established in the towns. Native-trained hospital attendants are very helpful in remote country districts and improvements in sanitation lead to a marked diminution in eye disease. By adopting these measures in Egypt the percentage incidence of blindness has been reduced from 19.2 in 1911 to 6.2 in 1934.

### 299 Corneal Grafting

V FILATOFF (*J med Ukraine* 1937 7 3 745) has been able to clarify corneal opacities by means of corneal grafts taken from the cadaver and preserved in cold storage. He believes that the transparency of the cornea is due to the disposition in space of its constituent elements which is determined by a substance or a group of substances normally present within the cell. Only those opacities which consist of damaged corneal tissue beneath the graft corneal scars consisting of connective tissue remain uninfluenced. The results obtained from grafts taken from the cadaver are better than those with grafts borrowed from a living person. The author has obtained excellent results from his method in one case of tuberculous keratitis, one case of herpetic keratitis, three cases of trachomatous pannus, six cases of parenchymatous keratitis and one case of sclerosing keratitis.

### 300 Black Cataract

Y SHON (*Arch Ophthalmol* Paris December 1937 p 1057) analyses thirty six black cataracts finding that in most the vision after operation is poor, there being such fundus lesions as myopic choroiditis, pigmentary degeneration of the retina and optic atrophy. The lens is slightly smaller than in the ordinary senile cataract and in some cases brilliant granules have been seen with the microscope. Certain black cataracts forming a class by themselves and distinct from true black cataracts follow intraocular haemorrhage. Of six of the cases examined histologically by the author five had pigmented granules. He believes the colour of the lens to be due to melanin which under certain conditions becomes granular.

### 301 Menopausal Eye Lesions

JACOVIDES (*Bull Ophthalmol Soc Egypt* 1937 30 34 174) states that 5 per cent of his menopausal patients complained of neuralgia, headache, vertigo, amaurosis, and loss of visual acuity. Three cases are fully described which typify the findings in such cases. They showed sluggish pupil reflexes, hyperaemia or ischaemia of the retina and disk, small retinal haemorrhages and inability to read even with glasses. The treatment employed was complete visual rest, dark glasses, a diet of milk and vegetables, ovarian hormone therapy, injections of strychnine, cocaine and adrenaline drops, and hot compresses.

The condition is attributed to the cessation in function of the ovaries. It should be remembered that asthenopia of accommodation may be due to cerebral tumours, syphilis, diphtheria or alimentary intoxication.

### 302 Dinitrophenol Cataract

W E BORLEY and M L TANTER (*Arch Ophthalmol* Chicago December 1937 p 908) using the capsules of ox lenses as permeable membranes for colloidal dyes in a series of experiments demonstrate that the permeability of the capsule in the presence of varying concentrations of dinitrophenol was very little altered. Similar investigation *in vivo* in rats led to the same result. They conclude that the existing evidence does not support the theory that dinitrophenol causes cataract by increasing the permeability of the lens capsule.

## Obstetrics and Gynaecology

### 303 Epithelioma of Bartholin's Gland

M CHATON (*Bull Ass franc Gynecol* December 1937 p 255) describes a case of epithelioma of Bartholin's gland, a rare condition of which only thirty cases could be collected by Harter in 1911. Chaton's case was that of a woman of 53 who had a tender swelling of the posterior part of the right labium majus. The right inguinal glands were enlarged and hard. The swelling was excised and on histological examination proved to consist of an enveloping shell of epitheliomatous tissue with a central centre. No glandular elements were seen in the centre. He maintains that the lesion was a primary cancer of the gland. No mention is made of any treatment of the enlarged inguinal glands but the patient is reported to have left the hospital cured.

### 304 Lipoid Nephrosis in Pregnancy

E ABUREL, I ORNSTEIN and C BART (*Pe franc Gynecol* January 1938 p 15) call attention to the relative frequency of the syndrome of lipoid nephrosis in pregnancy. They consider that pregnancy constitutes an important factor in the aetiology of this condition. Pure nephrosis is not associated with eclampsia nor with azotaemia or arterial hypertension. This pure form of nephrosis is rare in nephritis, the type usually being nephrosis associated with nephritic characters. It differs from nephrosis in the non-pregnant woman in that it is more resistant to treatment and usually persists for a long time after parturition. In this it differs also from the albuminuria of pregnancy. It may progress towards eventual cure or towards nephritis—a fact which renders prolonged post-natal care desirable.

### 305 Radium Treatment of Cancer of the Cervix

K SKAUM (*Norsk Mag Lægevidensk* February 1938 p 193) reviews the experiences of the gynaecological department of the Radium Hospital in Oslo where in the five-year period 1932 to 1937 852 cases of malignant disease of the female reproductive organs were treated. Cancer of the cervix was represented by 669 cases, cancer of the body of the uterus by 102, cancer of the vagina by thirty, cancer of the ovaries by twenty-two, cancer of the uterus and vagina by fourteen and chorion by five. As no case of cancer of the cervix was refused treatment and as there is still a marked tendency in Norway for surgeons to operate on early cases of cancer of the cervix and to treat early advanced cases into the Radium Hospital, his material was of a certain extent selected in an unfavourable way. Of 219 cases of cancer of the cervix treated at the Radium Hospital kept under observation for three years or more (11.25 per cent) were still alive after three years. With an 80 per cent

period of four and five years respectively the cases of cancer of the cervix still showed a symptom-free rate of about 42 per cent. In support of his claim that in Norway cancer of the cervix should be treated by radium and not by operation, the author confines himself to a three-year observation period, and classifies his patients according to the four recognized stages of the disease. Of the ninety-four patients in the first two stages (operable cases), sixty were symptom-free (64 per cent). The control cases were those from a gynaecological hospital in Oslo in the period 1906 to 1925. Of the patients operated on in this period in the first and second stages of the disease, only 33.5 per cent were symptom-free three years after operation.

## Pathology

### 306 Localization of Thrombosis

C PRIMA (*Zbl. Chir.* January 1, 1938, p. 21) discusses the conditions which determine the localization of thrombosis. It is well known that thrombosis of the vessels of the head, neck, upper limbs, and thoracic region is rare and occurs mainly in the condition known as thrombophilia. But the nearer the vessels approach the pelvis the more easily they thrombose, at the same time venous thrombosis is three times as frequent as arterial thrombosis. The conditions which determine thrombosis are to be found in the blood itself. The venous blood is more or less laden with toxic substances. This particularly applies to the portal system. Normally these substances are neutralized mainly by the ionized chlorine, which is supplied by the stomach and duodenum, but chiefly by the liver. In healthy individuals the portal blood is not much more toxic than the blood in the vena cava. But in cases of hepatic insufficiency the blood which reaches the right heart is charged with toxins, and may give rise to right auricular thrombosis, and, in extreme cases, to distant arterial thrombosis. The hypochloræmia which is produced by the increased demands on the chlorine reserves ultimately results in disturbances of the adrenal system and of the carbohydrate metabolism. The sympathetic disorder further aggravates the functional disturbance of the abdominal organs, with consequent stasis and accumulation of toxins in the portal system. This again favours the formation of thrombi wherever the portal blood meets the blood of the vena cava, as, for example, at the porto caval anastomosis formed by the inferior haemorrhoidal veins, which also communicate with the saphenous or the femoral vein. The special valves which normally prevent the backflow of the portal blood into the general venous circulation become insufficient in certain pathological conditions. The left femoral vein is particularly predisposed to thrombosis because of the extensive communication between the portal and general venous system in the region of the left sigmoid loop. This theory also explains why venous thrombosis in the upper part of the body is rare. Apart from the anatomical factors which determine the venous thrombosis there are also physical and chemical factors. The whirl which is formed at the junction of the two circulations, at different pressures, also favours thrombosis by causing a sedimentation of the thrombocytes and the formation of fibrin. Short-necked, muscular, and adipose individuals are particularly predisposed to thrombosis.

### 307 *Haemophilus influenzae* and Bronchitis

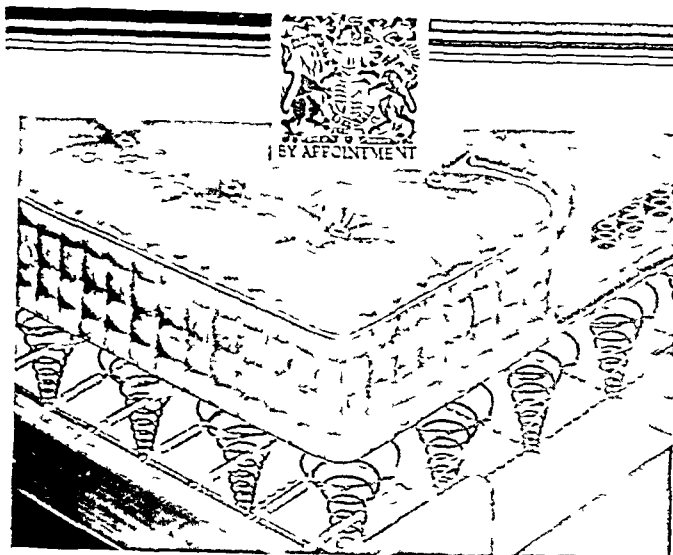
J. MULDER (*Acta med. scand.* 1938, 94, 1-2, 98) gives in account of his nine years study of acute and chronic diseases of the respiratory tract. Part of this study was conducted in the Dutch East Indies and part in Holland. As a rule, the clinical pictures in acute infections of the respiratory tract were identical in these two parts of the world. The *Haemophilus influenzae* represents, in the

author's opinion, a whole group of organisms, but in the present paper he refers to *H. influenzae* as a bacteriological entity which is to be found in the throats of 50 per cent of healthy persons. It occurs at all seasons, and in the Tropics as well as in Europe, and it is demonstrable in the mucopurulent sputum in cases of acute or chronic catarrh of the respiratory tract. Indeed, most cases of acute purulent tracheitis and bronchitis are, in the author's opinion, caused by it. It is, however, probably never alone responsible for lobar pneumonia. The susceptibility of healthy persons to infection with *H. influenzae* would seem to be very slight, and a high degree of susceptibility to it evidently depends on constitutional anomalies (exudative diathesis) and the debility associated with infancy, old age, operations, and exhausting infectious diseases. The author suggests that the frequent discovery of this germ in cases of influenza reflects the damage done by the virus of influenza to the mucous membranes of the respiratory tract, the resistance of which to the ubiquitous haemophilus group is impaired. The author adds that purulent or capillary bronchitis due to an infection with pneumococci alone must be very rare if it actually exists.

### 308 Systemic Affections of Cartilage

Apart from the well-known changes in rickets and arthritis deformans, H. v. MEYENBURG (*Schweiz. med. Wschr.* January 15, 1938, p. 57) describes, as maladies in which primary alterations of cartilage grossly affect the skeleton, (1) achondroplasia (chondro-dystrophia), (2) acromegaly, (3) a universal softening of cartilage—stated to be hitherto undescribed—of which a case is reported in detail. In the achondroplastic dwarf the skeletal changes are due to diminution of endochondral, with preservation of periosteal, ossification, the so-called periosteal fibrous strands, far from impeding endochondral ossification near the epiphyseal junction, mark the course of blood vessels which, near their anastomoses with those of the marrow, assist the deficient osteoblastic processes. The characteristic microscopic signs in cartilage have been found in a foetus of ten weeks, the offspring of an achondroplastic couple, the morbid condition is not of endocrine causation, but a disorder of growth. In acromegaly—as a result of over-production of growth hormone by eosinophil pituitary cells—the cartilage shows the opposed condition—namely, an exaggerated instead of a diminished endochondral ossification. Von Meyenburg confirms the recent findings of Erdheim concerning the chondral conditions in the acromegalic, even in maturity or old age the cartilage, especially in the ribs, intervertebral disks, and certain joints, shows proliferative changes such as were thought never to occur in the adult. Endochondral ossification is renewed, without or after preliminary calcification of the activated cartilage, and in addition the osteoblasts of the marrow are afforded material for the exercise of the bone-forming capacity which in their case normally persists through life. In the large joints the acromegalic cartilaginous changes begin in the deepest layers of the articular cartilage—a point which is clearly distinctive from senile or degenerative arthritic changes, which begin superficially. Proliferative changes have been discovered also in the laryngeal and tracheal cartilages in acromegaly. The author's case of generalized chondromalacia occurred in a boy, aged 14, and followed tonsillitis. Softening of laryngeal cartilages caused severe dyspnoea, and of articular cartilages swellings of the large joints. The roof of the nose sank inwards and the costal cartilages were softened, indented, and depressed, the trachea became a soft-walled tube. Microscopically the inflammatory nature of the chondral conditions was obvious, a vascular, highly cellular connective tissue penetrating the cartilages from both surfaces, no micro-organisms were found, and no signs of tuberculosis. Von Meyenburg, from his pathological observations, suggests a therapeutic trial in achondroplasia of purified hypophyseal growth hormone.





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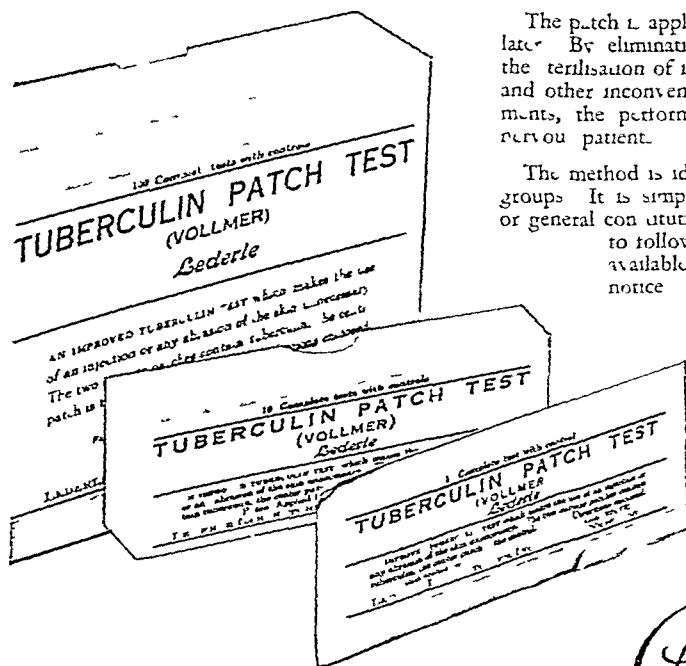
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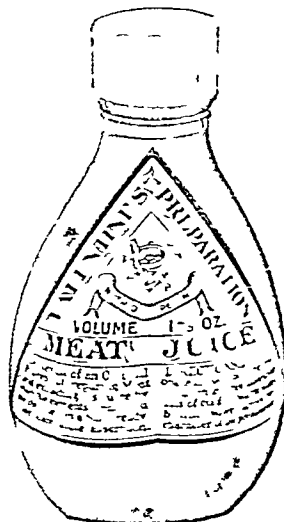
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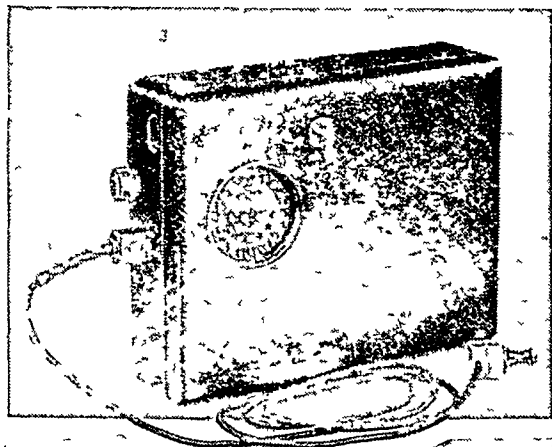
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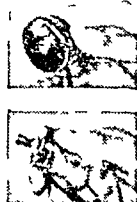
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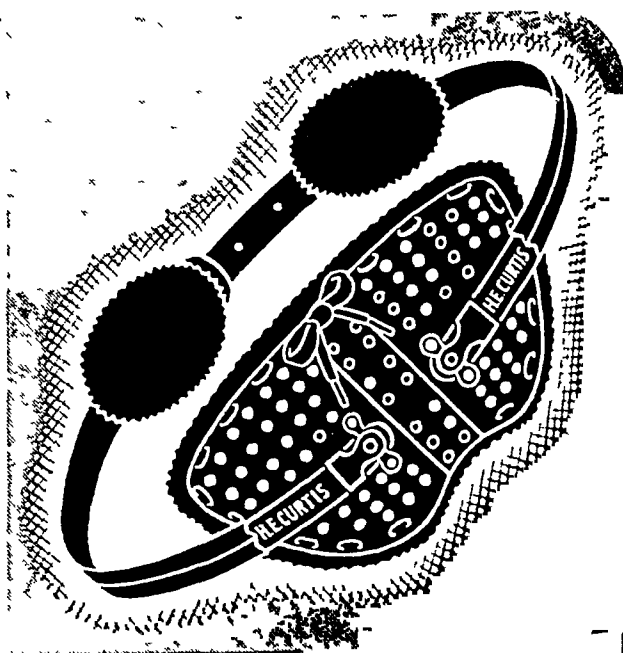
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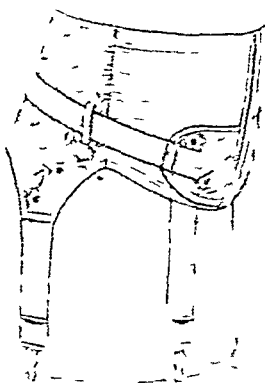
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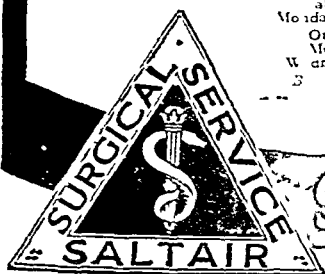
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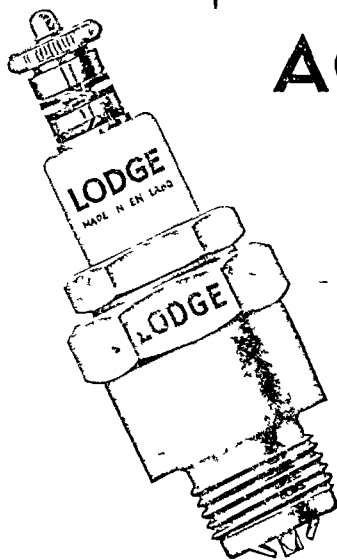
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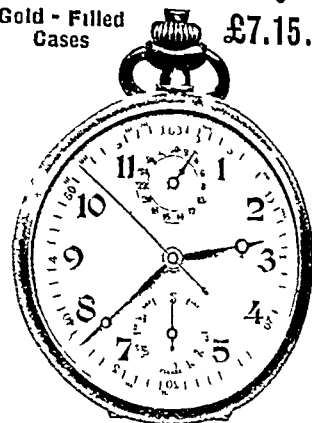


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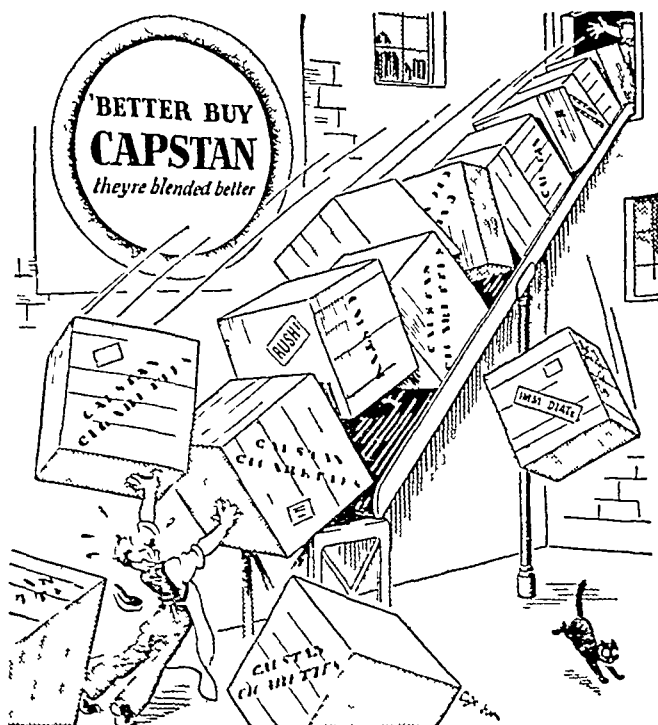
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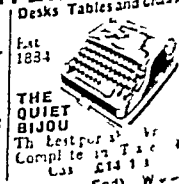
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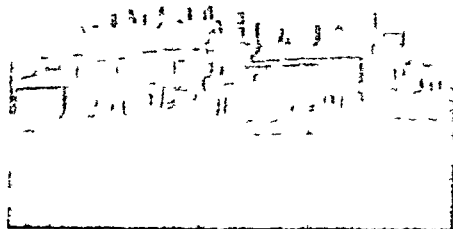
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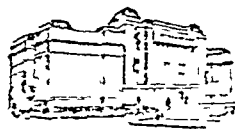
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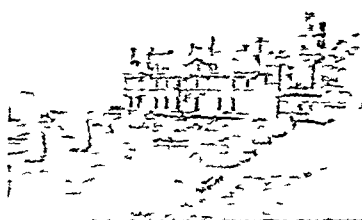
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Radio active sulphuric Mud from the world famous springs of Pistany Spa, made in poultice form to fit any part of the body. It may be used over and over again by simply dipping the compress in hot water before its application. Indicated in practically all kinds of chronic rheumatism, periarticular, articular, muscular or neuro-fibrositis. Also a great value in the treatment of sprained joints (especially for absorption of exudates) and of climacteric arthritis. Can be used as an abdominal or liver pack.

\* Literature and samples on request  
**PISTANY AGENCY LTD.,**  
312, Regent Street, London, W. 1  
(Lancaster 4211)



Illustration shows compress applied to back.



## SUNNYSIDE RESTORIUM HASSOCKS, SUSSEX

FULLY LICENSED  
LIFT TO ALL FLOORS

Situated one hour from London and fifteen minutes from Brighton, provides the ideal spot for patients convalescing after illness or operation or for those requiring treatment by physical methods. Fully Qualified Staff—Resident Physician. Formed on the American Plan, patients reside in the cheerful atmosphere of a high class Country Hotel free from the irksome restrictions of a nursing home or clinic.

The climate is mild but not relaxing. Overlooking the delightful South Downs yet sheltered from cold winds. Treatments available include Foams and other Baths, Radiant Heat, Ultra-violet and Infra-red Ray, Diathermy, Electrotherapy, Massage, Remedial exercises etc. Special Dieting, where necessary. An invitation is extended to Medical Practitioners to inspect the Restorium.

Write for fully illustrated Brochure and Terms to Physician in Charge, SUNNYSIDE RESTORIUM, Hassocks, Sussex.  
Phone Hassocks 133

## Smedley's Great Britain's Greatest Hydro- Matlock

Full range of Hydrotherapy Treatments in Under Hot water of Baths, Turkish and Russian Baths, Air and Vapour Douche, Massage, Plombieres Treatment, St. Charles Electric Installation for Baths and other Medical Appliances, Dousing, Radiant Heat, Infra-red Light, Artificial Sunlight, D. Approved High Frequency Diathermy, Naheim Baths, Saunas, Fumigation, etc.  
"Certified" milk from own farm. Large Winter Garden. Orchestra. Special provision for invalids. Night Attendance. Over 10 trained Male and Female Nurses. 16 Messrs Attendants, etc.

Terms 13/ to 18/6 per day inclusive board.  
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LITTLETON HALL, BRENTWOOD, ESSEX.  
Large ground, 400 ft. above sea. HOME for Ladies. Mentally afflicted. Voluntary Boarders received. Station Brentwood and Shenfield 1 mile. Liverpool St. 26 min. Apply Dr. Haynes.

### LONDON CORA HOTEL

Upper Woburn Place near B.M.A. Headquarters. Accommodates 25. Visitors. Modern Comforts. Excellent table. A.A. and R.A.C. recommended. Room, Bath and Breakfast from 4/-.

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## EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES, 1938

The POST GRADUATE COURSES to be held this year comprise

- (1) A COURSE IN OBSTETRICS AND GYNAECOLOGY from July 11th to July 29th Fee £10 10s
- (2) A GENERAL PRACTITIONERS' COURSE from August 15th to September 10th  
Fee £10 10s for whole Course £6 6s for two weeks
- (3) A GENERAL SURGICAL COURSE from August 15th to September 10th  
Fee £10 10s for whole Course £6 6s for two weeks
- (4) A COURSE ON INTERNAL MEDICINE from October 17th to December 10th Fee £15 15s

In addition to the above Courses in the following Subjects will be held at various periods of the year

INTERPRETATION AND SIGNIFICANCE OF MODERN DIAGNOSTIC METHODS Fee £3 3s	DISEASES OF NOSE EAR AND LARYNX (Royal Infirmary) Fee £10 10s
DISEASES OF THE BLOOD Fee £3 3s	DISEASES OF EAR NOSE AND THROAT (Ear and Throat Dispensary) Fee £4 4s
ENDOCRINOLOGY Fee £3 3s	OPERATIVE SURGERY OF THE EAR Fee £2 2s
DISEASES OF THE NERVOUS SYSTEM Fee £3 3s	VENEREAL DISEASES Fee £10 10s
UROLOGY Fee £10 10s	SURGICAL PATHOLOGY Fee £4 4s
X RAY PHYSICS AND ELECTRO TECHNIQS Fee £3 3s	ORTHOPAEDIC SURGERY Fee £4 4s
ULTRA VIOLET RADIATIONS AND THEIR USES Fee £3 3s	CLINICAL MEDICINE INCLUDING CHILD LIFE AND HEALTH Fee £5 5s
OPHTHALMOSCOPY Fee £5 5s	CLINICAL SURGERY Fee £4 4s
UROLOGICAL SURGERY Fee £3 3s	MODERN METHODS IN ANAESTHESIA Fees £3 3s and £5 5s
TREATMENT OF FRACTURES AND ORTHOPAEDICS Fee £3 3s	
NEUROLOGICAL SURGERY Fee £2 2s	

The Courses will be held only if a sufficient number of entries are received

Further particulars may be had on application to the Hon Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh

## THE CLINICAL RESEARCH ASSOCIATION, LTD.

WATERGATE HOUSE ADELPHI, W.C.2.

(Close to Charing Cross Station)

### A COMPLETE LABORATORY SERVICE

The Consulting Rooms and Laboratories of this Association (established in 1894) are available for all Medical Practitioners desiring Laboratory assistance in the investigation and diagnosis of cases under their care. All necessary apparatus and full instructions for collecting pathogenic material or for the personal attendance of Patients at the Consulting Rooms of the Association will be forwarded immediately on application.

CARDIOGRAPHIC AND X RAY EXAMINATIONS ALSO NURSING HOME ACCOMMODATION ARRANGED

Telephone TEMPLE BAR 8993 (4 lines)

D. M. LIVOCK A.C.A. Secretary

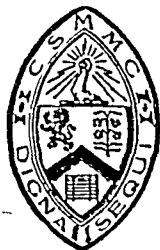
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## Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant-aided Scheme for Post-Graduate Study by Insurance Practitioners"—Anaesthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W.6.

## Chartered Society of Massage and Medical Gymnastics



CHARTERED MASSEUSES and MASSEURS receive Hospital Training. They are qualified to administer MASSAGE, REMEDIAL EXERCISES, ELECTRICAL and LIGHT TREATMENTS.

The Society was granted a Royal Charter in 1920 in recognition of the high standard of work maintained. C.S.M.M.G. Members do not advertise individually and pledge themselves to treat patients only under medical direction. All members of the Society are eligible for enrolment on the National Register of Medical Auxiliary Services.

Names and addresses of members practising in any district in this Country or abroad, can be obtained from

THE SECRETARY C.S.M.M.G. TAVISTOCK HOUSE (NORTH) TAVISTOCK SQUARE, LONDON W.C.1  
Phone Euston 1676 7 3

## CHILD GUIDANCE COUNCIL

### FELLOWSHIPS IN PSYCHIATRY

The Child Guidance Council offers THREE FELLOWSHIPS each of £300 tenable for a year for full time work at the London Child Guidance Clinic 1, Canonbury Place, Islington N.1.

Candidates should hold the Diploma in Psychological Medicine or show evidence of psychiatric knowledge up to a similar standard. Experience in Pediatrics or School Medical service will be regarded as an asset.

The Fellows will be expected to commence work in October this year.

Further particulars and forms of application may be obtained from the Secretary, Child Guidance Council, Woburn House, Upper Woburn Place, London W.C.1.

Applications should reach the Secretary not later than May 10th 1938 and should be accompanied by copies of three recent testimonials.

## KING'S COLLEGE HOSPITAL MEDICAL SCHOOL

Denmark Hill, S.E.5

### ADVANCED MEDICINE COURSE

A COURSE in CLINICAL MEDICINE, PATHOLOGY, MORBID HISTOLOGY and BIOCHEMISTRY suitable for M.D. and M.R.C.P. Examinations will be given for seven weeks commencing on May 15th.

The Class is limited in number. Applications should be made as soon as possible to the Secretary of the Medical School, King's College Hospital, Denmark Hill, London S.E.5.

The next Course will be held from February to April 1939.

## THE ROYAL DENTAL HOSPITAL OF LONDON

SCHOOL OF DENTAL SURGERY

(University of London)

Leicester Square, London, W.C.2

Students are admitted for the Curriculum for the

B.D.S. Degree and the L.D.S. Diploma in May

October and January

HOSPITAL PRACTICE—The School is furnished

with modern equipment and the Clinic of the

Hospital is unrivalled. Students may attend the

operations in the In-Patient Department and chair

side instruction is given in Advanced Operative

Technique and Orthodontics.

DENTAL PROSTHETICS—The Mechanical

Laboratory is a spacious and fully equipped department

under the direction of the Lecturer in Prosthetics.

HOUSE APPOINTMENTS—Six Senior House

Surgeons and eighteen ordinary House Surgeons

are appointed every year.

POST GRADUATE INSTRUCTION—Instruction

can be arranged in all branches of Dental Surgery.

SCHOLARSHIPS—A number of Scholarships

Bursaries and Prizes are awarded annually in

cluding eight open Scholarships ranging up to £50

per annum.

Write for further particulars and School Calendar

to THE DEAN.

UNIVERSITY OF LONDON

The Senate invite applications for the CHAIR

OF ANATOMY tenable at the London Hospital

Medical College. Salary £1000 a year. Applications

(twelve copies) must be received not later than

first post on May 3rd 1938 by the Academic

Registrar, University of London Senate House

London W.C.1 from whom further particulars

should be obtained.

## DIPLOMA IN OPHTHALMOLOGY DIPLOMA IN RADIOLOGY DIPLOMA IN LARYNGOLOGY AND OTOTOLOGY

Short Intensive Revision Courses Oral and Postal in preparation for these Diplomas. For full details write SECRETARY Medical Correspondence College 19 Welbeck Street, W.1.

## FRCS (Edin)

### EDINBURGH POSTAL COURSES

Full details of above and Oral Courses. H. C. ORRIN FRCS Surgeon's Hall, Edinburgh 2.

## ROYAL EYE HOSPITAL

Medical School

ST GEORGES CIRCUS SE1

### D.O.M.S. COURSE

An intensive SIX WEEKS COURSE for Part 1 and 2 of the D.O.M.S. Examination will commence on May 2nd.

Fees: Part 1 £5 5s Part 2 £10 10s. Applications are to be received by April 25th.

For further particulars apply to the Dean of Hospital.

1952-1953

## BRITISH POSTGRADUATE MEDICAL SCHOOL

Applications are invited for the post of FIRST ASSISTANT (non resident) in the Department of Obstetrics and Gynaecology in the above named School. Special experience in Obstetrics and Gynaecology is required. The post will normally be whole time. Salary £250 to £500 according to experience and qualifications.

Further particulars can be obtained from the Dean British Postgraduate Medical School, Duane Road, Shepherd's Bush, London W12, to whom applications accompanied by two testimonials and giving the names of two referees should be addressed to arrive not later than first post on Tuesday April 19th.

## UNIVERSITY OF BRISTOL

The University invites applications for the post of SENIOR CLINICAL PATHOLOGIST in the Department of Preventive Medicine. Salary £700 to £800 p.a. according to qualifications and experience.

Applications should reach the undersigned from whom further particulars may be obtained on or before April 20th 1938.

WINIFRED SHAPLAND  
Secretary and Registrar

## TREDEGAR WORKMEN'S MEDICAL AID SOCIETY

Applications are invited for the post of an experienced ASSISTANT DOCTOR under the above Society.

Applications stating age, qualifications married or single with copies of recent testimonials to be in the hands of the Secretary 10 The Circle, Tredegar, Mon. not later than first post on Tuesday April 12th 1938. Salary approximately £800 nett per annum. No canvassing.

## BOARD OF CONTROL ENGLAND AND WALES

The Board of Control (Lunacy and Mental Deficiency) invite applications from registered medical practitioners (men and women) for a vacant appointment as COMMISSIONER on the Board's staff.

Candidates should be experienced in the care and treatment of persons suffering from mental disorder or mental defect.

The salary commences at £850 per annum and rises by 11 annual increments of £30 to £1180 and then to £1200 per annum. In the case of a candidate with special experience of the administration of mental institutions the commencing salary may be advanced to a point not exceeding £75 above the minimum of the scale.

The appointment will be subject to the usual Civil Service conditions as to pension holidays etc. and also in the case of women marriage. Subject to certain conditions previously established service in a Mental Hospital or Mental Deficiency Institution can be aggregated with Civil Service for superannuation purposes.

Commissioners are required to devote their whole time to the Public Service.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application with further particulars of the appointment may be obtained from the Secretary, Board of Control, Metropole Buildings, Northumberland Avenue, London W.C.2.

No application can be considered unless received on the preprinted form not later than May 7th 1938.

## COUNTY BOROUGH OF BLACKBURN PUBLIC ASSISTANCE DEPARTMENT

Applications are invited from medical practitioners (male) for the appointment of a RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER at Queen's Park Hospital and Institution.

The Staff consists of a Resident Medical Officer, a Resident Assistant Medical Officer, a Consulting Surgeon, a Laboratory Assistant and an x-ray attendant.

There is a separate Infirmary, a separate Mental Block and a separate Hospital for Children and there is opportunity for experience in all departments including Medical Surgical and Midwifery cases. An x-ray apparatus is installed.

The person appointed will be required to devote his whole time to the duties and also to act as may be directed by the Resident Medical Officer.

The appointment will be limited to a term not exceeding one year.

Salary at the rate of £200 per annum together with board apartments and attendance.

Applications stating age, qualifications and experience accompanied by copies of not more than three recent testimonials must be sent so as to reach the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn not later than 10 a.m. on April 21st 1938.

Town Hall, Blackburn  
CHAS S ROBINSON, Town Clerk  
April 2nd 1938

## CITY OF CAPETOWN TUBERCULOSIS OFFICER

Applications are invited from qualified medical practitioners not over 45 years of age for the position of Tuberculosis Officer in the City Health Department.

The position will involve such administrative clinical home visiting and other duties as may be from time to time prescribed.

The appointment will be terminable upon one month's notice on either side and is subject to the provisions of Provincial Ordinance No. 10 of 1912 (Cape) and amending ordinances and to the standing rules and regulations of the Council.

If the successful applicant is resident in the United Kingdom his first class fare from Southampton to Capetown will be paid and half salary during the voyage and he will be required to enter into a three years contract with the City Council.

Salary will be at the rate of £800 per annum rising by annual increments of £50 to £1000 per annum and a motor transport allowance of £13 a month will be paid. The officer appointed will be required to devote the whole of his time to his office and not to engage in private practice.

Applicants must submit particulars as to age, qualification, present position and past experience with details as to experience in the diagnosis and treatment of tuberculosis and public anti-tuberculosis schemes and must also submit a medical certificate of physical fitness. Applications accompanied by copies of not more than three recent testimonials must be delivered in a sealed packet endorsed Tuberculosis Officer either to the undersigned or to Messrs DAVIS and SOPER LTD, 54 St Mary Axe, London EC3 from either of whom also certain further particulars as to the position may be obtained on application. If candidates are resident in South Africa applications must be delivered to the undersigned not later than noon May 7th 1938 if candidates are resident in the United Kingdom applications must be delivered at the office of Messrs Davis and Soper Ltd not later than noon April 23rd 1938. Applications should state when they can commence duty.

The canvassing of Councillors will be regarded as a disqualification.

FRANK D GALE  
Deputy Town Clerk

City Hall, Capetown  
March 14th 1938

## BOLTON EDUCATION COMMITTEE

### APPOINTMENT OF ASSISTANT (WOMAN) MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

The Education Committee invite applications for the appointment of a Woman Assistant Medical Officer of Health and Assistant School Medical Officer.

The person appointed will be required to assist the School Medical Officer in carrying out the work of medical examination of school children under the Education Act 1921 and also when not required in school work to assist the Medical Officer of Health in Child Welfare and other Public Health work. She must be prepared to devote the whole of her time to the duties of the office and not engage in private practice.

Preference will be given to applicants who (a) have had some definite experience in School Hygiene and (b) have enjoyed special opportunities for the study of children.

The possession of a Diploma in Public Health is essential.

The appointment is designated under the Local Government and Other Officers Superannuation Act 1922 and is subject to the provisions of that Act.

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum.

Applications endorsed Assistant School Medical Officer stating age, qualifications and previous experience and accompanied by copies of not more than three recent testimonials must be forwarded to reach the undersigned not later than Saturday April 23rd 1938.

Canvassing either directly or indirectly will be a disqualification.

Education Offices, JOHN A COX  
Nelson Square, Bolton, Director of Education

## CITY OF BRADFORD ASSISTANT CITY PATHOLOGIST REQUIRED

Salary £500 per annum rising to £700 per annum by annual increments of £25.

The salary is subject to a deduction of 5 per cent under the terms of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a satisfactory medical examination.

Application form may be obtained from the Medical Officer of Health, Town Hall, Bradford and should be returned to the undersigned not later than April 22nd 1938.

Town Hall, Bradford  
N E FLEMING  
April 4th 1938

## LANCASHIRE COUNTY COUNCIL PUBLIC ASSISTANCE COMMITTEE

Lake Hospital and Darnton House Institution  
Ashton under Lyne near Manchester

### APPOINTMENT OF SENIOR-RESIDENT MEDICAL OFFICER

Salary £250 per annum together with the usual residential emoluments.

The person appointed will be required to take up duty on June 1st 1938.

Applications are invited from Registered Medical Practitioners for the above appointment at the Lake Hospital and Darnton House Institution, Ashton under Lyne, comprising 300 and 45 beds respectively.

The Hospital is recognised as a complete Training School for Nurses.

Candidates must be unmarried. Preference will be given to candidates having previous hospital experience especially in midwifery and in the administration of anaesthetics.

The appointment will in the first instance be for a period of six months the successful candidate being eligible for reappointment for a further period of six months at the end of that period.

Form of application may be obtained from the County Medical Officer of Health, Public Assistance (Hospital and Medical) Department, County Offices, Preston, to whom all applications accompanied by copies of not more than two recent testimonials must be forwarded not later than Tuesday April 19th 1938.

GEORGE ETHERTON  
Clerk of the County Council  
County Offices, Preston  
April 14th 1938

## COUNTY COUNCIL OF MIDDLESEX JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Central Middlesex County Hospital  
Acton Lane, Willesden NW 10

Applications are invited for the above appointment.

Candidates must be registered medical practitioners preferably with surgical experience who have held resident appointments in a general hospital.

Salary £250 per annum together with board lodging and laundry valued at £100 per annum.

The appointment (which does not carry any superannuation rights) will be subject to medical examination and is terminable by one month's notice on either side) is for a period of six months in the first instance and may be extended for an additional six months. The officer appointed will work under the direction of the Medical Superintendent and will devote his or her whole time to official duties.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than April 20th. Application forms are not provided. Relationship to any member or officer of the Council must be disclosed in the application. Envelopes must be endorsed Junior Assistant Medical Officer, Central Middlesex County Hospital.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z  
Clerk of the County Council  
Middlesex Guildhall, Westminster SW 1  
March 26th 1938

## COUNTY BOROUGH OF OXFORD ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER (MALE)

Applications are invited for the appointment of Assistant Medical Officer of Health and Assistant School Medical Officer.

The maximum salary will be £700 per annum. The commencing salary will not be less than £500 per annum and will be fixed according to the qualifications and experience of the successful applicant and will rise by increments of £50 to £700 per annum.

A motor car allowance will be paid in accordance with the Scale adopted by the City Council.

Candidates must have had at least three years professional experience and special experience in ante-natal and Maternity and Child Welfare work and in the work of the School Medical Service.

The person appointed will be required to devote his full time to the duties and not to engage in private practice.

The duties to be performed will be under the direction of the Medical Officer of Health.

The post will be designated under the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to undergo a medical examination.

Forms of application can be obtained from the Medical Officer of Health, Greyfriars, 71-73 Street, Oxford, to whom they must be sent completed on or before April 27th 1938.

A HOLF  
Town Hall, Oxford



**KNOWLE MENTAL HOSPITAL FAREHAM HANTS**

Applications are invited for the following posts—  
**SECOND ASSISTANT MEDICAL OFFICER**

**JUNIOR ASSISTANT MEDICAL OFFICER**

Applicants should be male and single. The Second A.M.O. must have previous Mental Hospital experience hold the Diploma in Psychological Medicine and have a good knowledge of Laboratory work. Experience in x-ray work will be an advantage.

Salaries—Second A.M.O. £500 rising by yearly increments of £25 to £600. Junior A.M.O. £350 rising by yearly increments of £25 to £450 with in addition in both cases board lodging washing and attendance valued at £150.

The Junior A.M.O. will be paid an extra £50 p.a. if in possession of or on obtaining the D.P.M.

Applications with copies of three recent testimonials to be sent to the Medical Superintendent not later than April 16th 1938.

**CHRISTIE HOSPITAL AND HOLT RADIUM INSTITUTE Manchester 20**

Applications are invited for the post of ASSISTANT MEDICAL OFFICER to the Radium Institute. The appointment offers an excellent opportunity of acquiring extensive experience in Radium and Deep x-ray Therapy. Applicants must possess either a Fellowship in Surgery or a Diploma in Radiology and have had general medical and surgical experience. Actual experience in Radium Therapy is not essential. The appointment is a whole time one in the first instance for one year at £400 increasing to £500 for the second year.

Detailed applications and testimonials should be submitted to the undersigned not later than April 2nd.

**PERCY N GLASS**  
Superintendent

**ROCHDALE INFIRMARY AND DISPENSARY (110 Beds Three Residents)**

The Board of Management invite applications from gentlemen for the appointment of SECOND HOUSE SURGEON. The salary attached to the appointment is at the rate of £150 per annum including board residence and laundry.

Applications stating age nationality etc. together with copies of three recent testimonials to be sent to the Secretary endorsed House Surgeon. Conditions of the appointment may be had on application to the Secretary.

**W WYNNE**  
Secretary

Infirmary Office Rochdale Lanes

**EAR AND THROAT HOSPITAL BIRMINGHAM 3**

**THIRD HOUSE SURGEON** wanted (non resident). Must be qualified and with clinical experience. Salary at the rate of £150 per annum with lunch on six weekdays and an allowance of £50 per annum in lieu of board and lodging. Appointment for six months to commence immediately.

Candidates are eligible for election to Senior posts. Facilities for training for D.L.O. Applications and testimonials to be forwarded to the undersigned.

**W H LOMAS**  
Secretary

**LEEDS PUBLIC DISPENSARY AND HOSPITAL**

Applications are invited for the posts of CASUALTY OFFICER AND HOUSE SURGEON (male) HOUSE PHYSICIAN (male).

Appointments are for six months commencing May 1st 1938. Salary at the rate of £150 per annum with board residence and laundry. Application with copies of three recent testimonials to be sent in on or before Monday April 15th addressed to the undersigned Public Dispensary and Hospital North Street Leeds 2.

**CHARLES F J MAURY**  
Secretary and Superintendent

**BATLEY AND DISTRICT HOSPITAL (General Hospital—34 Beds)**

Required a duly qualified RESIDENT HOUSE SURGEON (male). Salary £175 with board residence and laundry. Applications with copies of testimonials should be sent at once to—

**A W WESTERN**  
Batley Yorks Secretary

**ECCLES AND PATRICROFT HOSPITAL near Manchester**

**SENIOR RESIDENT HOUSE SURGEON** required shortly. Good surgical work available. Commencing salary at rate of £17. Usual emoluments. Appointment for 6 months. May be extended. Apply with references to Secretary.

**PETERBOROUGH & DISTRICT MEMORIAL HOSPITAL (154 Beds)****APPOINTMENT OF RESIDENT HOUSE PHYSICIAN**

Applications are invited from fully qualified male practitioners for the above post. Duties to commence as early as possible.

Salary £135 per annum with board residence and laundry.

Applications stating age qualifications and experience with copies of recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

**FRANK A C TAYLOR**  
Secretary Superintendent

**CHORLEY AND DISTRICT HOSPITAL Chorley Lancashire (Voluntary General Hospital with 70 Beds)****HOUSE SURGEON**

Applications are invited for the post of House Surgeon to commence duties early in May 1938. The appointment will be for six months but the appointed candidate will be eligible for re-appointment.

The salary is £150 per annum with board residence and laundry.

Applications with copies of three recent testimonials to be sent to the undersigned not later than Saturday April 23rd 1938.

**C H SPENCE**  
Secretary Superintendent

**STOCKTON AND THORNABY HOSPITAL Stockton on Tees (140 Beds 3 Residents)**

**HOUSE PHYSICIAN (male)** alternating with Casualty Officer required for a period of at least six months to commence on or about April 16th 1938. Salary £150 per annum with board residence and laundry. Candidates must be duly qualified and unmarried. Applications stating age nationality and experience together with copies of three testimonials to be sent to the undersigned.

**J WILKINSON**  
Secretary

**THE GENERAL INFIRMARY AT LEEDS****RADIO-SURGICAL HOUSE SURGEON (Male or Female)**

Applications are invited for the above post. Salary £100 per annum with board residence and laundry. The appointment is for six months subject to renewal. Candidates must be legally qualified and registered. Applications with copies of testimonials to be sent in at once to the undersigned.

**S CLAYTON FRYERS**  
House Governor and Secretary

**ROYAL HOSPITAL RICHMOND SURREY**

Applications are invited immediately for the following post—  
**JUNIOR HOUSE SURGEON (male)** £100 per annum.

Board furnished apartment and laundry. Candidates must be fully qualified registered and single. Form of application can be obtained from the undersigned.

**G M EDEN**  
Secretary Superintendent

**ROYAL INFIRMARY BLACKBURN (244 Beds—Five Residents)**

**RESIDENT HOUSE PHYSICIAN (MALE)** required at a salary of £175 per annum with board residence laundry etc.

In addition to Medical Wards to be attached to the Eye Ear Nose and Throat Department.

Applications with copies of testimonials stating age nationality experience etc. to be sent to the undersigned as early as possible.

**F DEVHURST**  
General Supt and Secretary  
Royal Infirmary Blackburn

**STROUD GENERAL HOSPITAL Stroud Glos**

**RESIDENT MEDICAL OFFICER** required. Candidates must be fully qualified and registered. Six months appointment duties to commence as soon as possible. Salary £160 per annum with board and laundry.

Applications stating age nationality etc. together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

**C FORD SPENCER**  
Secretary

**ROTHERHAM HOSPITAL**

Wanted **HOUSE PHYSICIAN (male)** qualified Salary £140 with board residence and laundry 10 beds. Excellent experience to be gained.

Applications with copies of recent testimonials to be sent to the Secretary **G W ROBERTS** 5 Moorgate Street Rotherham.

**THE HOSPITAL OF ST CROSS RUGBY (120 Beds)**

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (the other R.M.O.s).

Salary to commence at the rate of £100 per annum for the first three months £125 per annum for the second three months and at the rate of £150 per annum for subsequent months. Full board washing etc. provided.

Six months appointment and eligible on completion of service for further extension of six months.

Candidates must be prepared to commence duties immediately.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.s.

Applications stating age nationality and full details with copies of three recent testimonials to be sent to the undersigned.

**(Signed) W COCKBURN**  
Superintendent and Secretary

**THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD Fifth Auxiliary Norton**

Applications are invited for the post of RESIDENT MEDICAL OFFICER from registered Medical Practitioners.

The appointment will be for six months commencing immediately subject to renewal for a further six months with salary at the rate of £150 per annum plus board residence and laundry.

Previous Obstetrical experience is desirable. The Fifth Auxiliary Hospital contains 47 beds of which 23 are set apart for the treatment of Puerperal Sepsis the remainder being for Ante-natal and Gynaecological cases.

Applications should be lodged with the undersigned addressed to the Jessop Hospital for Women Sheffield immediately.

**DAVID OSWALD**  
Superintendent and Secretary

**THE QUEEN'S HOSPITAL BIRMINGHAM 14**

**FIVE CLINICAL ASSISTANTS** are required for duty at the Midland Nerve Hospital.

Each Clinical Assistant will be required to attend the Out-patient Department on one day a week.

Honorarium will be at the rate of £50 per annum.

The appointments will be for six months from June 1st next and the successful candidate will be eligible for reappointment for a further six months.

Applications should reach me not later than May 9th.

**P CROCKER**  
April 4th 1938 House Governor

**THE CHESTER ROYAL INFIRMARY (225 Beds)**

Applications are invited for the post of HOUSE PHYSICIAN (male) to take up duty on May 1st. Salary £150 per annum with board lodging and laundry. The appointment is approved for the purposes of the M.D. Examinations of the University of London. Application list closes April 22nd. Application forms may be obtained from—

**W H GRACE M.D. M.R.C.P.**  
Hon. Secretary Medical Committee

**THE MOUNT VERNON HOSPITAL Northwood Middlesex (For the treatment of Cancer)**

There will shortly be a vacancy for a HOUSE SURGEON. Candidates must be fully qualified and registered. Salary at the rate of £140 per annum with board residence etc. Six months appointment. Applications accompanied with testimonials to be sent to the undersigned.

**W J MORTON**  
Offices 32 Fitzroy Square W1 Secretary

**THE HOSPITAL PORT SUNLIGHT RESIDENT (male British single good anaesthetist) required immediately for this private hospital connected with the work of Messrs Le Brothers (Port Sunlight) Limited Good qualifications and experience. Hospital visited by 12 consultants. Commencing salary £200 per annum full board etc. Applications stating age qualifications and experience to Dr Carrington Chester Road New Ferry Cheshire**

**THE HARTLEPOOL HOSPITAL (95 Beds)**  
Applications are invited for the post of HOUSE SURGEON. Salary £150 p.a. with board residence and laundry. Appointment for six months subject to renewal. Duties to commence April 30th.

**NORMAN O DEANS** Secretary

**ST JOHN'S HOSPITAL OF MANCHESTER AND SALFORD FOR THE BLIND 25 St John Street Manchester**

Application invited for the post of ASSISTANT HONORARY SURGEON to Secretary.

Apply to the Secretary **G W ROBERTS** 5 Moorgate Street Rotherham.

# HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

Brampton, S.W.3

The Committee of Management invite applications for the following posts:  
**RESIDENT SURGICAL OFFICER.** Candidates must have held a Resident Medical Officer's appointment for not less than six months. Salary £10 per annum with board and residence and an additional £100 per annum for services in connection with patients. The appointment is for a period of three years.

**ASSISTANT RESIDENT MEDICAL OFFICER.** Candidates must have held a Resident Medical Officer's appointment for not less than six months and in addition a diploma in Public Health. Salary £150 per annum with board and residence. The appointment is for a period of three years.

**HOUSE PHYSICIANS.** There are three vacancies. The duties include work in the Out-patient Department and in the wards. One of the selected candidates will be appointed Assistant to the Tuberculosis Officer for the Local Tuberculosis Department at the Hospital. The appointment is for a period of three years, ending May 11, 1941, with an honorarium of £50.  
Applications with copies of test results must be sent to the undersigned not later than Saturday April 16th 1938.  
F. G. ROUFRAY, Secretary  
Brampton, S.W.3

# THE LONDON CHEST HOSPITAL

(111 Regent Street, London, W.1)

## SURGICAL REGISTRAR (MALE) (PART TIME)

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

THOMAS BROWN, Secretary

# THE LONDON CHEST HOSPITAL

(111 Regent Street, London, W.1)

## MEDICAL REGISTRAR (MALE) (PART TIME)

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

THOMAS BROWN, Secretary

# THE ROYAL CANAL HOSPITAL (FREE)

(Incorporated in the Royal Charter) (Fleet Road, London, S.W.3)

## SECOND ASSISTANT PATHOLOGIST to the Hospital

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

CLEMENT COBBOLD, Secretary

# QUEEN MARY'S HOSPITAL FOR THE EAST END

(Stratford, E.15)

## HONORARY ASSISTANT SURGEON

There is a vacancy in the Staff of the Hospital for an Honorary Assistant Surgeon (with a salary of £100 per annum). Applications are invited from qualified surgeons who are Fellows of the Royal College of Surgeons. The successful candidate will be required to attend the hospital for a period of three hours per week. The appointment is for a period of three years.

RAPHAEL JACKSON, Secretary

# ROYAL CHEST HOSPITAL

(City Road, E.C.1)

## RESIDENT MEDICAL OFFICER (male) (Vacant)

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

GILBERT G. PANTER, Secretary

# ROYAL CHEST HOSPITAL

(City Road, E.C.1)

## HOUSE PHYSICIAN (Male) (Vacant)

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

GILBERT G. PANTER, Secretary

# ROYAL CHEST HOSPITAL

(City Road, E.C.1)

# WEST LONDON HOSPITAL

(Harper Road, W.6)

## AN ADDITIONAL HONORARY REGISTRAR

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

H. A. MADGE, Secretary

# THE HOSTEL

(Fleet Road, London, S.W.3)

## OFFICER (Male)

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

H. A. MADGE, Secretary

# THE ROYAL WATERLOO HOSPITAL

(Fleet Road, London, S.W.3)

## CHILDREN AND WOMEN

### RESIDENT CASUALTY AND OUT-PATIENT HOUSE PHYSICIAN

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

J. H. TEASDALE, Secretary

# THE ROYAL WATERLOO HOSPITAL

(Fleet Road, London, S.W.3)

## CHILDREN AND WOMEN

### RESIDENT CASUALTY AND OUT-PATIENT HOUSE PHYSICIAN

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(Fleet Road, London, S.W.3)

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J. H. TEASDALE, Secretary

# THE ROYAL WATERLOO HOSPITAL

(Fleet Road, London, S.W.3)

## CHILDREN AND WOMEN

### RESIDENT CASUALTY AND OUT-PATIENT HOUSE PHYSICIAN

Applications are invited for the above post. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years. The successful candidate will be required to attend the hospital for a period of three hours per week. The salary is £100 per annum. The appointment is for a period of three years.

J. H. TEASDALE, Secretary

# HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

Brampton, S.W.3

The Committee of Management invite applications for the following posts:  
**ASSISTANT PHYSICIAN.** Applications with copies of test results must be sent to the undersigned not later than Saturday April 16th 1938.  
F. G. ROUFRAY, Secretary  
Brampton, S.W.3

# METROPOLITAN HOSPITAL

(110 Regent Street, London, W.1)

There are vacancies for the following posts:  
(a) SENIOR HOUSE PHYSICIAN. Salary £100 per annum.  
(b) JUNIOR HOUSE PHYSICIAN. Salary £100 per annum.  
(c) JUNIOR HOUSE SURGEON. Salary £100 per annum.  
Applications are invited from qualified medical officers who are Fellows of the Royal College of Surgeons. The successful candidate will be required to attend the hospital for a period of three hours per week. The appointment is for a period of three years.

FRANK JENNINGS, Secretary

# QUEEN CHARLOTTE'S MATERNITY HOSPITAL

(Mansel Street, London, W.1)

Applications are invited from Registered Medical Practitioners for the appointment of a **RESIDENT ANAESTHETIST.** Duties to commence on June 1st. Salary £100 per annum with board and residence and laundry allowance (as weekly). Applications should be sent to the undersigned not later than Saturday April 16th 1938.

H. B. STOKES, Secretary

# DREADNOTCH HOSPITAL GREENWICH

(Greenwich, S.E.18)

Applications are invited for the following posts:  
**HOUSE PHYSICIAN.** Salary £100 per annum with board and residence and laundry. Applications should be sent to the undersigned not later than Saturday April 16th 1938.

F. A. LYON, Secretary

# KING EDWARD MEMORIAL HOSPITAL

(Ealing, W.13)

Applications are invited for the following posts:  
**CONSULTING PHYSICIAN.** Salary £100 per annum with board and residence and laundry. Applications should be sent to the undersigned not later than Saturday April 16th 1938.

R. A. MICKELTHRIGHT, Secretary

**KENT AND SUSSEX HOSPITAL**  
Tunbridge Wells (210 Beds)

Applications are invited for the appointment of **HOUSE SURGEON (male)** Salary £150 per annum Board residence and laundry in the Hospital

The Hospital includes the following Departments—Medical Surgical Ear Nose and Throat Ophthalmic Orthopaedic Gynaecological X-ray and Electro-therapeutic Massage Pathological Venereal Diseases etc etc

Successful candidate will be required to take up duty on or about Saturday April 9th

Applications stating qualifications together with certificate of registration and copies of not more than three recent testimonials should be sent to the undersigned immediately

**TOM B HARRISON**

April 8th 1938 Superintendent Secretary

**DUNDEE ROYAL INFIRMARY**  
MEDICAL ELECTRICAL DEPARTMENT

The Directors propose to appoint a **WHOLE TIME MEDICAL OFFICER** in the Medical Electrical Department Salary at the rate of £1000 per annum

Candidates must be fully qualified in and have had adequate experience in the therapeutic administration of X-rays and Radium Further details may be obtained from the Medical Superintendent

Applications together with twenty four copies of recent testimonials should be lodged with the undersigned on or before May 21st 1938

Royal Infirmary **W F FERGUSON**  
Dundee Secretary

**KING EDWARD MEMORIAL HOSPITAL**  
Ealing (145 Beds)

Applications are invited for the post of **HOUSE SURGEON (male)** to act in the Eye Gynaecological and Ear Nose and Throat Departments Six months appointment from May 1st 1938 with possibility of re-election for a further period Salary £150 per annum with usual residential emoluments

Applications stating age experience and qualifications and accompanied by copies of two recent testimonials to be sent to the undersigned immediately

**R A MICKELWRIGHT**

House Governor

**ABERDEEN MATERNITY HOSPITAL**  
Foresterhill Aberdeen

Applications are invited for the post of **RESIDENT HOUSE SURGEON** for Ante-Natal Cases The appointment is for six months commencing May 1st 1938 and the salary is at the rate of £50 per annum

Applications with copies of three testimonials should reach the undersigned before Saturday April 16th

**WATT AND CUMINE** Advocates

8 Golden Square Aberdeen Secretaries

**DERBYSHIRE ROYAL INFIRMARY DERBY**  
(General Hospital 362 Beds)

Applications are invited for the post of **HOUSE SURGEON** for Ear Throat and Nose Department who must be a male of British nationality and unmarried

Candidates must be qualified and registered under the Medical Acts Salary will be £150 per annum with apartments board etc

Applications with copies of testimonials to be sent to the undersigned

State earliest date duties could be commenced  
**ARTHUR TAYLOR**  
Superintendent and Secretary

**GREAT YARMOUTH GENERAL HOSPITAL**  
(72 Beds)

Applications are invited for the post of **HOUSE SURGEON** (one of two appointments) Duties to commence May 1st

Applicant must be male and unmarried Salary at the rate of £140 per annum with board residence and laundry

Applications stating age and qualifications together with copies of three recent testimonials to be forwarded to the undersigned

**FRED L GATFIELD**

Secretary

**KENT AND CANTERBURY HOSPITAL**  
Canterbury (155 Beds)

The Board of Management will shortly proceed to the appointment of an **HONORARY ANAESTHETIST**

Candidates must be duly qualified medical practitioners Application together with copies of testimonials should be sent on or before May 10th to the undersigned from whom further particulars can be obtained

**J F KENT**

Secretary and Secretary

**NORTH STAFFORDSHIRE ROYAL INFIRMARY**  
Stoke on Trent (390 Beds)**RESIDENT ANAESTHETIST**

The Committee invite applications for the above post Salary at the rate of £150 per annum with board residence and laundry

This appointment which is recognized by the Royal College of Surgeons for the Diploma in Anaesthetics will be made for six months renewable

Previous hospital Anaesthetic experience essential Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately

By Order

**W STEVENSON**

Secretary and House Governor  
March 28th 1938

**MANCHESTER ROYAL INFIRMARY****HOUSE SURGEON**  
AURAL GYNAECOLOGICAL AND OPHTHALMIC DEPARTMENTS

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment vacant on May 15th 1938

Applicants must hold a Medical and Surgical Qualification and be registered

The appointment is for six months subject to the Bye laws as to notice etc Salary at the rate of £50 per annum with board residence and allowance for laundry

Applications stating age to be sent to the Chairman of the Medical Board not later than April 23rd 1938

By order **F J CABLE**

April 4th 1938 Gen Supt Secretary

**MANCHESTER ROYAL INFIRMARY****MEDICAL OFFICER TO OUTPATIENTS**

The Board of Management invite applications from registered Medical Practitioners for the above appointment

The duties are to assist in the treatment of Medical Outpatients on three mornings a week from 9 o'clock The appointment is for one year Salary £105 per annum

Candidates must state age and send fifteen copies of their application and testimonials to the undersigned on or before 9 a.m. on Wednesday April 13th 1938

By Order

**F J CABLE**

General Superintendent and Secretary  
April 4th 1938

**NORFOLK AND NORWICH HOSPITAL**  
Norwich (417 Beds)

Applications are invited for the post of **CASUALTY OFFICER** Salary £120 per annum with board residence and laundry

Candidates (male) must be unmarried and must possess registered qualifications

Applications stating age nationality etc together with copies of testimonials should reach the undersigned not later than Tuesday April 19th 1938

**FRANK INCH**

House Governor and Secretary  
April 9th 1938

**KING EDWARD VII HOSPITAL WINDSOR**  
(200 Beds)

**CASUALTY OFFICER** required immediately Applicants must be fully qualified men or women registered and unmarried

Salary at the rate of £120 per annum together with board residence and laundry

Applications stating age qualifications and experience accompanied by testimonials should be sent to the undersigned not later than April 14th

**A E CHURCHILL**

Secretary

**TEMPORARY TUBERCULOSIS OFFICER**

required for HOLIDAY DUTIES for approximately four months from June 13th 1938 at a fee of £15 per week inclusive of travelling expenses Applications stating age qualifications and experience together with copies of three recent testimonials should be addressed and delivered to the Clerk of the County Council County Hall Chelmsford not later than 10 a.m. on Tuesday April 19th 1938

**LIVERPOOL AND DISTRICT HOSPITAL FOR DISEASES OF THE HEART**  
34 Oxford Street Liverpool 7

**HOUSE PHYSICIAN** required July 1st for six months Salary at rate of £100 per annum with board residence and laundry

Applicants to be sent to Secretary

**NORTHAMPTON COUNTY MENTAL HOSPITAL**

Applications are invited for the post of **DEPUTY MEDICAL SUPERINTENDENT (SENIOR ASSISTANT MEDICAL OFFICER)** at the County Mental Hospital Berrywood near Northampton

Candidates must be registered Medical Practitioners possessing a Diploma in Psychological Medicine or its equivalent and must have had mental hospital experience

Preference will be given to candidates who have special knowledge of and experience in the Insulin Shock Treatment of Schizophrenia Research is encouraged and a well equipped laboratory with trained assistant is provided

Salary £600 rising by £5 annually to £605 and £50 for the D.P.M. with unfurnished house light laundry and garden produce valued at £100 yearly for superannuation purposes

The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1907 Applications stating age and experience together with copies of not more than three recent testimonials to be sent not later than April 14th to the Medical Superintendent

**PRINCE OF WALES HOSPITAL**  
Dunport

(Formerly the Royal Albert Hospital Dunport) (64 Beds)

Applications are invited for the post of **JUNIOR HOUSE SURGEON** Salary £100 per annum with board residence and laundry

Duties to commence forthwith Appointment is tenable for six months and is subject to renewal or promotion to the senior position when this post becomes vacant Applicants must be registered under the Medical Acts

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned immediately

**ARTHUR R CASH**

General Supt and Secretary

Prince of Wales Hospital  
Greenbank Road Plymouth

**ROYAL GWENT HOSPITAL**  
Newport Mon (210 Beds)

Required for duty May 1st 1938 —  
\* **RESIDENT SURGICAL OFFICER HOUSE SURGEON** for the Fracture and Orthopaedic Department **CASUALTY OFFICER**

Salaries at the rate of £250 £135 and £135 per annum respectively with board residence and laundry

Applications stating age qualifications and experience together with copies of three testimonials should be sent to the undersigned immediately

**ALAN RUDDLE**

Secretary Superintendent

\* This appointment is recognized by the Royal College of Surgeons (England)

**PEELBOROUGH & DISTRICT MEMORIAL HOSPITAL**  
(154 Beds)**APPOINTMENT OF RESIDENT HOUSE SURGEON**

Applications are invited from fully qualified male practitioners for the above post Duties to commence May 1st 1938 Salary £135 per annum with board residence and laundry

Applications stating age qualifications and experience with copies of recent testimonials to be sent to the undersigned from whom further particulars may be obtained

**FRANK A C TAYLOR**

Secretary Superintendent

**PONTEFRACT GENERAL INFIRMARY (YORKS)**

**SENIOR RESIDENT MEDICAL OFFICER** (male unmarried) duly qualified registered medical practitioner with some previous surgical experience as hospital resident

Salary £175 p.a.

The appointment is for six months Applications stating age with testimonials and nationality to be sent to the undersigned

**DAVID J RICHARDS**

Secretary Superintendent

**PRESTON AND COUNTY OF LANCASHIRE ROYAL INFIRMARY**

Applications are invited for the post of **HOUSE SURGEON** to the Eye Ear Nose and Throat Departments and the Fracture and Orthopaedic Department

Salary at the rate of £150 per annum with board residence and laundry Further particulars may be obtained from the General Hospital Secretary

Applicants stating age and qualifications with copies of three recent testimonials to be sent to the undersigned

April 4th 1938 Secretary



## APPOINTMENTS—Important Notice

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Secretary, 7, Drumsheugh Gardens, Edinburgh)

### (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(contd.)</b>	<b>CONTRACT PRACTICE—(contd.)</b>
ABERTISSEW MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	OAKDALE MON. (Medical Officer for Men and Adolescent)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	<b>PUBLIC HEALTH</b>
LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN— (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Wynham Colliery Medical Aid Society) (Workmen's Medical Scheme)	HAMPSHIRE COUNTY COUNCIL (Assistant County Medical Officer)
		SALOP MENTAL HOSPITAL SHREWSBURY (Assistant Medical Officer Male)

### (b) Overseas

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association, B.M.A. House Tavistock Square, W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Friendly Society Appointments)	The Medical Secretary New South Wales Branch 135 Macquarie Street, Sydney N.S.W.	<b>VICTORIA</b> (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St. East Melbourne, Victoria.	<b>WESTERN AUSTRALIA</b> (Contract and Lodge Practices)	The Hon. Sec. Western Australian Branch, British Medical Association "Shell House," 205 St. George's Terrace, Perth Western Australia
<b>QUEENSLAND</b> Brisbane Associate Friendly Societies Institute)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. House 20 Wickham Terrace, Brisbane, B.17				

April 6, 1938

By Order of the Council

G C ANDERSON Secretary

#### BURLEIGH HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL, High Lane, Tunstall Stoke-on-Trent (66 Beds. Approved Training School for Nurses)

Applications are invited for the post of RESIDENT HOUSE SURGEON. Salary £175 per annum with board residence and laundry.  
The appointment is for six months in the first instance. Reappointment may be applied for.  
Applications stating age and experience with copies of three recent testimonials, to be sent to the undersigned immediately.

C E LOWDES  
Secretary

#### LOWESTOFT AND NORTH SUFFOLK HOSPITAL

JUNIOR HOUSE SURGEON (Male) required Salary at the rate of £11.0 per annum with board residence and laundry. Medical and Surgical qualifications required.  
Eligible for Senior post at £1.0 per annum after a period of satisfactory service.  
Applications to be sent to the Honorary Medical Superintendent, to be sent to the Honorary Medical Superintendent.

#### COSSHAM MEMORIAL HOSPITAL, Kingswood, Bristol.

A vacancy will occur at the end of March for a JUNIOR RESIDENT MEDICAL OFFICER. Salary £100 per annum with board and laundry. To remain for six months in the first instance. Applicants (male) should be of British nationality, fully qualified and registered.  
Applications, with copies of recent testimonials, to be sent to the Secretary.

#### BEDFORD COUNTY HOSPITAL

We call FIRST HOUSE SURGEON to take effect from April with for a term of not less than six months. He must be fully qualified. Salary £155 per annum with board residence and laundry. Applications to be sent to the Honorary Medical Superintendent, to be sent to the Honorary Medical Superintendent.

#### COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRY (147 Beds.)

Applications are invited for the following appointments—

- 1 CASUALTY OFFICER
- 1 HOUSE PHYSICIAN
- 2 HOUSE SURGEONS
- 1 HOUSE SURGEON to Ophthalmic Dept.

Each appointment is for a period of six months commencing May 1st, and the Surgical and House Physician appointments carry a salary at the rate of £11.0 p.a. with full board. Candidates for the post of Casualty Officer must have had previous hospital experience, if possible, and the salary will be from £11.0-£12.0 p.a. according to qualification and experience.

Applications with full particulars and enclosing copies of testimonials, should be addressed to the undersigned and must be received not later than April 15th 1938.

S C HILL,

House Governor and Secretary  
B—The Surgical appointments are recognized as qualifying posts in respect of the Fellowship of the Royal College of Surgeons in England and the Ophthalmic appointment for the D.O.M.S.

March 22nd, 1938.

#### ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER.

(120 Beds. 5 Resident Officers.)  
Hospital is managed by the Royal College of Surgeons in England.

#### TWO HOUSE SURGEONS.

Applications are invited for two vacancies which will be filled by the end of March on May 1st and will be for a period of six months. The successful candidates will be required to have had previous hospital experience, if possible, and the salary will be from £11.0-£12.0 p.a. according to qualification and experience.

HERBERT MASLEN

March 22nd 1938 Secretary

#### DERBYSHIRE ROYAL INFIRMARY DERBY (General Hospital 62 beds.) Recognized under F.R.C.S. Regulations

Applications are invited for the post of HOUSE PHYSICIAN who must be a member of British nationality and unimpaired.  
Candidates must be qualified and registered under the Medical Act.

Salary will be £150 per annum with apartments board etc.

Applications with copies of testimonials, to be sent to the undersigned.

ARTHUR TAYLOR

Superintendent and Secretary

March 14th 1938.

#### MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASE OF THE THROAT AND CHEST

Wanted an ASSISTANT MEDICAL OFFICER (male) for the Grosvenor Sanatorium, Deansgate, Manchester. (110 beds.) Salary £200 per annum with board apartments and laundry.

Candidates must be registered. The appointment offers an opportunity for practical experience in modern methods of treating Pulmonary Tuberculosis.

Applications, with copies of testimonials, to be sent to the undersigned not later than April 15th 1938.

W. Hunt, Secretary 45, Hardman Street, Manchester 1.

#### YORK COUNTY HOSPITAL (140 Beds.)

The post of HOUSE SURGEON in the Eye, Ear, Nose and Throat Department will become vacant on May 1st 1938. Desires should be sent to the County Council, York, by the 15th April 1938.

J R MACARILL Secretary



**WANTED RESIDENT MEDICAL SUPERVISOR**  
 TLNDENI for Private Mental Hospital  
 Work light Would suit man pensioned from  
 Public mental service—Address No 4911 BMA  
 House Ixistock Square WC1

**A LADY DISPENSER BOOKKEEPER SLP**  
 placed immediately on request qualified  
 and with practical experience in private practice  
 and dispensary work also trained in Bacteriological  
 Laboratories of the LONDON COLLEGE OF  
**PHARMACY FOR WOMEN** Preparation for  
 Examinations—Write, care of phone (Bays-  
 water 6969) Secretary 7 Westbourne Park  
 Road, W.2.

A Course of Training in Dispensing and Pharmacy is given at GORDON HALL SCHOOL OF PHARMACY and Secretary Dispensers can be supplied to Doctors. Sessions January April and September—Apply Principals School of Pharmacy Drayton House, Gordon Street, W.C.1. Phone Euston 3970

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KENT—RESID & AGRICULTURAL AVER AGE £1 000 p.a. increasing Panel 930 Apts 13 Premium 2 years purchase Good family house and garden—7

HANTS RESORT—£1 200 P.A. PANEL 1 300 Several Clubs Premium 2 years purchase Small house 3 bed for sale freehold—8

SURREY, NEAR LONDON—£800 P.A., rapidly increasing Panel over 600 Small house £75 p.a. Premium £1 500 or offer—9

LONDON S.E.—ABOUT £700 P.A. Panel 800 P.M.S. £100 Premium £1 00 ample accommodation at profit rental—10

PHYSIO AND ELECTROTHERAPEUTIC PRACTICE within 40 miles of London £900 p.a. Prem £1 125 Suitab. house available—11

LONDON N.E.—AVERAGE £1 460 p.a. incl panel of 2 300 and scope Half share now succession later House to rent at £45 p.a. net—1

LONDON W.6—NON PANEL AVER AGE over £500 Last year £1 150 Rapidly increasing Fees 5/ to 21/ Premium £1 000 Semi detached house 5 bed etc—13

S. DEVON—COUNTRY PRACTICE £400 incl Resident Patients and ample scope to young man Premium on £150 Nice commod. house rent £65 p.a.—14

LONDON W.2—AVERAGE £1 266 Better class no panel Fees 21/ Premium £1 100 or near offer House 3 recep 6/7 bed etc to rent—15

LONDON S.W.—ABOUT £850 P.A. Panel about 500 Club £80 p.a. Convenient house rented at £75 p.a. Prem £1 250 for quick sale—16

SOUTH AFRICA—NEAR EAST LONDON Average £1 250 and scope O/S—J Premium £1 000 half down Large house for sale on mortgage—17

LONDON S.E.20—OVER £700 P.A. Select panel illness cause of sale Prem 11 years purchase Detached house 6 bed etc on lease or 11½ years purchase—18

SOUTHERN SEAPORT TOWN—£1 400 p.a. increasing Panel 1 400 Apts nearly £10 p.a. Prem £3 000 Good house (5 bed) to rent—19

LONDON—SOUTH OF THAMES Over £2 000 p.a. with large panel Suitab. house to rent or would be sold—20

S. WALES—RESIDENTIAL AND WORKING HALF SHARE of £3 000 p.a. Panel 2 300 Visits 5/- to 7/6 Prem 2 years purchase Ex freehold house 5 bed large garden etc—1

NO CHARGE TO PURCHASERS  
 FINANCIAL ASSISTANCE ARRANGED  
 ASSISTANTS—VACANCIES IN TOWN and Country Indoor and Outdoor List application

# BRITISH MEDICAL BUREAU

(The Scholastic, Clerical and Medical Association Ltd.)

(FOUNDED 1880)

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Recommended with every confidence to the profession by the **BRITISH MEDICAL ASSOCIATION** as a thoroughly trustworthy medium for the transaction of all Medical Agency business

**TRANSFER OF PRACTICES AND PARTNERSHIPS INTRODUCTION OF RELIABLE ASSISTANTS AND LOCUM TENENS at Short Notice VALUATION and INVESTIGATION OF PRACTICES, Etc**

**FOR DISPOSAL**

Full particulars free on request

Practices and Partnerships wanted. Large list of bona fide purchasers with ample capital available. Enquiries invited from prospective vendors. All information treated in strict confidence.

**ANGLESEY**—DEATH VACANCY—O d-established unopposed mixed Panel and Private PRACTICE in beautiful Seaside village. Cash receipts last year £104 including Panel income of £45.5. Excellent house on lease with ample accommodation garage and garden. Rent £60 p.a. Premium—£1 000—No 1101

**YORKSHIRE**—Old-established PRACTICE in pleasant Country town. Cash receipts last year £1 040. Panel 600 (producing £300 p.a.) Scope. Excellent house 3 reception 6 bedrooms, 3 Professional rooms garage and large garden. Good food and educational facilities. Premium—Practice—£1 700—No 1102.

**MANCHESTER**—Mixed-class PRACTICE in good district. Income £400 £550 p.a. Panel about 400. Good house, 3 bedrooms, garage and garden. Rent £55 p.a. Premium—best offer for quick sale—No 1103

**LIVERPOOL**—Steadily increasing mixed-class PRACTICE in suburbs. Cash receipts last year £758. Panel 650. Excellent detached house, 2 reception 6 bedrooms, garage and garden. Premium—Practice—best offer—No 1036

**LANCAS TOWN**—Sound old-established middle and better working-class PRACTICE. Cash receipts last year £2,640. Panel over 1 700. Good house, 2 reception, 4 bedrooms, 3 Professional rooms (separate entrance) garage and small garden. Rent £70 p.a. Premium—12 years purchase—No 1090

**NORTH EAST COAST**—Old-established mixed Panel and Private PRACTICE. Cash receipts approximately £2,100 p.a. Panel 2,140. Appointment and Clubs £400 p.a. Good house 2 reception 3 bedrooms, 3 Professional rooms, garage and small garden. Price £400. Premium—2 years' purchase—No 1094

**MANCHESTER**—Old-established mixed-class PRACTICE. Cash receipts last year £1,222. Panel 600. Score. Good house 2 reception 5 bedrooms. Rent £65 p.a. Premium—11 years purchase—No 1009

**NUDDERSFIELD**—Well-established mixed class PRACTICE near large town. Average cash receipts £1 175 p.a. Panel 1 121. Good house 2 reception 4 bedrooms, 3 Professional rooms, garage and garden. Premium—best offer—No 1085

**LANCASHIRE**—Panel and Private PRACTICE. Cash receipts last year £1 010. Panel 1 300. Good detached house 2 reception 4 bedrooms, Professional rooms garage and garden. Rent £60 p.a. Premium—11 years purchase—No 1099

**YORKSHIRE (W.R.)**—Very old-established Mixed Panel and Private PRACTICE. Cash receipts £1 400 p.a. Panel 900. Scope. Good detached house 2 reception 4 bedrooms. Professional rooms, garage and garden. Premium—11 years purchase, or rear offer—No 1060

**MANCHESTER**—Well-established mixed-class PRACTICE. Cash receipts £1 600 p.a. Panel 1 600. Good surgery premises to rent at £52 p.a. Purchaser can choose own residence. Premium—14 years purchase. Vendor retiring—No 1079

**SCOTLAND**—FIFESHIRE—Old-established PRACTICE in small town. Cash receipts £800 p.a. Panel 800. Good house 2 reception 4 bedrooms, 3 Professional rooms (separate entrance), electric light, garage and good garden. Freehold. All kinds of sport. Premium—Practice and house—£2,500—No 1096

**WORCESTERSHIRE**—Very old-established Country PRACTICE in beautiful district. Cash receipts £1,000 p.a. Panel 400 and appointments £60 p.a. Nearest station 5 miles. Attractive house 3 reception, 5-6 bedrooms, electric light, garage and large garden. Good sport. Premium—Practice—£1,000—No 1097

**NORTH WALES SEASIDE RESORT**—PARTNERSHIP (at preliminary Agreement) in good-class PRACTICE. Cash receipts last year £400 and appointments £600 p.a. Income from about 100 good degrees and 100 assistants. Probable appointment to local Hospital. Salary £400 p.a. plus £0.10 car allowance and rooms over 1000 p.a. Premium—12 years purchase. Increase to 1 share later—No 1096

**LANCS TOWN**—PARTNERSHIP in old-established mixed-class PRACTICE. Cash receipts £1 400 p.a. Panel 3 600. Good house, 2 reception, 4 bedrooms, garage and small garden. To rent. Premium—2 1/2 share (about £1 600 gross)—No 1073

**MANCHESTER**—Sound old-established mixed Panel and Private PRACTICE. Cash receipts last year £1 200. Panel 2,240. Good house 2 reception 4 bedrooms, 2 Professional rooms, small garden. Rent £40 p.a. Premium—best offer—No 1084

**NEAR BLATON**—Old-established PRACTICE in large town. Cash receipts last year £740 (increased). Panel 622. Excellent house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and good garden. Premium—Practice and house £1 700—No 59

**MANCHESTER**—MEDICAL WOMAN'S PRACTICE in pleasant suburb. Cash receipts last year £1 041. Panel 570. Good detached house 2 reception 3 bedrooms, garage and garden. Price £1 000. Premium—1 year purchase—No 1072

**CENTRAL WALES**—Very old-established unopposed Country PRACTICE. 17 years hands 13 years. Average cash receipts over £2,000 p.a. Panel returns about £600 p.a. and appointments £350 p.a. Excellent house, 2 reception 6 bedrooms 3 Professional rooms electric light, garage for 2 cars and beautiful garden. Price £1,500. Premium—Practice—£3,000—No 1065

**MIDLANDS**—MEDICAL WOMAN'S PRACTICE in large town. Average cash receipts £645 p.a. Panel 300. Score for working. Good house, 2 reception 4 bedrooms, garage and garden. Premium—best offer—No 1104

**NORTH WALES**—Good-class PRACTICE in attractive seaside resort. Cash receipts over £1,100 p.a. for last 12 years. Panel 255. Good house in excellent position with garden to rent or purchase. Social and pleasant. Premium—£1 700 or near offer. Vendor retiring—No 999

**MANCHESTER**—Well-established mixed-class PRACTICE in pleasant suburb. Cash receipts last year £1,100. Panel 600. Score. Good detached house, 5 bedrooms, 2 reception 4 bedrooms, garage and large garden. Premium—best offer—No 963

**NORTH EAST COAST**—Mixed-class PRACTICE. Cash receipts £1 100 p.a. Panel 1 100. Rent of surgery premises to rent. Premium—best offer—No 1072

**DERBYSHIRE**—Old established mixed class PRACTICE in large town. Cash receipts last year £1 100 p.a. Panel 970. Good detached house, 2 reception 6 bedrooms, garage and large garden. Premium—best offer—No 991

**SHROPSHIRE**—Old-established mixed class PRACTICE. Cash receipts last year £648. Panel 400. Modern house 2 reception 5 bedrooms, 3 Professional rooms, garage and large garden. Electric light. Rent £80 p.a. Premium—best offer—No 1086

**AUSTRALIA**—Unopposed Country PRACTICE in North-West. Income £1 400 p.a. Suite and house on rent. Premium—best offer—No 1091

**EAST COAST**—PARTNERSHIP (at preliminary Agreement) in large town and better working-class PRACTICE in large town. Cash receipts £3,300 p.a. Panel 2,600. Choice of suitable house. Premium—14 1/2 years purchase—No 1076

**DERBYSHIRE**—Increasing Private and Panel PRACTICE in large town. Cash receipts £1 100 p.a. Panel 1 100. Good detached house, 2 reception 4 bedrooms, garage and large garden. Premium—best offer—No 1057

**SOUTH COAST**—Old-established mixed-class PRACTICE in large town. Average cash receipts £1,100 p.a. Panel 600. Good detached house, 2 reception 4 bedrooms, 2 Professional rooms, garage and large garden. To rent. Premium—2 years purchase—No 1030

**YORKSHIRE (W.R.)**—Well-established mixed class PRACTICE in large town. Cash receipts £1 100 p.a. Panel 1 100. Good detached house, 2 reception 4 bedrooms, garage and large garden. Premium—best offer—No 1057

**MIDLAND HEALTH RESORT**—PARTNERSHIP (at preliminary Agreement) in good-class PRACTICE. Cash receipts last year £400 and appointments £600 p.a. Income from about 100 good degrees and 100 assistants. Probable appointment to local Hospital. Salary £400 p.a. plus £0.10 car allowance and rooms over 1000 p.a. Premium—12 years purchase. Increase to 1 share later—No 1096

**LANCS TOWN**—PARTNERSHIP in old-established mixed-class PRACTICE. Cash receipts £1 400 p.a. Panel 3 600. Good house, 2 reception, 4 bedrooms, garage and small garden. To rent. Premium—2 1/2 share (about £1 600 gross)—No 1073

**MANCHESTER**—Sound old-established mixed Panel and Private PRACTICE. Cash receipts last year £1 200. Panel 2,240. Good house 2 reception 4 bedrooms, 2 Professional rooms, small garden. Rent £40 p.a. Premium—best offer—No 1084

**ASSISTANTS WANTED—OUTDOOR—MIDLANDS, LANCAS AND YORKSHIRE**—£500 p.a. with H. and C. and INDOOR. LANCAS, YORKS, MIDLANDS and N.E. COAST—£400 p.a. with H. and C. and INDOOR. Mary W. Jones Esq. Details on request. LOCUMS ALSO REQUIRED

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# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)

(FOUNDED 1880)

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent. Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

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## FULL TERMS ON APPLICATION

### Practices and Partnerships for Disposal

### Full Particulars sent free

1 DEATH VACANCY—Prosperous Midland City—Old established PRACTICE. Net income £1,100 p.a. Panel about 600. Nice detached modern house in best residential part.

2 DEATH VACANCY—ANGLESEY COAST—PRACTICE about £900 p.a. (appointments and panel £435). House (6 bedrooms) with nice garden. Rent £60 p.a.

3 W OF ENGLAND—PRACTICE, nearly £1,200 p.a., in small favourite watering place. Panel 715. Detached house (5/6 bedrooms) garage and good garden. Rent £85 p.a. Scope. Premium two years purchase or nearest offer.

4 LONDON, E 5—Middle-class PRACTICE about £2,700 p.a. Panel 1,200. Price of surgery premises 1,200. Private residence available if needed. Good scope for panel. Premium two years purchase.

5 UNIVERSITY TOWN—PRACTICE about £1,800. Panel over 2,500. House (about 7 bedrooms), for sale also surgery premises for sale. Scope. Premium one and three quarter years purchase.

6 COUNTRY TOWN, about 50 miles from London. PARTNER required (under 30 years of age with F.R.C.S. Eng or Edin) to do Ear, Nose and Throat work in addition to general practice and some general surgery. Share worth £1,000 p.a. at two years purchase. Possibility of hospital appointment later.

7 KENT—SEASIDE TOWN—PARTNERSHIP in mixed Practice, £3,650 p.a. Panel over 2,000. Excellent modern house for sale or rent. One third or one half share at two years purchase. Must be young, experienced and well qualified.

8 LONDON, SE 20—PRACTICE, about £1,730 p.a. in suburban district (appointments returning about £400 p.a.). Panel 966. Modernized house (13 rooms), garage and garden. Price £1,200. Premium £3,500.

9 NEW ZEALAND—S ISLAND—PRACTICE in prosperous coast town. Receipts average £1,450 p.a. (appointments about £450). Choice of house. Surgery, rent 30s per week. Premium £1,250.

10 MIDDLESEX—PARTNERSHIP in steadily increasing middle class Practice, about £4,000 p.a., in residential district. Panel 1,500/1,600. House available. Premium two ninths share (about £1,000 p.a.) two years purchase.

11 EAST ANGLIA—Country PRACTICE, about £1,700 in beautiful agricultural district. Panel about 1,000. Tudor house (4 bedrooms), garage and large garden. Price about £1,025. Premium £2,800 to include drugs, etc.

12 MIDLANDS—PRACTICE in growing residential district near good town. Receipts last year, £770. Panel about 100. Attractive modern easily run house (4 bedrooms). Price £3,500. Scope. Premium one and a half years purchase.

13 S.W. OF ENGLAND—FOURTH PARTNER required in mixed country town Practice nearly £6,800 p.a. Panel 4,600. Share worth about £1,100 p.a. at two years purchase. Partner must be young and have made special study of medicine. Preliminary Assistantship.

14 LONDON W 9—PRACTICE doing between £900/£950 p.a. in residential part. Panel 50/60. Rent of maisonette (4 bedrooms etc.) £200 p.a. Scope. Premium £1,250.

15 ESSEX COAST—PARTNERSHIP in well established Practice over £1,600 p.a. in growing district. Panel

about 1,000. Detached house (3 bedrooms) with garage and garden. Price £1,450. Yachting, sea fishing, etc. Decided scope. Premium one half share, £1,600.

16 W CROYDON—Cish and Panel PRACTICE. Receipts last year, £680. Panel 400 and club. Rent of house, £104 p.a. Premium £850 or very near offer.

17 LONDON W—Middle class PRACTICE, £600 p.a. in nice suburb. Panel 267. House (5 bedrooms). Price £1,300. Good scope. Premium one and a half years purchase.

18 EASTERN COUNTIES—PRACTICE, about £2,500 p.a. in progressive market town. Panel 1,500. Centrally situated house (7 bedrooms), garage and garden. Rent £68 p.a. Well equipped hospital. Ample scope. Premium two years purchase.

19 DEATH VACANCY—S WALES—Country PRACTICE averaging about £760 p.a. Panel 360. House (5 bedrooms etc.) large garage and garden, for sale or rent. 20 SURREY—PRACTICE in new developing district doing at rate of nearly £700 p.a., appointment, worth £50, and increasing. Panel 163. Well situated house (3 bedrooms and professional accommodation). Price about £1,650. Ample scope. Premium £400.

21 LONDON N W 8—Branch PRACTICE. Receipts about £220. Premises in residential flats. Rent £150 p.a. Scope. Premium £300.

22 S WALES—SEASIDE RESORT—PRACTICE averaging £800 p.a. Panel 234. Visits 5/ to 10/6. Corner house for sale or rent. Premium two years purchase.

23 NEW ZEALAND—AUCKLAND PROVINCE—PRACTICE of £750 p.a. in busy farming district. Seven roomed house with grounds of two acres. Premium house and practice £1,100.

24 HOME COUNTY—PARTNERSHIP in sound Practice about £8,300 in progressive town. Panel 1,650. House (6 bedrooms) for sale or rent. Premium one fourth share, £4,250. Smaller share considered. Purchaser should be able to do major surgery.

25 MIDLANDS—Inland Watering Place—THIRD PARTNER required in middle class Practice about £3,800 p.a. Panel about 1,300. Seven twenty fourths share at first at two years purchase. Short Assistantship.

26 SURREY—Increasing middle and working class PRACTICE doing about £1,500 in thickly populated suburban district. Panel about 800. Small house with garage. Price £800 or rent £78 p.a. Scope. Premium £2,500 to include fittings furniture drugs, etc.

27 WORCESTERSHIRE—Country, PRACTICE £800 p.a. in very beautiful district. Exceptionally attractive house (5/6 bedrooms), in about two acres grounds, for sale. Premium £1,500.

28 SCOTLAND—FIFESHIRE—PRACTICE nearly £800 p.a., in small town. Panel about 800. House (6 bedrooms) garage and good sized garden. Shooting, fishing, etc. available. Premium house and practice £2,500.

29 SOUTH AFRICA—Old established PRACTICE, averaging £3,000 p.a., near Capetown. House to rent. Cottage hospital. Scope for surgery. Premium £2,500 to include most up to date X ray apparatus, etc., etc.

30 MIDLANDS—PARTNERSHIP in Practice about £2,600 p.a. in small town. Two fifths share at two years purchase after short Assistantship.



# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1880)

Tele Address  
Triform Westcent—London

TAVISTOCK HOUSE SOUTH  
TAVISTOCK SQUARE, W C 1

Telephone Euston 1644  
1645

## Practices and Partnerships for Disposal (continued)

31 W OF ENGLAND—Old-established middle class PRACTICE in good town Receipts 1937 £1450 Panel 500 Visits 5/ to £1 ls plus medicine Very convenient detached non basement house (7 bedrooms etc) to rent Premium one and a half years purchase or near offer

32 PRIVATE MENTAL HOME for both Sexes—Cash receipts average £3900 p.a. Premium for licence and goodwill freehold property and furniture £7000 Further details on request

33 S MIDLANDS—PARTNERSHIP in Practice nearly £2400 p.a. in county town Panel about 2000 House could be obtained Premium two-fifths share one and three quarter years purchase or near offer (Short Assistantship)

34 SURREY—PRACTICE doing about £900 in growing neighbourhood Panel 650 increasing Detached house (3 bedrooms) nice garden Rent 35/ weekly Net rent of branch 12/6 Premium £1500 or offer

35 LONDON SE—Suburban PRACTICE Receipts 1937 £780 Panel 350 Detached house (7 bedrooms etc.) small garden no garage Price leasehold £700 Scope. Premium one and a half years purchase

36 MIDDLESEX—Increasing PRACTICE doing at rate of £400 in Harrow Panel 150 Small modern detached house Rent £50 p.a. Premium £500

37 LONDON SE—PRACTICE doing at rate of £770 p.a. in thickly populated district Panel 670 Small house (3 bedrooms) Rent £80 p.a. Branch surgery £40 p.a. Premium £1150 to include drugs etc

38 NE COAST—Old established and easily worked middle and better working-class PRACTICE over £1150 p.a. in seaport town No panel Private residence for sale Good scope Premium £800 to include furnishings and fittings of consulting rooms etc

39 LONDON W9—PRACTICE doing about £1600 Panel 1700 Semi detached house (4 bedrooms etc.) no garage or garden to rent Premium £3250

40 S OF ENGLAND—First rate Residential Town—Good-class non-dispensing PRACTICE about £1200 p.a. Consultations and visits 10/6 sometimes 7/ No midwifery Good house (6 bedrooms) in best part Price £1,500 Good scope Premium two years purchase Suitable to a physician

41 SURREY—PARTNERSHIP in well established and rapidly growing middle-class Practice doing about £3750 in developing residential neighbourhood Panel 750 Visits 5/ to 10/6 House (3 bedrooms) garage and small garden Price £1,250 One fourth share at first at two years purchase

42 DEVON AND CORNWALL BORDER—Very old-established unopposed and steadily increasing country PRACTICE £1,325 p.a. Panel 413 Visits 5/ to 15/6 medicine extra Very nice detached house (6 bedrooms 2 dressing rooms etc) garages and garden about one acre with fine orchard for sale Ample scope for increase Ill health cause of sale Reasonable premium accepted for quick sale

43 SE COAST—PARTNERSHIP in old established middle and working-class Practice in growing resort Receipts 1937 £4350 Panel about 5000 House (3 bedrooms) garage etc to rent at £120 p.a. Premium one third share two years purchase

44 SEASIDE TOWN WITHIN HOUR OF LONDON—Very old-established PRACTICE about £625 p.a. Panel about 300 Nice detached house (3 bedrooms) large garage and garden for sale or rent Good scope Premium £1000

45 W OF ENGLAND—PARTNERSHIP in non dispensing PRACTICE of £1800 in first rate residential town Panel 2000 Suitable flat available Premium four ninth's share two years purchase

46 S OF ENGLAND—Well established SANATORIUM for the Open Air Treatment Receipts per year £2400 Premium £1000 to include furniture etc Further details on application

47 N MIDLANDS—PARTNERSHIP in steadily increasing middle-class Practice averaging £2500 p.a. in county town Panel 900 House with 3 bedrooms garage and good garden to rent One fifth or one fourth share at two years purchase

48 EASTERN COUNTIES—PARTNERSHIP in Practice over £2600 in very pleasant agricultural district Moderate panel Pleasantly situated House Rent £160 p.a. or lease Extra grass land available Good scope for increase by young energetic man Premium one half share two years purchase

49 N WALES—PARTNERSHIP in Practice about £2400 p.a. in industrial district Panel 190 House (3 bedrooms) garage and garden Welsh not necessary but an asset Premium one half share to include remainder of lease £2500

50 MIDLANDS—PRACTICE in good town easy access to London Earnings average £2800 Panel 1900 Large house with garage and garden Rent £10 p.a. Vacancy for a physician on staff of local hospital also scope of surgery and gynaecology Premium two years purchase

51 EAST ANGLIA—PARTNERSHIP in Practice over £5500 in first rate country town Panel nearly 1500 Incoming partner should preferably be graduate of Oxford or Cambridge and must have had surgical training and ability to do surgical work on county hospital

52 SW ENGLAND—Ear Nose and Throat PRACTICE in large town Cash receipts over £3000 p.a. Fees £2250 Old Good house containing 12 rooms with garage and garden Price £2500 Scope Premium £2000 Purchaser must be experienced and possess the FRCS or D.L.O.

53 EASTERN COUNTIES—PARTNERSHIP in Practice over £5000 p.a. in county town Panel over 5000 Main surgery premises (4 bedrooms etc) garage and garden to rent Premium one fifth share two years purchase Further share in seven years Short As sur f p

Purchasers can raise additional capital for the purchase of approved practices or shares  
Particulars will be forwarded on application.

## RELIABLE LOCUMS AND ASSISTANTS ARE URGENTLY REQUIRED

All communications to be addressed to The Manager

Manager  
W M SCOTCH

SCOTTISH BRANCH, 21, Alva Street, Edinburgh, 2

## FOR DISPOSAL

A EDINBURGH—Old established PRACTICE Receipts averaging £1000 Panel 805 Suitable house Price £1,500 Premium practice two years purchase

B N OF SCOTLAND—Old established country PRACTICE in beautiful district Receipts £1,000 Attractive and commodious house for sale Premium practice and house £2850

C N OF SCOTLAND—Old-established country

PRACTICE in beautiful district Receipts average £1000 Excellent house to rent Premium £1600

D EASY DISTANCE to GLASGOW and EDINBURGH—PRACTICE nearly £900 p.a. in town House (6 bedrooms) garage and garden Premium practice and house £2,000

E EDINBURGH—Small PRACTICE Receipts approx £400 Suitable house to rent Modern premises

For further details apply The Manager 21 Alva Street Edinburgh

Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed



# BOVRIL MEDICAL AGENCY, LTD.

ALDINE HOUSE,

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Telephone TEMPLE BAR 1616 (3 Lines)

Chairman and Managing Director, Dr J FIELD HALL

The maximum commission payable on the sale of any Practice or Partnership in Great Britain placed exclusively in the hands of this Agency is £50 (fifty pounds), which sum covers goodwill, drugs, surgery fittings, fixtures and furniture, instruments and book debts, but not house property. Schedule of Terms will be forwarded on application.

Accountancy and legal services furnished by the Agency where desired at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 LONDON EAST—Very old established chiefly working-class PRACTICE producing over £1 200 p.a. including panel of 1 300. Very low expenses. Car not necessary. Rent of surgery premises £15 p.a. Premium 2 years purchase or near offer. Ill health reason for sale.
- 2 WEST OF ENGLAND—NEAR COAST—PARTNERSHIP—A share worth about £800 p.a. (with increase 110%) is offered in good class old established Practice producing over £8 000 p.a. Panel of about 2 000. Suitable house available. Incoming partner should be experienced 25 35 and married or engaged. Premium 2 years purchase. Cottage hospital.
- 3 WITHIN 6 MILES OF CENTRAL LONDON—Chiefly mixed class PRACTICE in prosperous residential district largely developed within the last few years. Average gross cash receipts £3 382 p.a. (last year £3 419). Panel over 2 200. Fees 2 6 to 10 6. Very good house with modern conveniences with 2 reception 4 bedrooms etc. Garden. Garage. Freehold for sale or rental. Premium 2 years purchase. Suitable for 2 friends in partnership.
- 4 LONDON SOUTH EAST—Old established mixed-class PRACTICE for sale owing to vendor's ill health. Gross cash receipts for past year £761 including panel of 350. Easily worked and capable of increase. Detached house with 2 reception 6 bedrooms etc. Price freehold £1 000 p.a. part on mortgage. Premium 11 years purchase or near offer.
- 5 SURREY—BEAUTIFUL COUNTRY DISTRICT NEAR GOOD TOWN—Well established unopposed mixed-class PRACTICE increasing and producing for last year £600. Panel of 776. One appointment worth £0 p.a. Good house with 2 reception 7 bedrooms etc. Garage. Three quarters of an acre of garden. Electric light. Gas. Price freehold £2 000. Sport of all kinds. Premium 2 years purchase. Vendor retiring.
- 6 MIDDLESEX—DEVELOPING DISTRICT—PARTNERSHIP AFTER PRELIMINARY ASSISTANTSHIP—A share worth about £903 £1 000 p.a. is offered in mainly good-class Practice averaging £4 000 p.a. Panel of 1 500. Fees 3 6 upwards. Suitable house available. Premium 2 years purchase. Incoming partner must be experienced and good worker.
- 7 Lincs—MARKET TOWN—Very old established middle and working-class PRACTICE producing about £2 000 p.a. (increasing). Panel of about 1 400 and appointments worth about £100 p.a. Fees 3 upwards. Good house with 2 reception 7 bedrooms etc. Electric light. Gas. Garden. Garage. Price freehold £1 500. Premium 11 years purchase.
- 8 NORTH WALES—SEASIDE RESORT—PARTNERSHIP AFTER PRELIMINARY ASSISTANTSHIP—A QUARTER SHARE (with increase up to one half eventually) is offered in very good class non dispensing Practice averaging for past 3 years £3 660 p.a. (first year over £4 000). Panel of 1 050. Premium 2 years purchase. Sport of all kinds. Incoming partner should be experienced and have held hospital appointments.
- 9 SOUTH AFRICA—NEAR CAPE TOWN IN VERY PLEASANT DISTRICT—Well established PRACTICE averaging about £3 000 p.a. Cottage hospital and scope for surgery. House on rental. Premium £2 500 to include up to date X-ray apparatus etc.
- 10 WESTERN AUSTRALIA—Very old established PRACTICE in good pastoralist and wheat growing district. Average income £1 200 p.a. including appointments worth about £126 p.a. House rented at £72 p.a. Premium (to include drugs and furniture valued at £175) £900 p.a. part down and balance by instalments.
- 11 SOUTH AFRICA—LADY DOCTOR'S PRACTICE IN GOOD TOWN—Established 7 years and averaging £750 p.a. Rent of consulting rooms £1 10 1 month. Premium £500 cash to include furniture.
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- 18 NORTH WALES—SEASIDE RESORT—Old established PRACTICE averaging over £1 200 for many years including selected panel of 425. Suitable house on rental or purchase. Premium £1 700 or near offer. Vendor going abroad.
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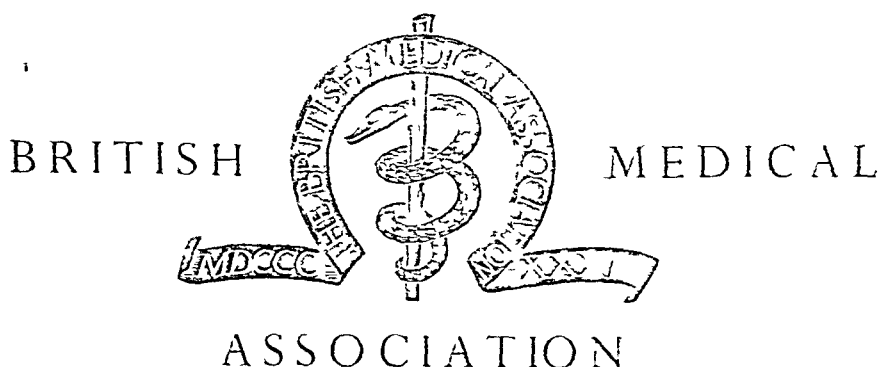
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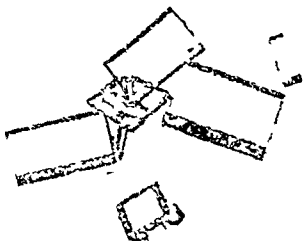
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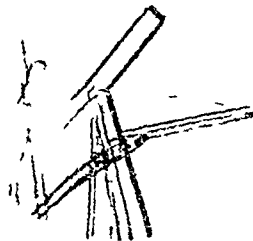
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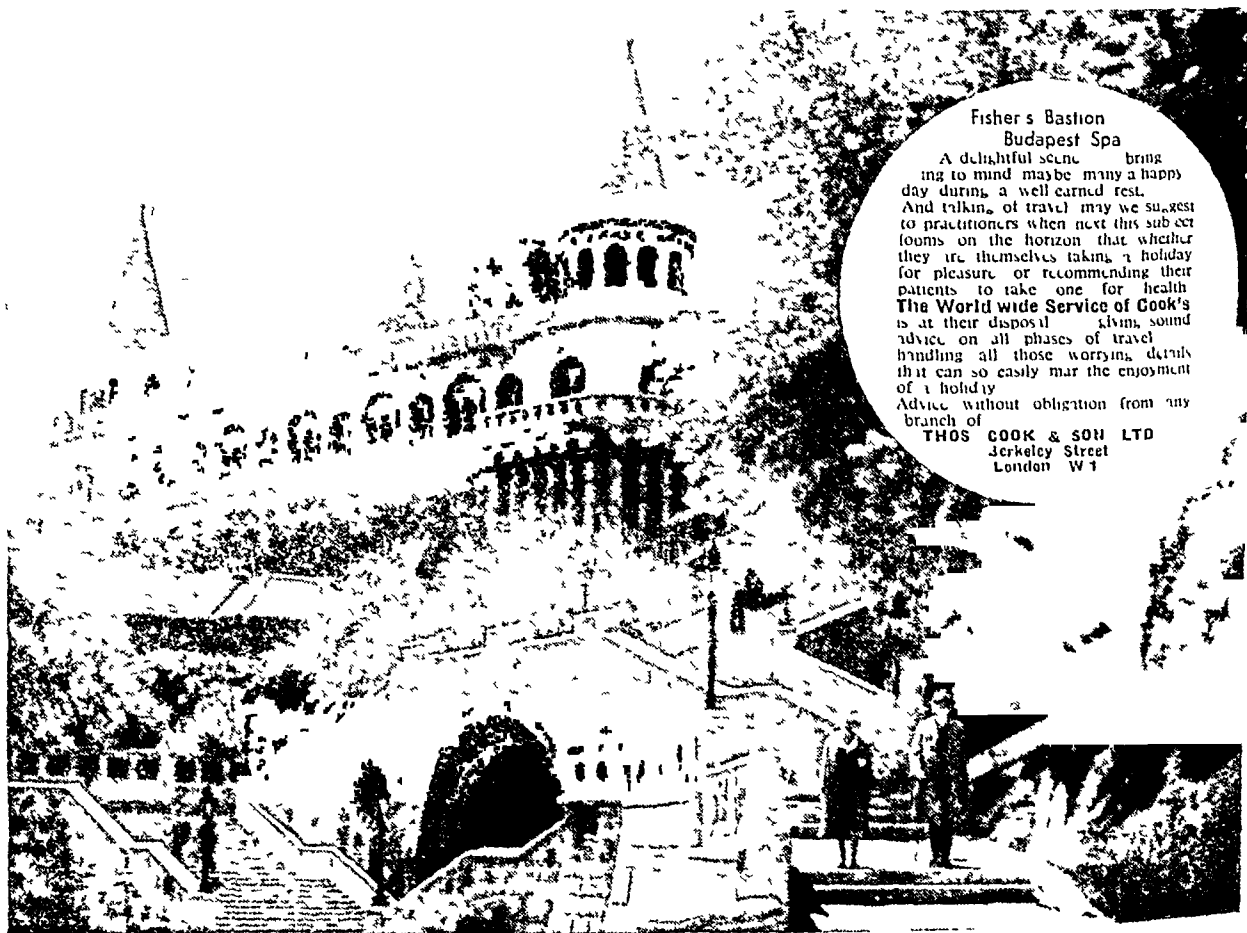
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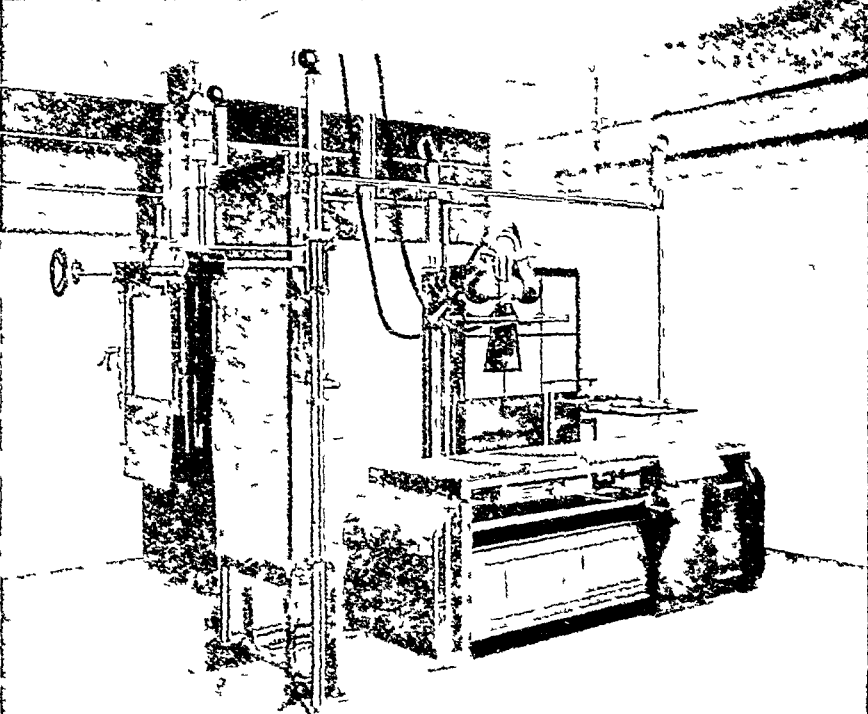
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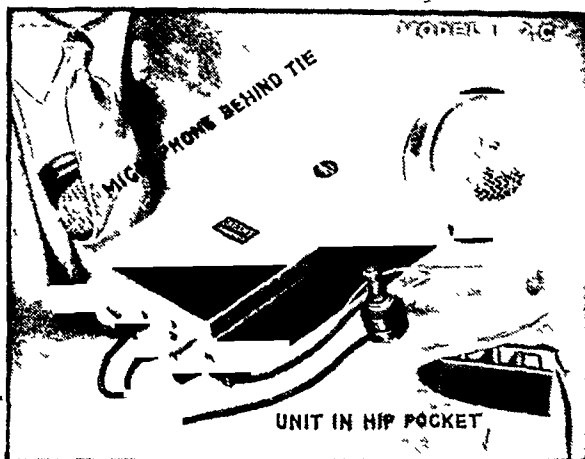
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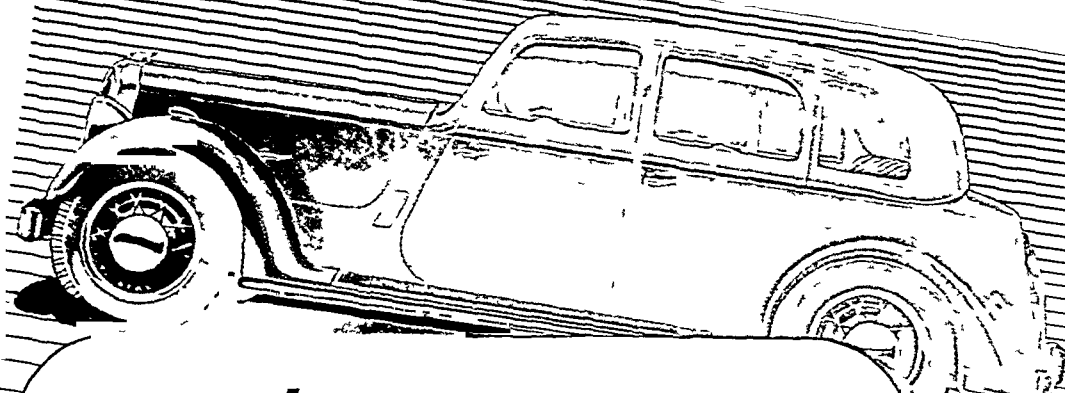
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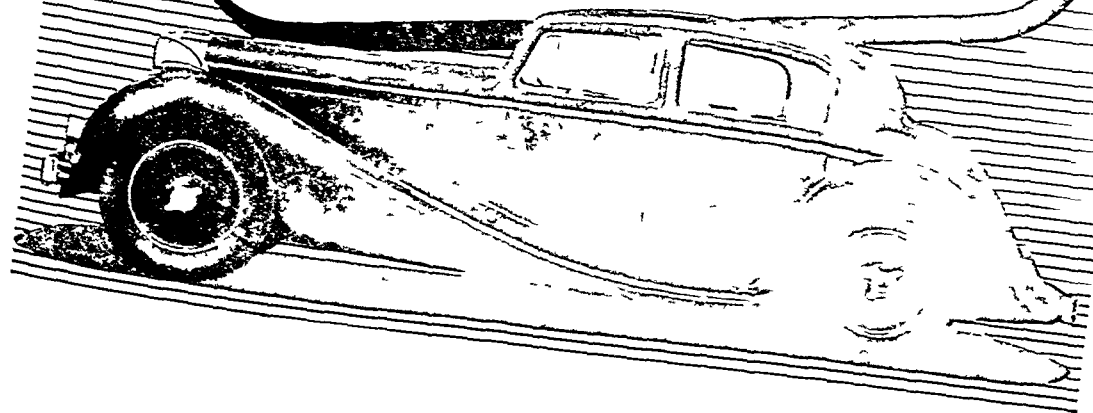
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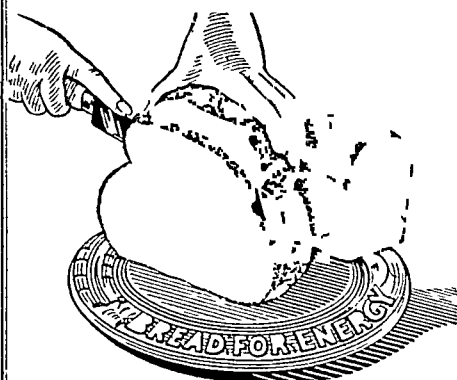
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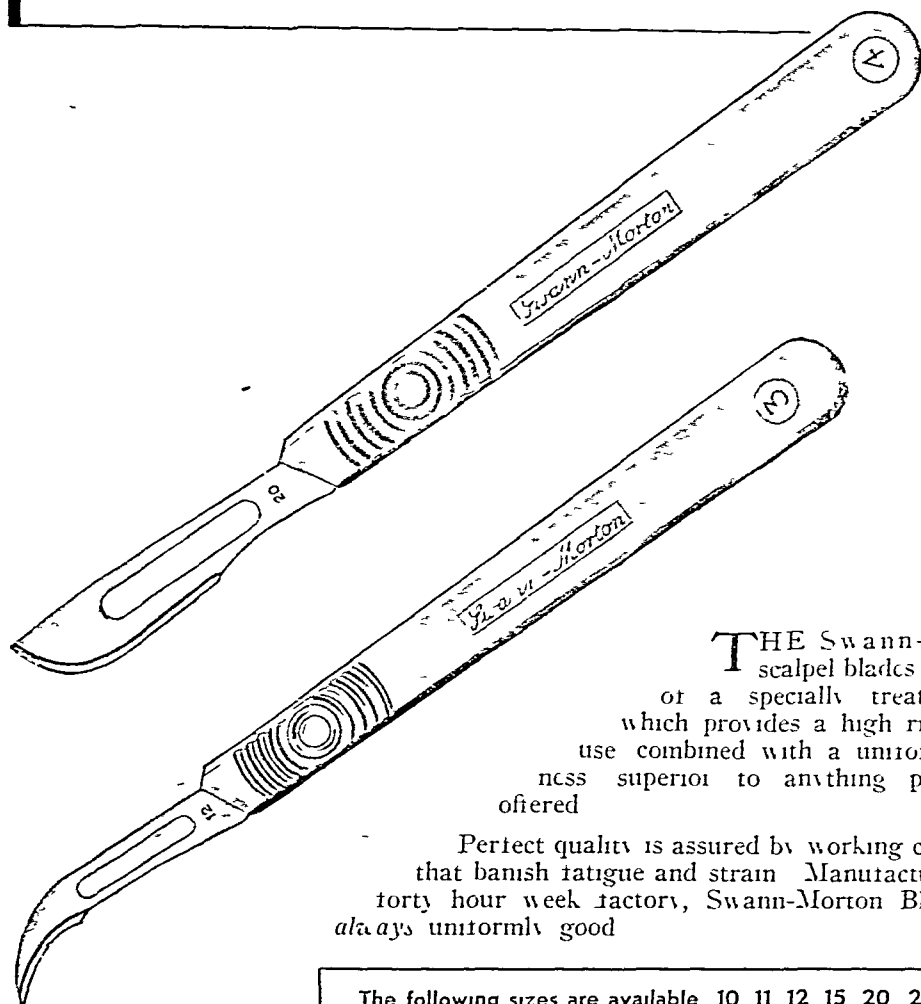
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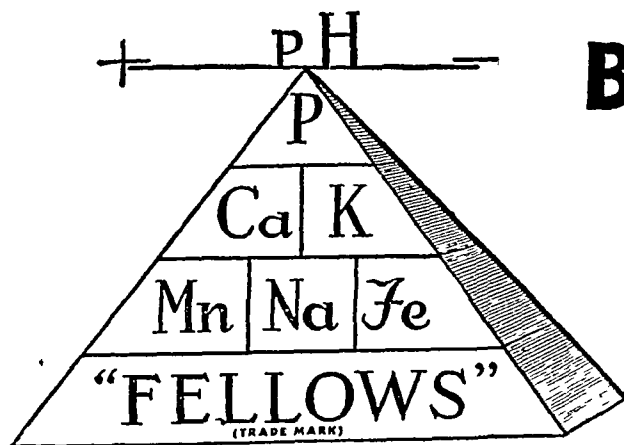
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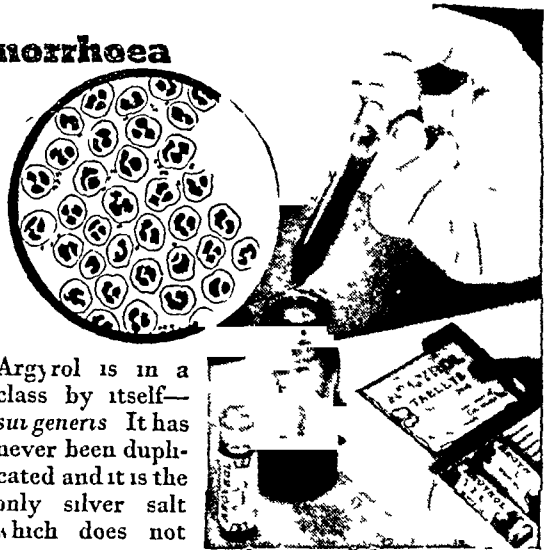
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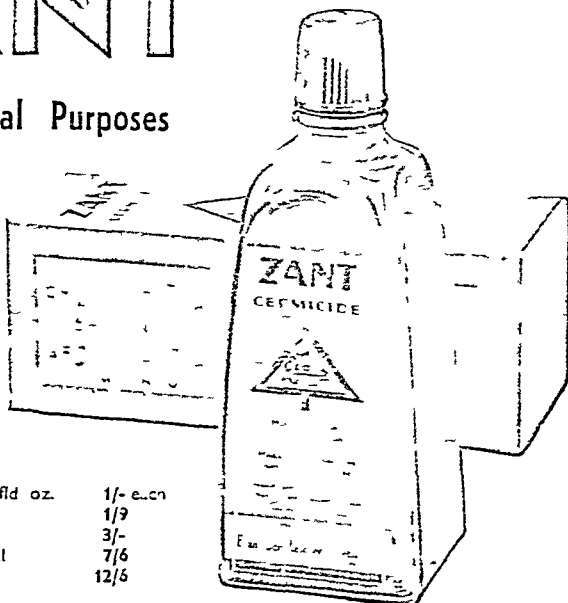
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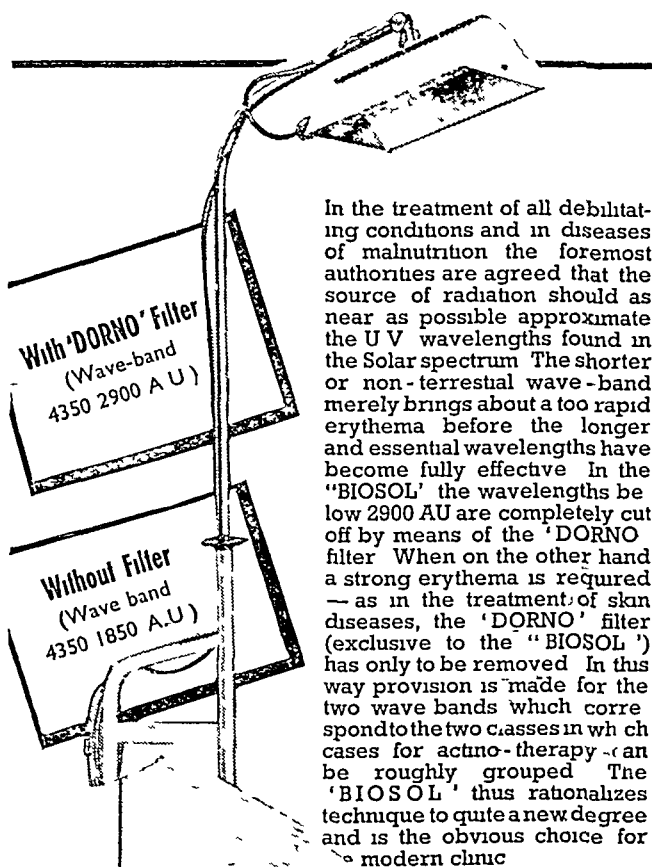
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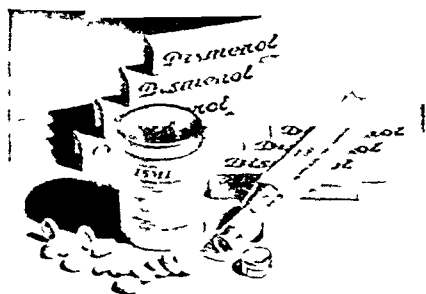
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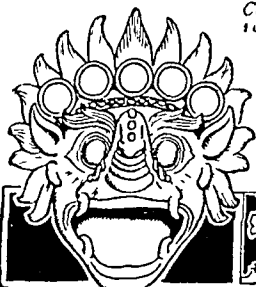
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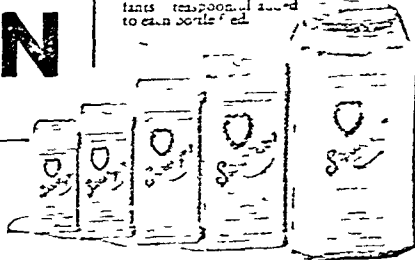
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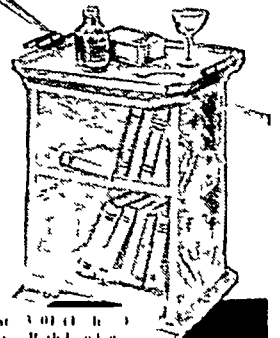
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## ON THE ORIGIN OF CANCER\*

BY

W. CRAMER, Ph.D., D.Sc., M.R.C.S., L.R.C.P.

(From the Imperial Cancer Research Fund)

Why does a patient get cancer? That is a question which summarizes the problem of cancer and which must have often occurred to you when a patient presents himself or herself apparently in good health except for some obscure and not necessarily painful symptoms and on examination a malignant growth is found sometimes in an early stage but possibly already in an advanced stage although the patient may have presented himself as soon as he noticed that something was wrong. It is this insidious onset of cancer—striking a patient like a bolt from the blue—which has given the disease the air of a grim mystery.

### Interpretation of Age Incidence

If I were asked in what respect the experimental investigation of cancer of the last fifteen years has most profoundly altered our outlook on the cancer problem I would say it lies in the correct interpretation of the age incidence. The frequency of cancer increases with increasing rapidity as age advances. This can be readily seen from the following table which gives the mortality rate per million people from cancer of all sites in decennial age groups in England and Wales.

Age Groups	0-	15-	25-	35-	45-	55-	65-	75-
Cancer Mortality Rate	52	41	140	596	1,593	7,390	21,711	127,077

The death rate from cancer increases in almost geometrical progression. I know of no other disease which exhibits a similar phenomenon. This remarkable feature of the disease must therefore have a fundamental significance.

Formerly the insidious onset of cancer—the bolt from the blue—led us to believe that the origin of cancer begins with the first appearance of a malignant cell. This as will be discussed presently is due to an intracellular change by which a normal cell becomes transformed into a malignant one and our attention was riveted to the investigation of this change as the one and only problem concerned in the aetiology of cancer. The fact that cancer occurs much more frequently in old people than in young or even middle aged people was explained formerly by the assumption that the senility of the tissue is the predisposing factor in the origin of cancer. It was believed that in such senile tissue cancer arises suddenly. But the experimental investigation of cancer has shown clearly that it can be induced in a young or middle aged

organism as readily as it not more readily than in an old one and further that when cancer has arisen the malignant cells soon grow in a young organism as readily as it not more readily than in an old one. This rules out senility as a direct aetiological factor in cancer.

### Carcinogenic Agencies

When it became possible to induce cancer experimentally it was found that there are a great many different agencies capable of inducing cancer in such a tissue as the skin. Chemical substances such as tar or the pure organic substances synthesized by Kernoway and Cook, physical agencies such as light rays and radium rays, heat and even gross parasites.

All carcinogenic agents have this in common that they induce cancer only after a lapse of time occupying a considerable fraction of the normal span of life characteristic for each species and furthermore that this period of induction is much more prolonged with a weak carcinogenic agent than with a very active one. We have learned further that during the prolonged action of these carcinogenic agents the tissue on which they act undergoes pathological changes and that cancer arises within this altered tissue. Now in man the bulk of cancer patients belong to the last half—even the last third—of the normal span of life. We can therefore conclude that in man cancer arises as the result of carcinogenic stimuli acting over a prolonged period occupying a considerable fraction of the span of life and it is so it follows further that cancer does not appear as a bolt from the blue in a healthy tissue but that as a result of its prolonged action of a carcinogenic agent the tissue or organ on which it acts undergoes pathological changes before cancer develops. That the preceding existence of such precancerous conditions was not generally—and still is not generally—recognized is due partly to the fact that the need not be sufficiently severe to manifest themselves as a definite disease especially when they develop in tissues or organs which are not readily accessible to clinical examination. They have however long been recognized in the skin where the whole course of carcinogenesis is visible. The term "precancerous condition" was in fact coined forty years ago by dermatologists as the empirical result of clinical observations.

### Two Phases of Development

We see then that the development of cancer whether it arises spontaneously or whether it is induced experimentally presents two phases. The first phase is a long

preliminary one which we may call "*the origin of cancer*" This extends over a long period of years amounting to a considerable fraction of the span of life—hence the characteristic age incidence of cancer—and it culminates in the sudden transformation of a few normal cells into malignant ones. During that phase in a more or less extensive though localized area of tissue a pathological condition develops, characterized by increased cellular proliferation in which subsequently cancer arises in a single cell or a small group of cells. The development of this precancerous condition depends upon the action from without on the cells of a given tissue of agencies of the most diverse nature—agencies which are called carcinogenic agencies. Carcinogenic agents may be substances foreign to the body acting locally where they are applied, they may be abnormal metabolites acting locally, or they may be formed in the body as normal metabolites—for example, oestrone, a hormone formed by the ovary but which produces its carcinogenic effect not on the cells where it is formed but on the cells of another organ remote from its origin—the mamma. But I emphasize the statement that during this preliminary phase the cells are being subjected to agencies acting on them from without.

Now the scene changes from the environment of the cell to its interior. When a cell within a precancerous area undergoes the transformation into a malignant cell a new race of cells arises. A change occurs *within* the cell which confers upon it the biological behaviour by which we recognize malignant cells and by which malignant cells kill the organism in which they have arisen. This biological behaviour characteristic of a malignant cell is its autonomous growth.

We pass now to the *second phase* of our problem—the *growth of cancer*, and I wish to emphasize that there is an essential and fundamental distinction underlying the mental concept of these two phases as two distinct and separate problems. The problem now is: What is the nature of the difference between the normal cell and the cancer cell? This difference does not consist, as is sometimes stated, in the acquisition of the property of growth. For the normal cells of the epithelium of the skin or of the intestine, of the lymphatic tissues, of the blood-forming tissues, and particularly of the cells of the embryo, all have this power to grow—that is, to form new cells. But this normal growth is subject to inhibitory and stimulating influences which regulate it in such a way as to ensure the well-being of the whole organism. The cancer cells are no longer subject to these stimulations and inhibitions. They are a new race of cells. They grow—that is, they multiply—sometimes rapidly, but sometimes very slowly, but always without any regard to the physiological needs of the tissue in which they have arisen and without regard to the physiological boundaries imposed after the growth of normal cells. By their destructive autonomous growth in a vital organ they kill the organism in which they have arisen. When a malignant tumour has appeared, either spontaneously or by experimental procedures, the cells of this tumour will continue to grow and form new tumours when placed into other perfectly normal animals. They can be kept growing *ad infinitum* by successive transplantations into normal animals in a perfectly normal environment and without any further application of the carcinogenic substances which have brought about their appearance.

Summarizing these experimental facts once more we can transform a normal cell into a malignant cell by acting on it from *without* the cell, this phase represents

*the origin of cancer*. But when this transformation has once occurred the malignant cell pursues its course in the absence of any agent acting on it from without. We are faced now with the problem of the *growth of cancer*. Whatever it is that drives the cancer cell on in its autonomous growth must reside within that cell, and that intracellular change is irreversible. The investigation of this second phase of the cancer problem is clearly much more difficult than that of the first phase. For our concern is now with subtle problems of cellular pathology, where even a rudimentary knowledge of cellular physiology is lacking. Essentially our task in investigating the growth of cancer is to search for differences between normal and malignant cells.

But it is not sufficient to discover differences, for these might be not the cause but the effect of the abnormal behaviour of malignant cells. It is necessary to establish differences which can account for the characteristic biological behaviour of malignant cells.

### Growth of Cancer Two Conceptions

Numerous attempts have been made to explain the growth of cancer by highly speculative conceptions. I shall content myself with mentioning very briefly two conceptions which are founded on a basis of experimentally established facts—namely

1 That the intracellular change is represented by an alteration in the metabolism of the cell in such a way that it enables the cancer cell to obtain the energy necessary to maintain its life by a process of fermentation—that is, a process which does not require the abundant supply of oxygen required for the maintenance of life of the normal cell.

2 That the intracellular change is due to the presence of virus.

These two conceptions must not be regarded as mutually exclusive theories, but as working hypotheses having as their object to elucidate from different angles the autonomous growth of the malignant cell. Thus it is by no means unlikely that the presence of a virus within a cell might alter the metabolism of a cell, and it has in fact been found by Crabtree that in certain virus diseases, such as fowl-pox and vaccinia, in which there is a temporary cellular proliferation, the metabolism is similar to that characteristic of malignant growths. As this lecture is concerned with the origin of cancer, I must refrain from a discussion of these two conceptions. A detailed exposition of the conception of a virus being responsible for the growth of malignant cells has been given in recent years in papers by Peyton Rous and by W. E. Gyac. But the conceptions which I mentioned are working hypotheses, and if they are to be judged, as working hypotheses should be judged, by their results, they have been most fruitful.

What interests us from the point of view of the origin of cancer is the question how these conceptions are to be reconciled with the long preliminary phase necessary for the development of malignancy. That a fundamental and permanent change in the metabolism of a cell requires a long period of adaptation to abnormal conditions can be expected *a priori*. Less obvious is the explanation why a long preliminary period is necessary to enable a virus to enter a cell and transform it into a malignant one.

### The Virus Hypothesis

The conception of a virus being responsible for the autonomous growth of cancer has met in the past with a strong opposition. This is due mainly to the fact that

most of the viruses with which we are familiar are the causes of highly contagious diseases such as small pox, measles and foot and mouth disease. But it is not an essential feature of a virus infection to be contagious any more than it is an essential feature of a bacterial infection. A virus is by definition a particulate pathogenic agent capable of multiplying foreign to the organism and of a uniform size which is below the limit of microscopic vision but above that of the largest organic molecule known to exist in the normal cell.

It is clear that the conception of a virus in the cancer cell cannot alter the clinical features of the disease but must adapt itself to them. Cancer is not a contagious disease. Even the towel tumours in which a virus can be demonstrated are not contagious. Assuming then for the sake of argument that the growth of all malignant cells is due to a virus, how could we correlate this with the established facts concerning the aetiology of cancer such as the existence of a long preliminary phase or the characteristic age incidence which is the statistical expression of this preliminary phase?

If we produce a tumour in the skin of a mouse by dibenzanthracene or in the mamma of a mouse by painting the skin with a chlorotorm solution of oestrin we clearly do not introduce thereby a virus. The virus must therefore have been pre-existent in the animal in a non-pathogenic condition. And since such tumours can be induced in a high percentage of animals these viruses must be frequently present in a non-pathogenic condition. The treatment with dibenzanthracene or oestrone respectively would then appear to play the part of so altering the cells that the virus becomes pathogenic for them. This is by no means an extravagant assumption to make for even with bacterial diseases there are well known examples where either bacteria or their spores remain non-pathogenic but become pathogenic when the tissues are subjected to abnormal conditions. The point I wish to make here is that even if the growth of malignant cells were due to a virus the prolonged preliminary phase in which the tissue undergoes a pathological alteration—the precancerous condition—would still remain a determining factor in the aetiology of cancer.

Quite recently Dr Peyton Rous has published an account of experiments which illustrate this relationship in a very striking manner. There exists in rabbits an infective papilloma of the skin—which is due to a virus—the so-called Shope papilloma. This papilloma can be transmitted to other rabbits by introducing cell free material obtained from such a papilloma into the scarified skin of a normal rabbit. After two weeks a papilloma begins to appear which may grow for several weeks and eventually regress or it may continue to grow and form large masses. After an interval of many months a malignant tumour sometimes develops underneath such a papilloma but no virus can be obtained from such a malignant growth although it is present in the papilloma. Rous subjected the ears of rabbits to tarring lasting over periods varying from two to four months. As a result a number of warts appeared on the skin. If tarring is now discontinued the warts as a rule disappear gradually and in order to produce a carcinoma in a rabbit tarring has to be carried on for eighteen months or more. But when Rous after two to four months tarring introduced into the tarred rabbits the virus from the Shope papilloma by intravenous injection the tar warts after an interval of three weeks—the incubation period of the virus—began to grow with explosive rapidity as if the virus had become localised in them and after one or two months true carcinomata of the skin developed in the tarred ears.

A similar experiment but with a different virus—the fibroma virus of Shope—has been carried out by Andrewes, Ahlstrom, Foulds and Gye. The fibroma virus ordinarily

produces fibroma like connective tissue swelling or subcutaneous injection into rabbits. These swellings eventually undergo spontaneous regression. But when this fibroma virus was injected intravenously into rabbits which had received previously an intramuscular injection of tar, connective tissue swellings appeared at the site of the injected tar and these swellings did not regress but grew progressively like true fibromata and in two cases growths arose which had the characters of true malignant new growths of the connective tissue.

Experiments such as these demonstrate very clearly the existence of the two phases in the aetiology of cancer: the preparatory action of the carcinogenic substance (tar) followed by the effect of the virus on the cells which had been prepared for its reception and in which the virus becomes localized.

### The Factor of Susceptibility

From the account which I have given so far it would appear that a malignant tumour develops whenever a carcinogenic agent is applied. But fortunately that is not so. I say *fortunately* because if my account was correct the incidence of cancer in man especially in people of 60 years and more would be much heavier than it actually is. The carcinogenic agents or stimuli are so numerous and various that it is difficult to see how one could avoid being exposed to them and cancer would then appear as a normal concomitant of old age like the greyness of hair or any of the other signs of old age. Fortunately the effect of carcinogenic agents is heavily conditioned by factors which reside within the organism and when we may group together under the term *susceptibility*. Ten years ago I drew attention to the significance of this factor by the following experimental observations:

If the skin of a large number of mice is subjected to a prolonged treatment with a weak carcinogenic agent, some mice will develop a skin carcinoma after about four months, others after six months, eight months, or even a year and some individuals will remain completely free from cancer. Since the differences are found while the animals are kept under identical conditions they must be due to a factor or factors of susceptibility intrinsic to the animals.

The importance of this factor has since been corroborated experimentally by another technique. In mice it is possible by prolonged inbreeding obtained by brother and sister mating to produce strains of mice in which the genetic constitution of the individuals belonging to a particular strain is very nearly the same. It is possible to breed such a strain from a cancerous ancestry; it is possible sometimes to obtain a strain of mice with a very high incidence of spontaneous cancer in one particular organ—most commonly the mamma. In such a strain only the females develop mammary cancer after they have passed a certain age. In this way strains have been obtained in which 70-80 and even 90 per cent of all the females develop spontaneously cancer of the mamma. Conversely it is possible to breed strains of mice in which the incidence of spontaneous cancer of the mamma in the female is very low and may even be zero. If from the males of such a strain are subjected to treatment with oestrogenic hormones it is possible to induce mammary cancer even in mice with the readiness with which they are reported to be free from mammary cancer in the different strains. In the same way it is possible to breed a strain of mice in which the females develop mammary cancer spontaneously the oestrogenic hormone may be completely unable to induce cancer although given over a much longer period and there is no further effect. Hence the origin of cancer is bound up with the susceptibility of the individual to the action of the carcinogenic agent.



Susceptibility is a deliberately vague term because our knowledge concerning it is as yet very incomplete. It comprises all those factors which condition the effect of the various carcinogenic agents. It may be concerned with the facility with which these agents induce the pre-cancerous condition, or again it may be concerned with the facility with which the malignant transformation sets in within such precancerous conditions. Dr E. Horning and I have shown recently, for a strain of mice with a very high incidence of mammary cancer, that the susceptibility to cancer of the mamma in this strain is due to an endocrine imbalance, particularly an imbalance between the oestrogenic hormone from the ovary and one or more hormones of the anterior lobe of the pituitary. Another important point is that an organism highly susceptible to the development of cancer in one particular tissue—the mamma—is not necessarily very susceptible to the development of cancer in a different tissue—the skin, for instance. In animals highly susceptible to mammary cancer the skin may, in fact, be resistant, and sometimes highly resistant, to the action of substances carcinogenic for the skin.

The conclusion we should draw from this line of work is that what is inherited is not cancer as a disease but a susceptibility to the development of cancer—that is to say, a tendency to respond with the development of cancer to carcinogenic influences which may be so weak as to be ineffective to the average normal organism—and, further, that this susceptibility is not a susceptibility to cancer generally, but is limited to one or at the most very few organs or tissues.

#### Remote and Proximate "Causes"

We have now completed our rapid survey of the origin and the growth of cancer.

It has been said by a distinguished physicist that problems are often found to be insoluble because they have been wrongly formulated. This is certainly true of the search for the *cause* of cancer. If I have been able to make myself clear to you, you will agree that the question, "What is the cause of cancer?" is meaningless. Does it refer to what I have called "the origin of cancer"—that is to say, the prolonged preliminary phase without which in the majority of cases cancer would not arise? Or does it refer to the growth of cancer—the sudden intracellular change which confers upon the malignant cell its power of autonomous growth and of metastasizing? They represent, as I have said before, two entirely distinct problems. If we wish to adhere to the use of the term "cause," we may distinguish them by calling the one the *remote causes*—that is, the origin of cancer (and these comprise not only the carcinogenic agencies but also the factor of susceptibility), and the other the *proximate cause*—that is, the growth of cancer. If we take as an example the skin, where the aetiology of cancer can be studied most readily, we know that cancer of the skin can be "caused" by, *inter alia*, light, x rays and radium rays, contact with tar, with certain organic hydrocarbons, and with certain lubricating oils. Here there are six different remote causes of skin cancer. They all lead up to the intracellular change, which we may assume is the same whatever the remote cause may have been, since malignant tumours produced by one carcinogenic agency, though differing *inter se*, do not essentially differ from malignant tumours produced by any of the other carcinogenic agencies. We may assume, then, that the growth of cancer of the skin is the same, no matter what the origin may have been, and, further, that the growth of cancer is the same for all organs and tissues, no matter what

the origin may have been. But we should always bear in mind the mental reservation that this unity of the proximate cause is an assumption which we can only accept so long as there is no evidence to the contrary.

We see, then, that cancer from the point of view of the proximate cause—that is, its growth—may be regarded as a single disease. But from the point of view of the remote causes—that is, its origin—cancer is a multiplicity of diseases. From this second point of view each tissue has its own specific aetiology, different from that of other tissues, and we must even go further and admit that there may be different remote causes for each tissue. I have just given an example by referring to a number of remote causes of skin cancer. My colleague, Dr Horning, and I have been able recently to bring evidence to show that cancer of the mamma can be due to—or, as I should say, has for its remote cause—an endocrine imbalance between the ovary, the pituitary gland, and possibly, also, the adrenal gland. But it does not follow that this applies to all cases of mammary cancer.

We should therefore discontinue the search for the cause of cancer, which is based on a naive and crude simplification of the problem, and substitute for it the exploration of the causation of cancer, bearing in mind always that this comprises the two separate and distinct conceptions of the origin and of the growth of cancer.

#### Experimental Analysis of Carcinogenesis

In the experimental analysis of carcinogenesis we have now reached a point where the two factors—carcinogenic stimulus and susceptibility—can be introduced into the experiment in almost quantitative doses. Their relationship can be expressed, though somewhat crudely, by a simple equation applying to two known and measurable variables, A and B, and a constant, C, where A is the carcinogenic stimulus and B the susceptibility, while the constant C represents cancer. The equation is  $A \times B = C$ .

In that equation an increase in A involves a diminution in B, and vice versa—that is to say, the aetiological importance of the factor of susceptibility increases as the strength of the carcinogenic agent or stimulus diminishes. A weak carcinogenic agent which will elicit cancer readily in a highly susceptible individual will remain ineffective in an individual with a lower susceptibility, and where the susceptibility is very low even a strong carcinogenic stimulus may be ineffective. Moreover, when cancer develops in response to a carcinogenic stimulus applied to individuals of different levels of susceptibility it will develop more rapidly in those with a low susceptibility than in those with a high susceptibility.

Under experimental conditions we can therefore predict whether an animal will or will not get cancer of the mamma by controlling the two factors—carcinogenic stimulus and susceptibility. The carcinogenic stimulus is a pure chemical substance—oestrone—which can be given in accurately measured doses, while susceptibility can be varied by using different inbred strains of mice with a known incidence of spontaneous cancer of one particular organ.

#### Applications to Cancer in Man

When we try now to answer the question with which I opened this lecture—"Why does a patient get cancer?" by transferring these findings and conclusions to man, we meet at once with the difficulty that the two factors—susceptibility and carcinogenic stimulus, which under experimental conditions were variable and known, now are variable but unknown. The equation reads now  $X \times Y = C$ .

We know that the patient has cancer and our task now is to search for shreds and patches of evidence concerning the part played by susceptibility and concerning the nature of the carcinogenic stimulus. This is clearly a difficult task. But it has to be faced if the advance in our knowledge of cancer obtained by the experimental study in animals is to lead to a control of the disease in man. That it is not an impossible task is shown by the knowledge obtained in recent years.

The part played by the factor of *susceptibility* has been made evident by the recent statistical investigations of Wasink in Holland and of Waaler in Norway on the familial incidence of cancer. I have reviewed the evidence in some detail in two recent papers and I need only summarize it here. There are certain organs—the mamma, the uterus and the prostate—in which there is a very high familial incidence which is restricted to one particular organ. The immediate female relatives of a woman with breast cancer show a remarkably high incidence of breast cancer but not of cancer in other organs nor do their male relatives show an abnormally high familial incidence. Similarly the female relatives of a woman with uterine cancer show a high incidence of uterine cancer. In such tissues as the skin or the lip there is no very clear evidence of a high familial incidence while some organs such as the stomach show a definite increase though it is much less marked than for the mamma, uterus and prostate. The extraordinary degree to which the incidence of mammary cancer is influenced by the family history is well illustrated in the accompanying diagram which represents the proportion of cancer of the mamma in the total incidence of cancer in two populations—one the general female population and the other the population of female relatives of patients with mammary cancer.

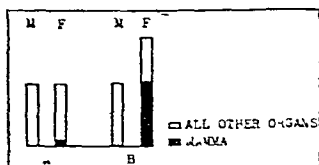


Diagram showing the comparative total cancer incidence in men and women and the share of breast cancer in the total cancer incidence in (A) the general population (Holland) and (B) the relatives of patients with breast cancer.

It is necessary to mention that even for those organs where the familial incidence is high only a proportion of the relatives—about 25 to 30 per cent.—develop cancer. Even so these findings have a very important practical bearing on the early diagnosis of cancer particularly in such organs as the mamma, uterus and prostate. Thus the existence of a history of mammary cancer in the relatives of a middle aged patient who presents herself with symptoms suggesting the possibility of a malignant growth in the mamma would in my opinion justify an immediate operation even if the diagnosis of a malignant growth has not been established beyond a doubt.

#### A Preventable Disease

The search for the stimuli and agents responsible for the incidence of cancer in man is a most difficult task. We know that stimuli and agents carcinogenic for one tissue are not necessarily carcinogenic for other organs and that even if we restrict ourselves to one organ the agents capable of eliciting cancer in that organ are numerous and diverse. Perhaps the greatest difficulty in this search is due to the conditioning influence of suscepti-

bility. As a result of this when two individuals are exposed to the same carcinogenic stimulus one may develop cancer while the other remains free from it. In spite of these difficulties we are now beginning to acquire a knowledge of the *origin of cancer* in man which will make cancer a *preventable disease*.

The recognition of cancer in man as essentially a preventable disease is in my opinion one of the most important results of scientific cancer research. It is based on the correct interpretation of the well-known characteristic age incidence of cancer in the light of the knowledge obtained by the experimental study of carcinogenesis to which I have referred earlier in this lecture—namely that the onset of cancer is not a sudden one but is always preceded by a long period of induction occupying a considerable fraction of the span of life of the species during which the tissue in which the phenomena of malignancy eventually develop undergoes definite pathological changes. I correlated these two phenomena in a B.M.A. lecture in 1925 and a further study of this relationship emphasized its importance for it meant that cancer was in principle a preventable disease. What is necessary now is an application of this knowledge to the study of cancer in man. We can now search for the origin of cancer by identifying the pathological conditions which precede the onset of cancer and their causes.

In certain tissues such as the skin, the tongue and the vulva—that is to say tissues which are readily accessible to inspection—the existence of precancerous conditions has long been recognized by clinicians although the validity of such a conception was questioned by many pathologists. In any case it was not recognized that these conditions represent special examples of a general phenomenon which is applicable to the vast bulk of the cases of cancer occurring in all organs. It is only in quite recent years when our knowledge of the origin of cancer has made rapid advances that an attempt has been made to correlate the incidence of cancer in organs not accessible to inspection with preceding disorders and diseases.

#### Clinical Correlations

A very striking example of such a relationship has been demonstrated recently. At the International Cancer Congress in Brussels in 1936 two physicians (Dr Ahlborn from the Cancer Centre in Stockholm and Dr Wasink from the Cancer Centre in Amsterdam) read two papers with the identical conclusion—namely that cancer of the mouth, pharynx and oesophagus in women is preceded with surprising frequency by a type of anaemia known as simple achlorhydric anaemia, which is associated sometimes with dysphagia and is then known as the Plummer-Vinson syndrome. This type of anaemia occurs usually in women from an early age to middle age onward. It is characterized by achlorhydria and an early loss of teeth. The nails are frequently soft and spoon shaped. In this condition the mucous membrane of the mouth, tongue and hypopharynx is pale, dry and atrophic and there are often fissures around the mouth. The facial type is said to be readily recognizable.

In Ahlborn's figures of 133 women with cancer of the buccal cavity and oesophagus ninety-nine (61 per cent.) had suffered from simple achlorhydric anaemia with or without dysphagia. Here there is a disease recognized as a separate entity more than twenty-five years ago and readily recognizable which after many years is followed very frequently by the development of cancer in certain definite sites. There is at first sight no obvious connection between the two diseases. This and the failure to recog-

nize that the origin of cancer has to be sought for almost always in some pathological condition pre-existing for many years are the reasons why the association between the two diseases has not been recognized until recently. This type of anaemia is readily curable by iron and hydrochloric acid, and since such treatment restores also the atrophic condition of the epithelium to the normal it is practically certain that the effective treatment of this type of anaemia will prevent the subsequent development of cancer which would otherwise occur in certain sites in two-thirds of the patients suffering from this type of anaemia. Although this relationship affects a number of women which is numerically small it is of fundamental importance, for it demonstrates clearly the possibility of elucidating by clinical investigations the origin of one particular form of cancer, from which its prevention logically follows.

I am convinced that a similar aetiological relationship can be found for the occurrence of cancer in many other organs. Thus Hurst has presented evidence that carcinoma of the stomach is frequently preceded by organic and functional changes—namely, a gastritis associated with either a hypochlorhydria or a hyperchlorhydria. Here, however, the relation between these disorders and the subsequent development of cancer is not so simple as in the example which I have just given. These preliminary disorders may, according to Hurst, give rise to a variety of gastric diseases. They tend to malignant disease of the stomach only in those constitutionally disposed to gastric cancer. The causes of gastritis are widespread and trivial, and consist largely of mechanical, thermal, or chemical insults to the gastric mucous membrane, resulting from such conditions as imperfect mastication, septic infections in the buccal cavity, dietetic irregularities—in a word, from imperfect alimentary hygiene. They can therefore be avoided.

Statistical investigations have given valuable information pointing to the same conclusion. The late Dr Stevenson showed, fifteen years ago, that when the male population of England is divided into five social classes the incidence of cancer of all sites exposed to injury increases rapidly as we descend the social scale, but is approximately equal for the sites not exposed to injury. The exposed sites consist of the skin and the upper alimentary canal, including the stomach. By making a similar analysis for a Continental country (Bavaria) where suitable statistical material is available I could confirm Stevenson's observation. The incidence of gastric cancer shows, then, that the external agencies responsible for the development of cancer in the stomach can be avoided, and are avoided more successfully by the upper social classes than by the lower ones. Here, again, there is evidence that cancer of the stomach is to a large extent preventable.

I have already referred to the recent findings of Horning and myself that cancer of the mamma in a certain strain of mice is due to an endocrine imbalance between the ovarian hormone oestrin and an anterior pituitary hormone which is the physiological antagonist of oestrone. The imbalance can be restored experimentally by the injection of an anterior pituitary hormone—and mammary cancer can thus be prevented. We must, therefore, search for endocrine factors in the aetiology of mammary cancer in women. Here, again, one must not assume that all cases of mammary cancer have the same aetiology. The endocrine type is most likely to be found among women with a marked familial incidence of mammary cancer. Perhaps the statistically established fact that breast cancer is more frequent in unmarried women than in married

women—and that, moreover, in women equally exposed to the risk of pregnancy it is more frequent in those women who are less fertile—may find an explanation in such an endocrine imbalance.

### Need for a "Follow-down" System

The task of establishing in man such aetiological relationships is not an easy one. It is rendered more difficult by the lack of a suitable organization. We have to-day in many hospitals a "follow-up" system for cancer patients. This has as its object to trace the results of treatment. What we need now is a 'follow down' system for cancer patients in which the development of the disease is traced down to its origin. Such a system requires the careful clinical examination by a trained physician of a large number of cancer cases with special regard to their previous history. The relation between a certain type of anaemia and the subsequent development of cancer in certain sites was established by two clinicians working in two cancer centres. It would seem necessary, therefore, to establish in a few hospitals a separate department, under the control of a physician, through which all patients admitted to the hospital suffering from cancer of the internal organs, especially those which are numerically important, such as the breast, uterus, and digestive tract, must pass for an investigation into their previous medical histories.

But perhaps the greatest difficulty is the unjustifiable pessimism which pervades the medical profession concerning cancer. We are still being told by distinguished clinicians that cancer is a mystery, that we know nothing about cancer, and that we must wait until the cause of cancer is found—whatever that may mean—when the cure for cancer will automatically follow, which is by no means true.

Cancer is, unfortunately, a sensational disease, but the prevention of cancer is unsensational work. The physicians who prevent a hundred cases of cancer have less evidence to establish their success than the surgeons or radiologists who cure five, nor will they get for their achievement any credit or financial reward. The results of prophylactic work will become evident only after many years by a careful analysis of the national mortality statistics.

We often hear of proposals for an educational propaganda among the public for an earlier diagnosis of cancer, what is much more needed is an educational propaganda among the medical profession to establish in their minds the conviction that cancer is largely preventable and that every effort should be made to prevent it.

### BIBLIOGRAPHY

- Ahlbohm, H. E. (1936) *British Medical Journal* 2, 331, Internat. Cancer Congress, Brussels Communications, p. 155.  
 Andrewes, C. H., Ahlstrom, C. G., Foulds, L., and Gye, W. E. (1937) *Lancet* 2, 893.  
 Cramer, W. (1926a) *Brit. J. exp. Path.* 7, 1.  
 — (1926b) *British Medical Journal*, 1, 175.  
 — (1936) *Assurance Med. Soc.*, p. 67.  
 — (1937) *Amer. J. Cancer* 30, 318.  
 — and Horning, E. S. (1938) *Lancet*, 1, 72.  
 Gye, W. E. (1938) *British Medical Journal* 1, 551.  
 Hurst, A. F. (1933) *Ibid.*, 2, 89.  
 — (1934) *Ibid.* 2, 665.  
 Lacassagne, A. (1936) *Lectures, Internat. Cancer Research Foundation, Philadelphia*.  
 Kreyberg, L. (1935) *Amer. J. Cancer* 24, 554.  
 Rous, P. (1936) *Ibid.*, 28, 233.  
 — and Kidd, J. G. (1938) *J. exp. Med.* 67, 399.  
 Stevenson, T. H. C. (1927) *Registrar General's Decennial Sur.*, England and Wales 1921, Part II.  
 Wassink, W. F. (1936) *Internat. Cancer Congress, Brussels Communications*, p. 171.

## THE ALLEGED EFFECT OF ACETYLCHOLINE ON IMMOBILIZED JOINTS

By

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Neuburger and Scholl (1937a) have recently claimed that acetylcholine given by subcutaneous injection relieves or prevents the ankylosis and muscular atrophy which normally follow the immobilization of the limbs of experimental animals. In their experiments the knee joint and ankle joint of one hind limb in each of twenty rabbits were immobilized by means of a plaster bandage several layers thick which extended from the great trochanter of the femur to the toes. The ten animals which served as controls showed ankylosis and a high grade of muscular atrophy after three to four weeks of continuous immobilization. The remaining ten animals received 10 mg of acetylcholine subcutaneously every second day until a course of eleven to fourteen injections had been made when the plaster was removed. All the joints were found to be entirely free to passive movement in active motion there was a slight sparing of the previously immobilized extremity, but this disappeared after a few hours. The muscles of the leg seemed fully normal and did not differ from those of the other hind limb.

In a more recent report Neuburger and Scholl (1937b) have extended their observations. A group of twelve rabbits were treated in the same manner but the dose for injection ranged from 0.1 to 10 mg. It was found that the dose of 10 mg gave the best results, and no effect was observed with doses below 3 mg. Six more controls were studied with this group and all showed ankylosis when the casts were removed. Atropine did not counteract the beneficial effect. When prostigmin and atropine were given before each injection of the acetylcholine a dose of 3 mg was found to be sufficient to prevent the ankylosis and atrophy. The authors state that because of the similar action of acetylcholine and histamine on the blood vessels of the rabbit the latter drug was given to a series of eight animals prepared in the same fashion. 15 mg of histamine hydrochloride was administered subcutaneously every two days to a total of fourteen injections. A beneficial action was reported but it was not so good as that obtained with the acetylcholine. In view of the practical importance of this suggested new action of acetylcholine it was thought advisable to repeat these experiments following as closely as possible the technique for immobilizing the limb described by Neuburger and Scholl.

Twelve rabbits of different sexes each weighing between 2 and 3 kg were used. As in Neuburger and Scholl's experiments the right hind limb was firmly wrapped in a bandage impregnated with plaster six yards in length and one inch wide extending from the greater trochanter of the femur to the toes. The animals quickly became accustomed to the cast and by using it as a crutch were able to get about quite easily. They were allowed to run about freely in a small room.

Of these rabbits seven were used as controls. Two received a subcutaneous injection of 1 c.c. of 0.9 per cent saline each second day and the other five the same quantity of a dummy solution containing the same

amounts of choline and sodium acetate as would be liberated by the hydrolytic decomposition of 10 mg of acetylcholine. The five remaining rabbits were given 10 mg of acetylcholine in 1 c.c. of saline solution each second day. The injections were made beneath the skin covering the shoulder blades. Some respiratory distress and collapse was observed to follow the acetylcholine injections but the animals recovered rapidly and in their general behaviour closely resembled the controls. All of the animals received from twelve to fourteen injections over a period of about four weeks at the end of which time the casts were removed.

After the casts had been in position for some time they showed in practically all cases a tendency to become a little loose. The muscular atrophy resulting from the immobilization which is one of the effects described by Neuburger and Scholl in their controls makes it inevitable that the fixation should thus become less perfect with the progress of the experiment. This loss of complete immobility in the later stages must be encountered if the cast is initially applied as closely as is possible without impairment of the circulation in the leg and foot. In my series it affected equally the rabbits treated with acetylcholine and the controls. When the animals were finally anaesthetized with ether and examined more thoroughly before being killed under the anaesthetic for further study the opportunity was taken to examine the circulation in the neighbourhood of the joints by incising the tissues. In all cases free bleeding followed the incisions showing that the circulation had been well maintained.

The results of the plaster fixation were the same in all the rabbits whether treated with acetylcholine or with either of the control solutions. All showed changes of the kind observed by Neuburger and Scholl in their control rabbits and none revealed any trace of the amelioration or prevention of these effects which they attributed to treatment with acetylcholine. In every case there was limitation of movement both at the knee joint and the ankle joint and this limitation persisted under deep anaesthesia with ether. When under the terminal anaesthesia strong force was applied to produce flexion of the joints crepitations were felt and a snap as of adhesions being broken was often audible. In spite of this not quite perfect immobilization or some of the limbs the muscles in every case showed a pronounced atrophy of disuse being very much smaller than the corresponding muscles in the other normal leg. All these effects were present and without perceptible difference in degree in the rabbits treated with acetylcholine as in the two groups of controls.

I am unable to suggest any explanation of the contrast between my negative results and those reported by Neuburger and Scholl in which they describe a prevention by acetylcholine of the effects of immobilization so certain that they are able to study it quantitatively with gross dosage. I have thought it desirable to record my completely negative experience since Neuburger and Scholl's publications may well lead to an application of this method in surgical practice. My own experiments suggest no likelihood of its success.

### Summary

Neuburger and Scholl have recently reported that acetylcholine prevented the ankylosis and muscular atrophy normally resulting from the immobilization of the hind limb joints of rabbits.

Their experiments have been repeated, but no differences between the control and treated animals, as described by these authors, could be demonstrated

This work was done during the tenure of a Medical Research Fellowship of the American College of Physicians

I wish to express my thanks to the Medical Research Council for allowing me the privilege of carrying out these experiments in the laboratory of Sir Henry Dale

## REFERENCES

- Neuburger, F., and Scholl, R. (1937a) *Arch exp Path Pharmac*, 188, 492  
 — (1937b) *Ibid*, 188, 64

## GLASGOW EXPERIENCE OF INCREASED DYSENTERY PREVALENCE

BY

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During the past three years the annual number of dysentery cases registered in Glasgow has been increasing and has become relatively high. During the second half of 1937, too, the city, with 203 cases, shared in the reported country-wide increase in prevalence. I attempt here a brief review of some aspects of the prevalence of dysentery during these years and on previous occasions of raised incidence.

### Annual Incidence

Dysentery became notifiable in 1919, when 117 cases were registered. During the nine years thereafter the annual number of notifications was small, often being less than twenty. In more recent years the number has been increasing, and has exceeded a hundred again on five occasions—namely, 1929, 119, 1932, 136, 1935, 135, 1936, 239, 1937, 272. The annual average over the whole period 1919-37 was 81.4.

## OTHER DIARRHOEAL DISEASES

There has not been any apparent regular association between increased prevalence of dysentery and that of other diarrhoeal diseases. It is true that in 1919 and 1932 an increased number of deaths from diarrhoea were registered, that in 1935 enteric and paratyphoid fevers were more prevalent than usual, and that 1936 was a high year both for paratyphoid cases and for deaths from diarrhoea. On the other hand, deaths from diarrhoea were more numerous than usual in 1920, 1921, and 1926, also, the incidence of enteric fever was relatively high in 1920, and that of paratyphoid B fever in 1927, 1930, and 1933.

### Seasonal Incidence

Reports from various sources regarding the seasonal incidence of dysentery differ widely. The years under special review here might be regarded as revealing some resemblance between the seasonal incidence of dysentery and that of the other diarrhoeal diseases. Deaths from diarrhoea and enteritis are highest in either the third or the fourth quarter of the year. Enteric infections are most frequent in the third quarter. Paratyphoid infections are less regular in this respect than typhoid, and, indeed, a large outbreak of paratyphoid B comprising 159 cases in Glasgow and forty-one other cases in neighbour-

ing county areas occurred in the spring of 1936. The total seasonal incidence of dysentery during the past three years was as follows:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Home Infections	41	65	136	106	348
Institutional Infections	116	13	59	110	298
Total	157	78	195	216	646

It is held that the true seasonal tendency of the disease is obscured in the figures with respect to institutional cases by reason of special opportunities for spread, then dysenteric infections would appear to be most frequent in the third quarter, as suggested by the figures regarding cases infected at home. From the following list it will also be noted that of fifteen outbreaks of dysentery the numbers commencing in each quarter of the year were respectively 4, 0, 8, and 3. Of twelve institutional outbreaks included in the list the quarterly distribution of the onset was 4, 0, 5, and 3.

### Outbreaks

The outbreaks recorded up to the end of 1936 and those now falling to be recorded for 1937 were as follows:

Date	Outbreak
1928 Aug Sept	7 fatal institutional cases among infants. 2 positive Sonne. Reported by Hay (1930).
1929 Aug Nov	51 cases and carriers in group of overcrowded tenements. 35 positive Flexner including 9 symptomless persons. No common source detected. 93 other cases of enteritis investigated.
1930	5 of 10 institutional cases positive Sonne.
1933 January	Small Flexner Z institutional outbreak.
Aug Sept	Small Sonne institutional outbreak affecting children.
August	7 children positive Sonne of 12 cases which sickened 1-3 days after consumption of suspected ice-cream.
1934 March April	5 of 13 institutional cases positive Sonne.
1936 January only	60 positive Flexner (X or Z) of 104 cases in large Poor Law institution including 20 positive food workers. Total inmates excluding staff 1343. 23 patients sickened in first 5 days after eating suspected meat pies on January 1, then 29, 27 and 24 in successive weeks. 10 aged patients died.
September	9 positive Sonne cases associated with ice-cream—2 in family of vendor and 7 cases sickening 1 to 2 days after consumption.
Sept Nov	13 positive Sonne and 2 Flexner in children's institution.
1937 Jan March	23 young children and 2 nurses notified from large general hospital. Sonne and Flexner W, X and Z. Again.
Aug Sept	23 young children and 2 adults notified from this institution. Sonne and Flexner W, X and Y. Total cases notified in 1937 from this institution 60, mainly Flexner. Several of the food untraced.
September	9 men notified as cases of Flexner dysentery from ward in large general hospital which later housed the big outbreak described below.
Oct 21 Nov 4	Fever hospital staff outbreak affecting one doctor and 34 nurses with 14 positive Sonne. Cases sickening on successive days—1, 2, 2, 2, 2, 3, 5, 5, 3, 4, 1, 2, 1, 0, 2. Possibly due to fresh fruit eaten October 20. Controlled by removing cases from nurses' home to special ward.
Nov Jan 1938	5 positive Sonne of 11 cases among staff and female patients in large mental institution. First case mixed inmate of old standing. Good isolation accommodation. Notifications in 1938 figures.
Nov Jan 1938	94 cases and 12 carriers in large general institution with 86 positive of whom 78 were positive Sonne. Described below. 42 cases included in 1937 figures. 386 other persons investigated including 114 with close contacts. Total persons examined 492.

### True Incidence of Dysentery

The above list sheds light on some factors in the frequently discussed disparity between the notified cases of dysentery and its true incidence. Of 121 positive findings in two outbreaks twenty one were made regarding persons free from symptoms and of 349 persons comprised in nine outbreaks only 219 yielded positive specimens. It therefore seems probable that despite the increased attention recently paid to dysentery many mild and many bacteriologically negative cases remain unnotified. More over suspicion of dysentery may not be raised when cases do not occur in groups and it is also known that investigation and notification are withheld in some cases that do incur suspicion. Other considerations tend to limit the extent of disparity between true and apparent prevalence. In connexion with two outbreaks regarded as comprising 157 persons 207 contacts with loose motions were investigated with negative result. Also in connexion with one outbreak regarded as comprising 106 persons 386 contacts were examined with negative result.

### Food borne Infection

It will be noted that food has been incriminated or suspected as the vehicle of infection in respect of both types of bacillus and both in institutional and in non institutional environments. Besides the two listed Glasgow outbreaks of Sonne dysentery attributed to ice cream, a small county Flexner outbreak traced to ice cream was investigated in the city laboratory in 1931. In 1926 too a county outbreak of eighty cases of Sonne dysentery associated with a milk supply had been investigated in the city laboratory as reported by Wiseman (1927) in the first record of the appearance of Sonne dysentery in epidemic form in the West of Scotland.

### Institutional Infections

Institutional infections form a substantial and increasing proportion of the total number of cases as will be seen from the following list.

Year	Institutional Infections	Home Infections	Total Cases Registered
1935	4	93	135
1936	111	123	239
1937	145	127	272

It will also be noted that the excess of total cases for 1937 over 1936 is accounted for by institutional cases.

Periods of high institutional incidence are of course not necessarily periods of high domestic incidence because any one institutional focus may become enlarged owing to the special conditions existing in institutions. For example in January 1936 sixty eight cases from institutions were registered but only eight home cases were notified. Sometimes domestic registrations have been high without an associated increase in institutional cases. For instance in the three years 1935-7 the following numbers of home and institutional cases were registered in September the month with the highest total of home cases over that three year period 25 and 528 and 6 and 23 and 16 respectively. In December 1937, however when the prevalence in other parts of the country was also notably high there was a simultaneous notable rise in the number of home infections which totalled twenty eight and of institutional infections which totalled forty four. On the whole some relation does probably exist between the

two classes of cases. The third quarter was the one giving the highest figures for domestic registrations during the past triennium and also for the onset of various outbreaks recorded over several years. It is indeed reasonable to assume that infection will be more often introduced into institutions when its prevalence in the general community increases.

Institutional cases appear to fall into two categories. In one a definite cause can be recognized—for example contamination of food or secondary spread from a previous case. In the other are those institutional patients who become sporadically in the manner of cases ordinarily arising in non institutional communities and more than one type of endemic dysentery organism may thus participate in the prevalence. In respect of the relative frequency of institutional cases in this category dysentery differs from the enteric infections institutional outbreaks of which usually are traceable to a definite source—a difference doubtless due to the greater general severity of enteric infections and to the longer duration of the ensuing carrier state.

### Sex Incidence

The gross figures for all cases of dysentery without subdivision according to type of bacillus revealed no special feature with regard to sex incidence. For the years 1935-7 the sex distribution of the registered cases was as follows.

	Males	Females
Home Infections	137	161
Institutional Infections	140	1
Total	277	162

### Age Incidence

The figures with respect to the age of incidence of both institutional and non institutional cases confirmed the recognized high incidence of dysentery under the age of 15 and especially between the ages of 1 and 14. True dysentery does occur under 1 year of age but with relative infrequency. Although a large proportion of cases of summer diarrhoea in America appear to be due to dysentery Blacklock, Guthrie and Macpherson (1937) working in Glasgow state that in common with other British investigators they have rarely isolated dysenteric bacilli in cases of infantile diarrhoea apart from cases of frank dysenteric ileocolitis. The total figures for the years 1935-7 were as follows.

Age	-1	-5	-15	15-25	25-35	35-45	45-55	55-65	65-75	Total
Home Infections	6	35	5	13	1	1	1	1	1	75
Institutional Infections	17	9	15	1	1	1	1	1	1	57
Total	23	44	20	14	2	2	2	2	2	132

Thus 306 cases occurred below the age of 15 and 40 cases above home cases under 15 and of age 15 and over outnumbered those aged over 15.

### Fatality

Deaths certified as due to dysentery remained low. The age distribution of the sixteen persons who died in 1936 and of the nine who died in 1937 of dysentery was as follows.

Age	-1	-5	-15	15-25	25-35	35-45	45-55	55-65	65-75	Total
Cases	1	1	5	15	12	1	1	1	1	41
Deaths	3	1	1	2	1	1	1	1	1	13

The disease therefore appears to be more serious among infants and among the elderly. The number of deaths during 1935 was five. Thus, during the three years of increased prevalence there were thirty deaths among 646 cases. During the years 1927-34 there had been thirty-two deaths among 619 registered cases; the case mortality rate has therefore not risen with the incidence. Dysentery, of course, also plays a part in deaths not included in such figures—that is, when it forms a terminal event in cases where death is certified as primarily due to pre-existing illness.

### Organisms

A majority of the cases of bacillary dysentery are probably still due to the Flexner type of organism. The presence of Sonne dysentery in Glasgow was first recorded in 1928, when the outbreak reported by Hay and a few other isolated cases occurred. During the years 1929-36 positive specimens from Glasgow, according to the city bacteriologist, have numbered 413 Flexner and 278 Sonne. Positive Sonne specimens have exceeded positive Flexner specimens in the central city laboratory only in 1930, 1933, and 1936, and in 1936 a large institutional outbreak with sixty positive Flexner cases was investigated in a hospital laboratory. It is also of interest to note that, in 1936, of fifty positive specimens submitted from a town near Glasgow thirty were Sonne and twenty Flexner. Carter (1937) reported the results of his examination of eighty-eight Flexner strains isolated from Glasgow cases during 1936 and 1937. The staff of Dr F. E. Reynolds, Stobhill Hospital, also recently examined ninety-five Flexner strains derived from the hospital. The results were as follows:

	V	W	X	Y	Z	WX	XYZ	Total
Carter	—	16	8	3	60	1	—	88
Reynolds	—	28	23	29	14	—	1	95

Although one type of organism usually predominates in any group, it is not uncommon to find different types and strains of these endemic dysentery organisms associated in a multiple focus. Examples of this association are included in the list of outbreaks given above. In 1934, too, four persons in a family were found positive for Flexner and two others positive for Sonne. In the autumn of 1932 four positive findings of paratyphoid B and three of Sonne dysentery had been made regarding seven persons living in an insanitary tenement. Also, in the large Sonne epidemic described below, a man unusually ill with positive Sonne dysentery was found to be a chronic urinary carrier of *B. typhosus*.

### A Large Outbreak of Sonne Dysentery

The first large Glasgow outbreak of Sonne dysentery occurred in a big general municipal institution towards the end of November, 1937, and continued till the end of January, 1938. It therefore appeared at a time of exceptionally high country-wide prevalence of dysentery. In December forty-two cases were registered from this focus and only two from other Glasgow institutions. Home infections numbering twenty-eight were also registered in Glasgow in December. The seventy-two December cases thus constituted over a quarter of the year's 272 cases. Although the possible sources of introduction of dysentery into the institution were therefore more numerous than usual, it is to be remarked that of the ten Glasgow home infections registered in November and of the twenty-eight registered in December only one and four respec-

tively occurred in the city division containing the institution. Moreover, apart from a few households whence patients were admitted suffering from frank dysentery, no infections were reported from the homes of infected patients, a large proportion of whose visitors would be derived from these homes. Also, no dysentery cases were registered from the homes of the infected staff members.

The epidemic assumed the form of two successive waves of infection. The following number of acute cases, all positive for Sonne except one positive for unspecified dysentery, sickened in successive weeks from November 20, 1937, 2, 20, 5, 4, 0, 9, 1938, 15, 6, 1, 1, 2, 0, making a total of 65 positive acute cases of Sonne and unspecified dysentery. Other positive findings were:

Cases admitted with dysentery: Sonne 6, Flexner 1.  
Acute institutional infections: Flexner 1, Flexner W 1.  
Symptomless temporary carriers: Sonne 8, Flexner 1, Flexner X?, unspecified 1.  
Total positive findings: 86, including 78 Sonne.

Acute cases numbered sixty-seven as detailed. Only twenty other persons were regarded as clinical cases yet gave negative specimens. These were not notified, but they would raise the total of infected persons to 106. The detection of so large a proportion of positive cases was doubtless due to the facilities for relatively prompt bacteriological examination. Negative specimens were also obtained from 114 persons with loose motions or incontinence and from 272 persons free from suspicious symptoms. Six of the positive cases ended fatally during December and January. These persons were all elderly, and suffered, moreover, from pre-existing illnesses.

The patient admitted with Flexner dysentery and two patients admitted with Sonne dysentery produced no secondary cases. Of the six patients admitted to the hospital wards suffering from Sonne dysentery four were associated with only six other cases that could be regarded as possibly attributable to the admissions, even when among the secondary cases is included one sickening two and a half hours after the admission of a dysenteric patient to an adjacent bed in an otherwise uninfected ward. In one of these groups the interval between the removal of one secondary case and the sickening of another was eight days.

Since many of the cases were clinically extremely mild it is not surprising that eight persons were classified as symptomless Sonne carriers. None of the carriers could reasonably be regarded as chronic, and indeed it is generally accepted that symptomless chronic carriers of bacillary dysentery are rare. Five of nine staff members found positive were symptomless. Neither the carriers detected among the staff nor those detected among the patients were so situated as to account for all the other wise untraced foci of infection in the outbreak. The acute infections among the staff occurred after the outbreak had begun.

There was no definite evidence of spread of infection by food, milk, or water, but it was thought important that the milk supplies should be scalded in the wards and attention devoted to the methods of cleansing food utensils, especially milk containers, passing through the central kitchen and dairy premises. It will be noted that no incidence of Sonne dysentery was detected in these departments, all the members of the staff of which were examined bacteriologically.

The most noteworthy feature of this outbreak was the apparently sporadic way in which some of the affected individuals sickened within the institutional community. The first cases in the institution were female inmates of old standing in the chronic sick block. The disease sub-



sequently appeared in other non admitting blocks of the institution. Similarly acute infection reappeared in wards which had been free from dysentery cases for two to four weeks and in which the presence of carriers had not meanwhile been demonstrable. The following list gives some details of incidence in all sections of the institution.

#### Female chronic sick wards

9 of 17 wards affected between November 20 and January 27  
Inmates 192 Positive findings 41 including 1 nurse

#### Male chronic sick wards

6 of 18 wards affected between December 3 and January 29  
Inmates 18 Positive findings 13 including 1 nurse and 1 maid

#### Male mental observation wards

90 inmates 3 positive acute cases on December 3

#### Male mental wards

159 inmates 4 positive acute cases January 6-11

#### Female mental wards

222 inmates 3 positive acute cases January 3 and 31

#### Female mental observation ward

27 inmates No cases

#### Hospital wards

8 of 19 wards affected from December 12 to January 16. Total inmates 525. Positive findings 17 including 1 doctor 7 admissions and 6 possibly secondary cases

#### Staff

Total 64\* of whom 233 lived in and 410 lived out. 5 positive findings—namely 3 nurses (not employed in any infected ward) a kitchenmaid (Flexner carrier) and a food porter to chronic sick block (Flexner carrier). 2 nurses 1 maid and 1 doctor are mentioned above. Of the 3 nurses infected 3 were symptomless Sonne carriers so that 5 of the 9 staff members found positive were symptomless.

Total population of institution	1629	20.9
Non resident staff	410	
Persons examined bacteriologically including those found positive	492	
Positive findings	36	

### Summary

Dysentery registrations in Glasgow between 1919 and 1934 averaged 56.3 annually. Between 1935 and 1937 the annual total of institutional infections rose from 42 to 145 and the annual total of cases averaged 215.3. Some epidemiological aspects of these 646 registrations have been noted. Previous occasions of increased prevalence and sixteen outbreaks including thirteen in institutions recorded since the introduction of compulsory notification in 1919 have been adduced. Glasgow with 203 cases including seventy-two in December shared in the widespread increased prevalence during the second half of 1937 and towards the end of that period experienced the onset of its first large outbreak of Sonne dysentery. Some details have been given of the incidence of the eighty six positive findings (seventy-eight Sonne including eight not associated with symptoms) made during this institutional outbreak. In the absence of case to case connexion between several foci within the outbreak it was considered important to devote attention to the methods of cleansing the ward food utensils handled by the uninfected staff of the central kitchen and dairy.

I am indebted to Dr A. S. M. Macgregor for the suggestion to compile these notes, also for criticism and permission to publish.

#### BIBLIOGRAPHY

- Annual Medical and Sanitary Reports Glasgow* (1919-36). Sections on Dysentery reports of City Bacteriologist etc.  
Blacklock J. W. S., Guthrie C. J. and Macpherson I. (1937) *J. Path. Bact.* 44: 321.  
Carter H. S. (1937) *Ibid.* 45: 447.  
Hay H. R. (1940) *J. Hyg. Camb.* 30: 3.  
Wismann W. R. (1927) *Lancet* I 817.

## CARCINOMA OF THE PALATE HOW OFTEN DOES IT MASK MALIGNANT DISEASE IN THE MAXILLARY ANTRUM?

BY

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In the 1936-7 Statistical Report of the National Radium Commission the relatively low proportion of patients with carcinoma of the palate who have remained free from recurrence after treatment is commented upon. The report states that the low proportion of patients with carcinoma of the palate who have remained free from recurrence is unexpected in view of the fact that the survival rate for this group approximates closely to that for the alveolus and that this group shows the highest proportion of patients free from glandular metastases when treatment was started. The figures given suggest that there is a tendency for tumours of the palate to spread further than can be easily recognized by clinical means with the result that the tumour is often inadequately irradiated and thus tends to recur with greater frequency than tumours of the other sites. This particular problem was noticed some years ago at the Holt Radium Institute and led to investigation with a view to finding and remedying the cause. Although at the time of the original investigation certain definite information was obtained it was felt that the available cases were too few to justify publication of the inferences from the observation.

At the present time analysis of 167 cases of malignant palatal ulceration and of 104 cases of antral carcinoma passing through a single clinic is possible and in view of the comments in the Radium Commission Report it would appear expedient that the conclusions to be drawn from that analysis should be placed on record. As a result of the investigation I suggest and this article purports to demonstrate that the tendency to recurrence after treatment of carcinoma of the palate is due to the fact that a large proportion of palatal growths are really neoplasms of the antrum. It will be shown that with certain limitations which will be discussed in their appropriate place it is a wise generalization that a case of carcinoma of the palate must be considered and treated as an antral growth unless it has been proved not to be so. This generalization corresponds with those which nearly every medical student finds helpful with regard to malignant disease of the stomach, uterus and rectum.

### Material for Study

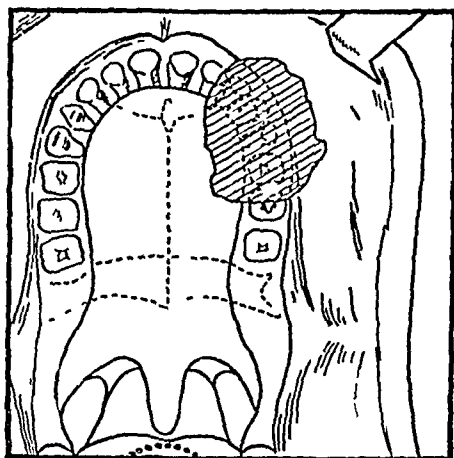
The material upon which this analysis is based is a group of 167 cases of palatal neoplasm and 104 cases of malignancy involving the maxillary antrum put together in the 167. Only those cases in which the palate was the site of major involvement have been considered. The patients were referred in part by general practitioners and in part by the surgical consultants on the outpatient staffs of the general hospitals in the area served by the Institute. In fairness it should be stated that failure to recognize the antral involvement of many of the palatal tumours was not restricted to the former of these two groups.

The term malignant disease involving the maxillary antrum has been chosen to avoid any implication that it is considered that all or even the majority of the



tumours reviewed necessarily originated in the antrum. The investigation was undertaken to obtain information for the purpose of improving the results of treatment of malignant palatal ulceration. From a treatment point of view it matters little which side of the palate was first involved if both sides are involved at the time the patient is treated, since both sides have to be dealt with in any case. The majority of palatal growths could be grouped either as "anterior" or "posterior," although every part of the palate was represented in the cases studied. The posterior growths were usually associated with soft-palate ulceration, and frequently with extension on to fauces and tongue. They formed a group which a certain type of radium implantation (referred to in the Institute as a tongue-ptyergoid implantation") was generally successful in curing locally. Glandular involvement was usually the reason for eventual failure to cure, and many of the patients had involved glands when first seen.

The "anterior" group were found to involve the palate, upper alveolus, sulcus between cheek and alveolus, and sometimes the cheek in the neighbourhood of the



Typical antral site

alveolus. The actual site of this lesion was fairly constant, being about the junction of the middle and anterior thirds of the alveolus. Glandular involvement was rare, except as a late event. Local treatment of the obvious lesion was often followed by recurrence involving the maxillary antrum.

The factors which determined a final diagnosis of antral involvement may be summarized as follows. In the majority of cases the diagnosis was made before treatment, by radiographic demonstration of bone destruction. In others the diagnosis was arrived at only after failure of local palate treatment had been followed by recurrence accompanied by bone destruction revealed on x-ray examination or presentation of an obvious tumour eroding through another wall of the antrum.

#### Typical Antral Site

For convenience the anterior situation just described will be referred to as being in the "typical antral site." It may immediately be questioned whether this term can be justified. In Table I 167 cases of malignant ulceration of the palate are analysed with regard to site and antral involvement.

TABLE I—167 Palate Growths Analysed According to Site and Antral Involvement

Total number of cases with ulceration of palate	167
A Ulcer in typical site	96
Typical site ulcers involving antrum	91
B Ulcer not in typical site	71
Non typical ulcers involving antrum	1

The table shows that of ninety-six typical site lesions ninety-one at some period involved the maxillary antrum (94 per cent), whilst of the rest only one in seventy-one (1.4 per cent) did so. There can be no doubt that these figures justify the term.

The textbook description of antral malignancy usually given is of a history of nasal discharge and hemorrhage, often associated with pain in the maxilla, and trismus. There may or may not be nasal polypi. Later, as the tumour increases in size, there is extension beyond the walls of the antrum. A tumour presents most frequently in the malar region, orbit, or nose, but it occasionally occurs in the nasopharynx or the palate. Not infrequently several of these sites are involved. In actual clinical experience, however, it is very often the presence of one of these obvious tumours that is the immediate cause of the patient's decision to take medical advice. The obvious lesion results in a diagnosis of carcinoma of the nose or rodent ulcer of the inner canthus or epithelioma of the palate being made and treatment for this condition being instituted.

In Table II all the cases of maxillary antrum malignancy seen in the clinic are analysed according to the anatomical sites obviously involved.

TABLE II—Site of Obvious Involvement in 104 Antrum Cases

Site	No.	Percentage
Intra oral only	71	68.5
Both intra oral and extra oral	21	20
Mouth therefore involved in	92	89
Extra oral only		
Nose 4 orbit 1 malar 4 more than one site 3	12	11.5
Malar swelling	20	19

The heavy preponderance of visible mouth lesions over extra oral involvement in this group of cases is so obvious as to require no further stressing. Consideration of the incidence of face swelling shows that in only twenty out of the total of 104 cases was this visible. Only two of these are found in the "missed antrum" group.

It may be inferred from these two tables that antral malignancy usually involves a typical part of the palate, and that practically every palatal ulcer in that site involves the antrum. The cases forming the background of this analysis do not bear out the usual view as to the common picture of antral neoplasm. Malar involvement is comparatively rare, whilst the palate is involved in 89 per cent of the cases. It may be argued in reply that because the cases were referred for radiation therapy they were presumably advanced ones, and that consequently the typical picture was distorted. The infrequency of visible involvement of the malar region even in the obviously late cases, however, suggests that this is not the explanation.

#### The Incidence of Missed Antrum

It has been the custom in the Institute to refer to the cases which have been proved to involve the antrum although originally diagnosed as some other condition as "missed antrum." These cases fall naturally into two groups: (1) those which were recognized on first examination in the radium clinic although referred with a different diagnosis, (2) those not recognized until treatment for the first-diagnosed condition had been followed by recurrence. It is necessary in studying these missed antra to consider two proportions. First, there is the proportion of the total antral cases which were missed,

secondly there is the proportion of the total palate cases which were in fact or could have been missed antra

TABLE III—Analysis of Missed Antra in Relation to Total Antral Cases

Total antra analysed	101
Total referred with misdiagnosis	0
(a) Recognized here but missed elsewhere	5
(b) Not recognized at all till recurrence	13

Table III shows that in seven years seventy possible missed antra have passed through a single institution concerned with general malignant disease. This figure represents 67 per cent of the total antral scene. Of these seventy cases fifty five were recognized in the clinic here but fifteen were not.

TABLE IV—Analysis of Missed Antra with Palatal Lesion

Total palate analysed	157
Total involving antrum	92
Total referred with misdiagnosis	64
(a) Recognized here but missed elsewhere	51
(b) Not recognized at all till recurrence	13

The two cases which were not recognized till recurrence took place and which appear in Table III but not in Table IV were diagnosed and treated as rodent ulcer of the inner canthus and as carcinoma of the nose respectively.

When both Tables III and IV are considered it is seen that, while 67 per cent of all the antral cases were misdiagnosed before reference to this clinic 91 per cent (64 out of 70) of the errors occurred in cases with palatal involvement. I submit that this has a very direct bearing upon the comments of the National Radium Commission statistician, to which reference has already been made.

### Clinical Investigation

It follows as an obvious corollary of the foregoing analysis that every case of carcinoma of the palate requires special investigation to eliminate the probability of its really involving the antrum. In this institute the usual procedure is to look upon every palate case with suspicion. If the lesion is entirely in the posterior part of the palate and not lateral no particular investigations are carried out beyond examination of the upper surface of the soft palate either digitally or by inspection through a mirror. A posterior lesion involving the alveolus and the sulcus between cheek and alveolus is investigated as one in the typical antral site. The approach to lesions in the typical site is threefold.

1 *X Ray of Sinuses*—In the advanced case in which there is opacity of the antrum and erosion of the bone between the obvious lesion and the antrum the diagnosis is definite. The presence of an obvious lesion and opacity of the antrum but no bone erosion is suspicious enough to determine treatment. A negative x ray report, however, is not of very great value unless it is confirmed by other examinations. This statement is supported by the fact that thirteen of the fifteen cases of missed antrum which were not recognized until recurrence after treatment were overlooked because negative x ray reports were accepted as conclusive.

2 *The Needle Test*—A sterile hypodermic needle whose sharpened end has been blunted is grasped in forceps and pushed into the tumour. If it passes through the bone erosion is assumed to have taken place. In every case in which the antrum is found to be involved irradiation of the antrum as well as the palate is undertaken. The needle test is useful but is open to criticism and unless the palate is completely perforated it is apt to be

painful. Injection of a local anaesthetic has not proved very helpful on the few occasions on which I have used it. In cases in which only the oral surface of the palate is eroded it is often possible to force the needles through the remaining bone. Probably however in designing treatment lesions of this kind should be considered as already involving the antrum. When the erosion spreads outward obliterating the alveolo-cheek sulcus care is necessary to ensure that the needle is not merely passing upwards in soft tissues completely external to the antrum. Other than in this case a positive needle test ought to be considered to indicate the need for treatment designed to include at least the floor of the antrum in addition to the oral malignancy. Failure to get the needle through the bone has little diagnostic value since the clinician has no sure means of knowing that he has not missed probing the one site which is perforated.

3 *Exploration of the Antrum*—It occasionally happens that both these tests are inconclusive. In these cases either of two courses is open to the investigator: he may decide there and then that the statistical probability of antral involvement is so high that he is justified in carrying out treatment which includes the antrum or he may ask an aural surgeon to open the antrum so that direct inspection of the lining settles the point at issue. Either of these procedures is infinitely preferable to failure to treat an involved antrum for in thirteen of the fifteen missed antrum cases only recognized after recurrence the patients are dead: nine of them in less than a year after recognition.

It may be asked why biopsy has not been included in the description of clinical investigation. For biopsy to be of value antral lesions would need to present an entirely different histological appearance from palate ones and an overwhelming majority of cases. If the did so lesions originating in the antrum could immediately be segregated leaving only the palate lesion perforating into the antrum to be recognized. In Table V the pathological findings in seventy-eight palate cases which did not involve the antrum are compared with those in seventy-five cases of known antral malignancy.

TABLE V—Proportion of Squamous Carcinoma in the Palate and Antrum Tumours

	Number Secured	Squamous Carcinoma	Other Tumours
Palate malignancy not involving antrum	73	5	3
Malignancy of antrum	75	3	16

The table shows that of the seven-eighths non-antral palate growths 96 per cent were squamous carcinomata while of those involving the antrum 79 per cent were of the same histology. Although there is a considerable difference in these percentages the great preponderance of squamous carcinoma in both groups renders any logical examination of little value as a differential diagnostic agent.

### Improvement following Recognition of the Palate-Antrum Relationship

The relationship between lesions of the palate and the maxillary antrum was recognized in this institution 10 years ago after a preliminary examination of the available statistical material. At the time it was difficult to carry out a large prospective study of the problem. The information gained was however used in determining policy with regard to palate lesions.

Having demonstrated a connection and subsequently carried out a prospective study the results showed that

improvement has been effected? I believe that it can. There has been no change in the methods of reference of patients to the Institute over the whole seven years under review, and cases referred as carcinoma of the antrum remain few. The average number of missed antrum cases per year is ten. During these seven years the Institute staff failed to recognize fifteen out of the seventy cases until recurrence took place. Of these fifteen only three have occurred during the last two years—that is, since the high incidence of antral involvement in palate malignancy was realized. Each of these three cases was missed because again a negative x-ray report was accepted as being conclusive.

### Conclusions

It may be inferred from the report of the National Radium Commission that the frequent involvement of the maxillary antrum in certain palatal and upper alveolar malignant lesions is not generally appreciated.

Investigation in the Manchester Radium Institute of 167 cases of malignant disease of the palate showed that 94 per cent of the lesions of the middle third of the palate, spreading on to the alveolus and into the alveolo-labial sulcus, involved the maxillary antrum. In the Institute this is known as the typical antral site. Lesions in the other usual palate site—that is, the posterior part of the hard palate, spreading on to the soft palate and fauces—did so in only 14 per cent of the cases.

Typical antral-site lesions should be regarded as involving the antrum unless it is proved that they do not. If definite proof is not forthcoming they should be assumed to do so, and be treated accordingly. X-ray examination alone is conclusive only when positive. A negative report should not be accepted as being conclusive. Thirteen cases out of fifteen with antral involvement, missed until recurrence followed treatment, escaped notice through the acceptance of negative x-ray reports.

The needle test described is useful, but should only be accepted when positive.

Histological examination does not help to clear up the diagnosis, because of the high proportion of squamous carcinomata in both the simple palate lesions and those involving the antrum, taken in conjunction with the fact that all malignant tumours of the palate are not epitheliomata. As treatment must include both mouth and antrum, anatomical differentiation of site of origin is not considered to be of great clinical importance.

The cases seen in the Institute suggest that intra-oral ulceration is by far the commonest evidence of antral neoplasm. This finding is contrary to accepted teaching, but is not due to the fact that usually it is the more advanced cases which are referred for radiation therapy, as cheek-bulging is rare even in the obviously late cases.

It is shown that recognition of the palate-antrum relationship has been followed by a great reduction in the number of cases entirely missed until local palate treatment was followed by recurrence.

From April 1 the importation into this country of all meat, including bacon and ham and also meat products such as canned meats, sausages, and sausage casings, will be permitted only if they are accompanied by an official certificate recognized by the Minister of Health as evidence of satisfactory inspection and hygienic preparation. The importation of certain defined classes of meat (such as scrap meat) continues to be prohibited.

## TINEA OF THE FOOT

BY

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Since the discovery of pedal tinea by Whitfield in 1908 the condition has become increasingly prevalent (C. J. White, 1927a), and according to American authorities presents to-day one of the major problems of dermatological practice. The many statistical surveys that have been made in America by Hulsey and Jordan (1925), Legge, Bonar, and Templeton (1929), Andrews and Birman (1931), and Gilman (1935), to mention only a few, appear to confirm this, and it seems strange that no comparable figures have been produced in this country. It may be as Gray (1934) said, that "the profession as a whole is still barely aware that the problem exists," and should the disease achieve the lay popularity it has achieved elsewhere there is every danger of a too free diagnosis on inadequate evidence.

### Difficulties in Diagnosis

The frequent and early spontaneous disappearance of fungal mycelia from the infected area is one of the main difficulties, and in late cases there may be nothing to distinguish the condition from dermatitis from other causes (Whitfield, 1908, 1911). The reason for this disappearance is hard to understand in view of the viability of the pathogenic fungi (Farley, 1921; Weidman, 1927a; Bruhns, Alexander, and Kadisch, 1929), but the secondary bacterial contamination which sometimes occurs may in some way exert a lethal influence on the moulds. In this connection the observations of Weidman (1926) on a case of pedal ringworm sown with yeasts are of importance. Thus it would appear that many cases of tinea, when seen, will not show the causal agent, although such authorities as J. H. Mitchell (1922) and C. J. White (1919, 1927b) countenance a diagnosis on clinical grounds alone in the chronic keratotic pedal type. This may be admissible under certain circumstances, but the demonstration of the specific factor still remains a *sine qua non* in diagnosis, and the following statement by Ramsbottom (1931) may be taken as an expression of general opinion.

"There is, however, a tendency on the part of some investigators to assume a fungal origin of a disease on insufficient evidence. It is not enough to postulate the parasitic nature of a disease and then, bacteria, protozoa, and other parasites being eliminated to describe it as mycotic, the evidence must be as clear as that for any other parasitic group."

In addition it must be remembered that all cases of interdigital scaling and maceration are not mycotic, although von Graffenried (1918) and Catanei (1932) have shown that such lesions form a suitable nidus. Dirt seems to bear no relation to infection, as the highest incidence is to be found among the wealthy and more leisured classes (Beintema, 1931). Therefore the practitioner will often be confronted with strong clinical evidence of fungous infection without microscopical or cultural confirmation, and a specific dermal test would be of great help in accurate diagnosis.

### Previous Investigations with Mycotic Extracts

The use of mycotic extracts in the diagnosis of superficial tinea infers an altered state of reactivity in the body. That this state exists in certain bacterial diseases is a well established fact, and for many years mycologists have endeavoured to find a corollary in ringworm infection.

The position with regard to deep ringworm has practically been cleared but the occurrence of general changes in the superficial type has caused much controversy. The tendency towards spontaneous cure in deep tinea (Sabouraud Greenbaum 1924) has been explained by the development of a general immunity and the rarity of scalp infection in adults has been cited as an example of acquired herd immunity. Supporting the development of immunity Greenbaum (1924) and Scholz (1934) showed that by inoculating guinea pigs cutaneously with ringworm they rendered the animals immune to further inoculation and Sabouraud found that he could not use the same animal twice in testing for the pathogenicity of moulds. Greenbaum also showed that by inoculating the skin of a human with *Trichophyton cyaneum* spontaneous healing occurred in four weeks and that the site of the lesion could not be reinfected as long as three months afterwards. Further he claimed that the immunity thus produced was group-specific against the other ringworms and said that so sharply defined is this local immunity that reinoculation of a previously healed site only shows a take at the exact edge of the previous lesion. Disproving this cutaneous immunization as applied to superficial infection Weidman (1927b) was able to infect the first interdigital cleft of his foot on two occasions with *Trichophyton cruris* after a lapse of two years although the interval appears to have been unduly long. It is also not uncommon in tropical practice to see more than one attack of tinea cruris in the same patient despite the fact that Gray (1934) thinks this is rather unusual.

The occasional development of distal phlyctid eruptions in superficial infections has been established by Jadassohn and Peck (1929) Sulzberger and Kerr (1930) Peck (1930) and Ayres and Anderson (1934) while a fungus has been recovered from the circulating blood in some cases (Sulzberger 1928 Peck 1930 Strickler *et al* 1932). It is of interest to note the inhibitory effect on ringworm cultures of serum from cases with phlyctid eruptions (Per and Braude 1928 Ayres and Anderson 1934) Ravaut and Rabreau (1932) even claim general changes in superficial yeast infections and they have used an extract of yeast cultures (levurin) as a diagnostic test.

From the foregoing evidence it is logical to conclude that superficial ringworm can sometimes cause local immunity and there is reason to believe that the products of the causal fungus are not limited to the site of infection.

The diagnostic skin tests have given very variable results in the hands of different investigators. Such an eminent mycologist as Castellani (1934) places little reliance on them although he publishes full details for the preparation of the extract while Tarantelli (1926) and Garzella (1926) insist that to produce a positive result the lesion should be deep seated. Amberg (1910) using linear scarification had thirteen positives from 131 casual patients four of the thirteen had no previous history of ringworm. Repeating this investigation Rosen Peck and Sobel (1931) intradermally tested 102 dermatological patients—seventy-two of them with some pedal skin lesion—and found a positive reaction in sixty seven. There were nine proved cases of tinea pedis in this series and eight of them reacted strongly. Muskatblat and Director (1933) encouragingly report 72 per cent. positive results in 300 cases of superficial tinea while Ruete and Scholz (1934) claim 100 per cent success in proved cases. In addition the last named observers contend that the extract used will only react against the fungus from which it is prepared although this is disproved by Sulzberger and Kerr

(1930). These group reactions are accepted generally and are to be expected in view of the close biological relationship of the pathogenic moulds. Lomholt (1934) and Muende (1934) regard dermal tests as being of especial value in the differentiation of mycotic from dandruff eczema—a matter of importance in this country on account of the insignificance of the mycotic factor in the latter type of lesion (McLachlan and Brown 1934).

### The Present Investigation

The following investigation was carried out in ships or war during the last three summers. In all, 111 cases were examined twenty two of them with superficial pedal tinea the remaining eighty nine were casual patients used as controls. In every case a careful examination of the interdigital crural and axillary folds was made and any skin surface showing maceration or desquamation was examined microscopically for fungus while the previous dermatological history was assessed as to the possibility of a fungus infection. Polyvalent trichophytin (Hoescht) was used throughout in a dilution of 1 in 30 and the diluent was employed as a control. Dilutions of 1 in 2.0 and 1 in 800 were also used at the beginning of the investigation but were soon dispensed with as unnecessary. The solutions were renewed at monthly intervals to ensure against deterioration. After a trial of the linear scar and patch methods the intradermal route was chosen as being the most reliable. The trichophytin was injected with a fine needle into the flexor surface of the right arm and the control was injected in a similar site in the other arm care being taken that the syringes and needles used were dry and free from traces of chemicals.

Four types of reaction were met with (1) immediate and transient urticarial reaction (2) inflammatory reaction (3) inflammatory reaction with vesicle formation (4) late eczematoid reaction. Types 1, 2 and 4 correspond to those described by Sulzberger and Wise (1932) and Type 3 has been added on account of its frequent occurrence in the strongly positive group. Type 1 was occasionally seen in the negative group and according to Bray is due to tissue damage at the site of injection. The results were read at intervals of one, two, four and seven days and were classified according to the following table.

Classification	Date of First Appearance	Maximum Duration of Weal	Urticarial	Delayed Reaction
Strongly	1st-3rd	10-20 mm	—	—
Moderate	1st-3rd	10-20 mm	—	—
Weak	1st-3rd	10 mm	—	—
Negative				

The trichophytin when fresh appears to be remarkably resistant to heat as five positive and five negative cases retested after autoclaving the extract gave the same results. A summary of the investigation is set out in tabular form below.

Type of Case	No. of Cases	Strong Reaction	Moderate Reaction	Weak Reaction	Negative Reaction
(A) Microscopically proved tinea	2	14	2	2	4
(B) Control with previous history of tinea	20	3	3	13	5
(C) Control with negative history	6	2	1	11	25

Owing to the difference in the numbers of cases in the three groups it is proposed to scrutinize the table as it stands and not in terms of percentages. The four negatives in Group A are disappointing but all of those cases showed "mosaic" fungi microscopically. According to Weidman (1936) such "mosaics" are either a stage in the development of fungus or are due to some fungoid action on the superficial layers of the dermis, while Whitfield (1935) regards them as artefacts due to interaction between the epidermal scales and the caustic potash used in preparation of the microscopical specimen. Repeated attempts to culture scales showing such "mosaics" were made under ideal conditions in Ramsbottom's mycological laboratory without success. Their exact nature, therefore, must be a matter for doubt, but it is of interest to note their frequent association with the accepted type of fungus. The results in Group B are gratifying, but the unavoidable personal error in assessing the history makes it difficult to draw a definite conclusion, and this becomes especially noticeable in Group C. Many patients may have had a patch of superficial tinea not diagnosed as such, or an interdigital type may have escaped notice completely. The frequency of such previous infections has been regarded as negating the value of a positive reaction (Wise and Wolf, 1936), and this would seem to increase considerably the value of a negative reaction.

### Conclusions

From this small series and from observation of the skin tests in other hands, it is permissible to state that a strong reaction in a clinically suggestive case with a negative previous history lends a bias towards a diagnosis of tinea, while a negative reaction in a similar case precludes a positive diagnosis completely.

An interesting outcome of the investigation was provided by two negative reactors in Group C. Some time after testing they developed microscopically proved tinea pedis—one with an associated tinea cruris—and when retested three weeks and twelve months after infection gave a strongly positive result.

### Summary

Attention is called to the increasing frequency of pedal tinea in America and to the large number of statistical investigations published by American observers.

The lack of comparable figures in this country is noted, and appears to be due to non-appreciation of the condition among the great mass of the profession.

The difficulties and pitfalls of diagnosis are described and a conservative opinion by Ramsbottom is quoted.

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### REFERENCES

- Amberson, S. (1910) *J exp Med* 12, 435.  
 Andrews, G. C. and Birkman, F. W. (1931) *N Y St J Med* 31, 1029.  
 Ayres, S. and Anderson, N. P. (1934) *Arch Derm Syph* Chicago, 29, 543.  
 Beintema, K. (1931) *Nederl Tijdschr Geneesk* 75, 4302.  
 Bruhns, C., Alexander, A. and Kadisch, E. (1929) *Med Klink* 25, 1769.  
 Castellani, A. (1934) *J trop Med Hyg* 37, 365.  
 Catanei, A. (1932) *Arch Inst Pasteur Alger* 10, 195.  
 Farley, D. L. (1921) *Arch Derm Syph* Chicago, 3, 759.  
 Garzella, N. (1926) *G Ital Derm Sif* 67, 280.  
 Gilman, R. L. (1935) *J Amer med Ass* 100, 715.  
 Graffenried, C. von (1918) *Derm Wschr* 68, 361.  
 Gray, A. M. H. (1934) *British Medical Journal* 2, 541.  
 Greenbaum, S. S. (1924) *Arch Derm Syph* Chicago, 10, 279.  
 Hulse, S. H., and Jordan, F. M. (1925) *Amer J med Sci* 169, 267.  
 Jadassohn, W. and Peck, S. M. (1929) *Arch Derm Syph* Berlin, 158, 16.  
 Legge, R. T., Bonar, L., and Templeton, H. J. (1929) *J Amer med Ass* 93, 170.  
 Lomholt, S. (1934) *Ugeskr Laeg* 96, 655.  
 McLachlan, A. D., and Brown, W. H. (1934) *Brit J Derm Syph* 46, 457.  
 Mitchell, J. H. (1922) *Arch Derm Syph* Chicago, 5, 174.  
 Muende, I. (1934) *Brit J Derm Syph* 46, 488.  
 Muskatblat, E. and Director, W. (1933) *Arch Derm Syph* Chicago, 27, 739.  
 Peck, S. M. (1930) *Ibid* 22, 40.  
 Per, M. L., and Braude, R. (1928) *Acta derm venerol* 9, 1.  
 Ramsbottom, J. (1931) Medical Research Council, *System of Bacteriology in Relation to Medicine* 8, 11, London.  
 Ravaut, P. and Rabreau, H. (1932) *Presse med* 40, 1925.  
 Rosen, I., Peck, S. M. and Sobel, N. (1931) *Arch Derm Syph* Chicago, 23, 1041.  
 Ruete, A. E. and Scholz, U. (1934) *Derm Z* 68, 241.  
 Scholz, V. (1934) *Derm Wschr* 99, 1342.  
 Strickler, A. et al. (1932) *Arch Derm Syph* Chicago, 25, 1028.  
 Sulzberger, M. B. (1928) *Ibid* 18, 891.  
 — and Kerr, P. S. (1930) *J Allergy* 2, 11.  
 — and Wise, F. (1932) *J Amer med Ass* 99, 1759.  
 Tarantelli, E. (1926) *G Ital Derm Sif* 67, 108.  
 Weidman, F. D. (1926) *Arch Derm Syph* Chicago, 13, 374.  
 — (1927a) *Ibid* 15, 445.  
 — (1927b) *Ibid* 15, 427.  
 — (1936) Personal communication.  
 White, C., and Taub, S. J. (1932) *J Amer med Ass* 98, 524.  
 White, C. J. (1927a) *Arch Derm Syph* Chicago, 15, 889.  
 — (1927b) *Ibid* 15, 467.  
 Wise, F., and Wolf, J. (1936) *Ibid* 34, 1.  
 Whitfield, A. (1908) *Lancet* 2, 237.  
 — (1911) *Brit J Derm Syph* 23, 35.  
 — (1935) Personal communication.

## Clinical Memoranda

### Pneumococcal Meningitis Treated with Prontosil Soluble

The case recorded below appears to afford further evidence of the efficacy of prontosil in the treatment of pneumococcal meningitis, and presents in addition several other points of interest.

#### CASE RECORD

A girl aged 5 years was admitted to hospital on February 22, 1938, with a provisional diagnosis of meningitis. For the past three weeks she had been suffering from whooping cough.

On examination she was found to have a generalized purpuric rash, chiefly marked on the abdomen and limbs. There was rigidity of the neck muscles and head retraction and a tendency to opisthotonos. Photophobia was present and Kernig's sign was strongly positive. The lungs apart from a few catarrhal signs, appeared normal, and there was an apical systolic murmur. The temperature was 101° F., the pulse rate was 160 and the respirations 30. Haematuria was present. The child was very lethargic and wore an expression of frowning discomfort.

Lumbar puncture was performed and the cerebrospinal fluid was found to be slightly turbid and under considerable pressure. The result of pathological examination was as follows: Cells 11,200 per cmm (all polynuclear); chloride 816 mg per ccm; protein 150 mg per ccm; sugar absent; globulin reaction positive. Pneumococci in direct smears and on culture.



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### REFERENCES

- Amber, S. (1910) *J. exp. Med.* 12, 435.  
 Andrews, G. C. and Birkman, F. W. (1931) *N. Y. St. J. Med.* 31, 1029.  
 Ayres, S. and Anderson, N. P. (1934) *Arch. Derm. Syph. Chicago* 29, 543.  
 Beintema, K. (1931) *Nederl. Tijdschr. Geneesk.* 75, 4502.  
 Bruhns, C. Alexander, A., and Kadisch, E. (1929) *Med. Klin.* 25, 1769.  
 Castellani, A. (1934) *J. trop. Med. Hyg.* 37, 365.  
 Catanei, A. (1932) *Arch. Inst. Pasteur Alger.* 10, 195.  
 Farley, D. L. (1921) *Arch. Derm. Syph. Chicago*, 3, 759.  
 Garzella, N. (1926) *G. Ital. Derm. Sif.* 67, 280.  
 Gilman, R. L. (1935) *J. Amer. med. Ass.* 100, 715.  
 Graffenried, C. von (1918) *Derm. Wschr.* 66, 361.  
 Gray, A. M. H. (1934) *British Medical Journal* 2, 541.  
 Greenbaum, S. S. (1924) *Arch. Derm. Syph. Chicago* 10, 249.  
 Hulsey, S. H., and Jordan, F. M. (1925) *Amer. J. med. Sci.* 169, 267.  
 Jadassohn, W., and Peck, S. M. (1929) *Arch. Derm. Syph. Berlin*, 158, 16.  
 Legge, R. T., Bonar, L., and Templeton, H. J. (1929) *J. Amer. med. Ass.* 93, 170.  
 Lomholt, S. (1934) *Ugeskr. Laeg.* 96, 655.  
 McLachlan, A. D., and Brown, W. H. (1934) *Brit. J. Derm. Syph.* 46, 457.  
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 Muende, I. (1934) *Brit. J. Derm. Syph.* 46, 488.  
 Muskatblat, E., and Director, W. (1933) *Arch. Derm. Syph. Chicago*, 27, 739.  
 Peck, S. M. (1930) *Ibid.* 22, 40.  
 Per, M. L., and Braude, R. (1928) *Acta derm. venerol.* 9, 1.  
 Ramsbottom, J. (1931) Medical Research Council, *System of Bacteriology in Relation to Medicine* 8, 11, London.  
 Raviut, P., and Rabreau, H. (1932) *Presse med.* 40, 1925.  
 Rosen, I., Peck, S. M., and Sobel, N. (1931) *Arch. Derm. Syph. Chicago* 23, 1041.  
 Ruete, A. E., and Scholz, U. (1934) *Derm. Z.* 68, 241.  
 Scholz, V. (1934) *Derm. Wschr.* 99, 1342.  
 Strickler, A. et al. (1932) *Arch. Derm. Syph. Chicago* 25, 1078.  
 Sulzberger, M. B. (1928) *Ibid.*, 18, 891.  
 — and Kerr, P. S. (1930) *J. Allergy* 2, 11.  
 — and Wise, F. (1932) *J. Amer. med. Ass.* 99, 1759.  
 Tarantelli, E. (1926) *G. Ital. Derm. Sif.* 67, 103.  
 Weidman, F. D. (1926) *Arch. Derm. Syph. Chicago*, 13, 374.  
 — (1927a) *Ibid.*, 15, 445.  
 — (1927b) *Ibid.*, 15, 427.  
 — (1936) Personal communication.  
 White, C., and Taub, S. J. (1932) *J. Amer. med. Ass.* 98, 524.  
 White, C. J. (1927a) *Arch. Derm. Syph. Chicago*, 15, 889.  
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Lumbar puncture was performed and the cerebrospinal fluid was found to be slightly turbid and under considerable pressure. The result of pathological examination was as follows: Cells, 11,200 per cmm (all polynuclear); chlorides, 816 mg per ccm; protein, 150 mg per ccm; sugar absent; globulin reaction positive. Pneumococci in direct smears and on culture.

The patient was given 10 ccm of prontosil soluble intra-muscularly twice daily on four successive days. At the end of this period the temperature and pulse rate fell to normal; the rigidity began to diminish and the child became less lethargic. The purpuric rash faded and the haematuria subsided.

Lumbar puncture was repeated on March 15. The cerebrospinal fluid was still under slight pressure and examination gave the following result: Culture sterile after twenty-two hours incubation. Cells 100 lymphocytes per c.c.m. Sugar present chlorides 725 m. per c.c.m. Globulin Nonne Apelt and Pandy reactions both negative. Protein 0 m. per c.c.m.

The patient made a complete and uneventful recovery and was discharged from hospital on March 29. Although the case presented several unusual features there can be little doubt that the basic condition was a pneumococcal meningitis and the response to treatment was of such a character as to justify the assumption that recovery was largely brought about by the injections of prontosil.

JOHN LINDON

M.R.C.S. L.R.C.P. D.I.H.  
Medical Superintendent

County Borough of East Ham  
Infectious Diseases Hospital

## Mechanical Obstruction of Ileum by Appendix

The following case, which came under my care at the Victoria Hospital, Swindon, seems of sufficient interest to be placed on record.

**Clinical History.**—The patient, a red-haired fair-skinned boy aged 13, was admitted to hospital complaining of pain in the right iliac fossa. Two years ago he had a similar attack which subsided under conservative treatment. On January 6, 1935, about 7 a.m. pain began suddenly in the right iliac fossa and he later felt sick and vomited. The pain was of an acute colicky nature and gradually got worse. He vomited repeatedly all day. In addition he had slight dysuria. His appetite was normally good and he was not constipated. Apart from the common complaints of childhood and jaundice when he was eleven years old his previous health had been good.

On examination the abdomen was seen to move slightly with respiration. Tenderness was marked a little below McBurney's point and was associated with hyperaesthesia and slight rigidity. On rectal examination no mass could be felt but he was extremely tender on the right side of the pelvis. Examination of the other systems revealed no abnormality.

**Diagnosis.**—The case was considered to be one of acute appendicitis although it was thought to be by no means typical—inasmuch as (1) the pain started in the right iliac fossa (2) the patient vomited repeatedly (3) the point of maximum tenderness was unusually low in the right iliac fossa.

**Operation.**—The abdomen was opened through a right gridiron incision and a distended and congested loop of small bowel was delivered through the wound. This was the terminal loop of the ileum which was tightly and completely encircled by a large appendix the tip of which was adherent to a tuberculous lymph node in the mesentery of the small intestine close to the root of the appendix. The appendix itself was congested and the lymph node to which it was adherent showed softening. After freeing the appendix along its whole length appendicectomy was performed and the obstructed loop of bowel was seen to empty immediately into the caecum. A number of lymph nodes were seen in the mesentery of the ileocaecal angle, one of these had caseated. The abdomen was closed without drainage.

Pathological examination of the appendix showed it to be congested and no evidence of tuberculous infection was found.

I am indebted to Mr J. Ewart Schofield, F.R.C.S., for permission to publish this case.

Milbank, S.W.1

DONALD MATHESON, M.B., Ch.B.

## Reviews

### GRAFTON ELLIOT SMITH

*Sir Grafton Elliot Smith: A Biographical Record & his Collections.* Edited by Warren R. Dawson, F.R.S.E., V.P.R.S.L., F.S.A. (Pp. 272, 3 illustrations, including a frontispiece, 12 6d. net.) London: Jonathan Cape Ltd. 1933.

Beyond any question Elliot Smith was one of the most remarkable personalities that have appeared in modern medicine. I have written medicine but a man so seen from the names of the men who have contributed to his biography, his zest for knowledge carried him far beyond the wide limits of the profession to which he was bred. The editor of the biography, Mr. Warren R. Dawson, who contributes a summary of the activities in which our great anatomist crowded his life, is not a medical man; he was one of the many young men of inquiring mind who perceived the fertility of the methods which Elliot Smith began to apply to the study of Egyptian civilization at the end of the nineteenth century, leading to conclusions which so startled and upset more orthodox scholars. Dr. W. J. Perry, who contributes a chapter on Elliot Smith as an anthropologist and ethnologist, is another early recruit who too up and extended lines of inquiry which arose from Elliot Smith's work in Egypt. Elliot Smith had this essential mark on his character: he had not only the vision to see the advance of knowledge was possible but also the inclination as to the way by which that advance could be attained. Then there is another non-medical chapter on the life of Lord Rutherford (a brief but invaluable chapter) dealing with the life which two young adventurers from the Dominion—first one from New Zealand the other from New South Wales—led in the University of Cambridge in 1896 when Elliot Smith arrived there.

The other chapters are written—and extremely well written—by anatomists. Professor J. T. Wilson, his master—it is a genius like Elliot Smith can be said to name a master—writes of early years in the University of Sydney; a chapter which leaves no doubt, in the mind of the reader that so far as Elliot Smith is concerned the boy was father to the man. Then follows a chapter on Professor Wood Jones who now occupies the chair of anatomy in the University of Manchester. Professor Wood Jones thus fills a position which was held and made famous by the man whom he brings so vividly to life in these pages. Professor Wood Jones joined Elliot Smith in Egypt and deals with the most fertile phase of the master's career. Then follows the important Manchester phase from 1899 to 1919 which is described by the pupil who succeeded him in Manchester, Professor J. S. B. Stoptford, now Vice-Chancellor of the University. The account of his life at University College London, the final phase of a wonderful career, has fallen into the able hands of a former colleague at University College, Dr. H. A. Harris, now professor of anatomy in the University of Cambridge. A summary of his career as an anatomist is contributed by Dr. A. J. E. Cave of the Royal College of Surgeons of England. Thus all phases of Elliot Smith's career have been covered and a picture has been drawn which future generations will certainly wish to possess.

Not the least valuable section is a complete bibliography; the items numbered 34—books, monographs, articles and reviews being included in the list. Elliot Smith served no period of apprenticeship in his career; like all first-class men he began his career (1874) with



a mature and finished piece of work—a research on the commissures of the mammalian brain. Being in contact with Professor J. T. Wilson, Almroth Wright, and C. J. Martin in those early years in Sydney, he acquired from them the best technique then available for microscopical work on the brain—more than students could then obtain in England. It was certainly Elliot Smith who introduced into British Anatomy modern methods of brain research. His predecessors approached the problems of the human brain by giving their attention to the form and size of its outer aspect, whereas Elliot Smith's intuition led him straight to its deepest and oldest parts—the commissures and the olfactory bulb and lobe. His predecessors began with the human brain and then worked down the animal scale, he began low down in the animal scale and worked upwards, and so came by a clear perception of the sequence of events which ended by giving man his predominant brain.

From 1894 to 1907 papers on the brain came in rapid sequence. In 1907 new items began to appear on his list of literature. He had then been teaching anatomy in the medical school at Cairo since his arrival in Egypt in 1900. Until 1907 he resolutely refused to be drawn from his prescribed course of brain research. Circumstances proved too strong for him. We find him becoming involved in the study of the ancient Egyptians—first of their bodies and then of their civilization. With most men a "new love" means a break with the "old love." But this was not so with Elliot Smith, he added subject to subject, and kept a "harem" of research going with ease.

The places held by Lord Rutherford and Sir Grafton Elliot Smith have been "filled," but their successors would be the last to claim that they had replaced them. Both advanced knowledge, both had the power to impart their gifts of mind to apt pupils, yet I feel persuaded, and the study of this life of him by old comrades and pupils has deepened my conviction, that coming generations will be interested in Elliot Smith not because of his discoveries, but because of the man he was—a man of a rich, peculiar, and lovable personality. I might have quoted passages from Stopford, Wood Jones, or H. A. Harris to bring out this personal aspect of his life, but I have refrained, leaving the enjoyment of these passages to the readers of Elliot Smith's biography.

ARTHUR KEITH

## INJURIES OF THE EAR

*Traumatismes de l'oreille*. By J. A. Ramadier and R. Causse. (Pp. 150, 15 figures. 45 fr.) Paris: Masson et Cie. 1937.

In their small volume on injuries of the ear Dr. Ramadier and Dr. Causse group the subject-matter under four headings: (1) injuries of the external ear, tympanic membrane, and middle ear; (2) fractures of the temporal bone; (3) gunshot wounds; and (4) concussion of the labyrinth. They provide in addition a description of the examination both clinical and pathological, required for medico-legal report or evidence.

A most important section deals with the light which has been thrown upon fractures of the skull by histological examination of the petrous portion of the temporal bone. Fractures of the temporal bone can be roughly divided into longitudinal and transverse varieties, while the oblique combines some of the characters of both, the longitudinal variety being the more common. In the longitudinal variety the line of the fracture descends from the squamous portion of the temporal bone across the tegmen tympani and middle ear and then passes along the anterior aspect of the pyramid. The tympanic mem-

brane is ruptured, but the internal ear and the facial nerve escape injury. The transverse variety is a fracture of the labyrinth and passes across the cochlea, and often the facial nerve is injured either at the internal auditory meatus or in the aqueduct of Fallopius. The inner or labyrinthine wall of the middle ear may be injured, but the tympanic membrane remains intact.

Nager has shown histologically that in transverse fractures the capsule of the cochlea may be cracked like an eggshell from such an injury, although there is no naked eye evidence of the fracture. If the patient recovers from a longitudinal fracture no dangerous sequel is to be feared, but after a transverse fracture the barrier between the middle ear and the internal ear is permanently impaired. Even a mild attack of otitis media is then liable to extend through the internal ear to the meninges. Thus a longitudinal fracture, which tears the tympanic membrane, is associated with some immediate risk of intracranial infection, whereas a transverse fracture with intact tympanic membrane puts the cavity of the tympanum into communication with the subarachnoid space at the internal auditory meatus, and heals in such a way that for the rest of his life the patient is in danger of meningitis should the middle ear become infected. The interval in recorded cases may be as short as twenty-eight days (Scheibe) or as long as fifteen (Brocq) or even sixteen (Schlittler) years, but the sequel is now proved to be a direct though remote consequence of the original injury, not a mere coincidence, and such a conclusion has been accepted by insurance companies. The information contained in the book might have been provided more concisely, but the matter is readable and is of prime importance in relation both to the management of head injuries and to the problems of compensation which arise later.

## RENAL DISEASE

*Practical Talks on Kidney Disease*. By Edward Weiss, M.D. (Pp. 176, 3 figures, 12 tables. 9s.) London: Baillière, Tindall and Cox. 1937.

Professor Edward Weiss of Philadelphia has made a useful summary of his reading and practice in a series of practical talks on renal disease. An attack of glomerulonephritis while a resident at hospital led him to take a special interest in the subject, and his experience with himself and his patients has enabled him to produce a handy volume which is informative and stimulating. He begins by traversing the old disputes between clinicians and pathologists, and traces the development of the modern concept of renal disease. The chief function of the kidney is the removal of waste products from the blood, at the same time preventing the elimination of certain vital substances. In addition it has much to do with the regulation of the water balance and maintenance of the acid-base equilibrium of the body. Kidney disorders lead to some degree of interference with renal function, but there is no selective impairment of renal function. In chronic renal disease the kidney, by means of its reserve capacity, can compensate for a disturbance of its function with increased work. It is important to recognize that impaired renal function is a decompensation and that failure may be brought about by extra-renal factors—diarrhoea, vomiting, active perspiration. The methods of assessing the efficiency of renal function are numerous. Not all are needed, in early cases the 11th recommends the modification of the concentration test suggested by Fishberg—specimens of morning urine obtained after taking no fluid after 6 p.m. the previous day. An impaired kidney cannot concentrate up to a 1:1000

gravity of 1023. In advanced chronic renal disease the non-protein nitrogen of the blood is the best index of renal failure.

The various groups of kidney disease are discussed on orthodox lines but the author is not afraid to state his own views. On the question of protein in the diet he insists that there is no need for restriction in glomerulonephritis except at the beginning and end of the disease; his remarks on the treatment of uraemia are practical; the nephritic oedema of the earliest stages and the nephrotic oedema of the subacute stage must be differentiated from the cardiac oedema of the final stages of chronic glomerulonephritis (small white kidney). On the subject of nephrosclerosis the author states that too much may be made of the effort to bring down the blood pressure. The patient with high blood pressure and perhaps albuminuria who is referred to as a cardiovascular renal case may be suffering from (1) cardiac disease with renal congestion (2) nephrosclerosis (3) chronic glomerulonephritis or (4) a combination of these processes. Progress in this subject is impeded by a failure to differentiate them. A series of plates beautifully illustrates the eye grounds and vascular changes in this group of diseases. Unfortunately numerous misprints sometimes the omission of a word make reading difficult and indicate hasty proof-reading. These detract from the pleasure of handling a well-informed book on renal disease.

### THE STEROL GROUP

*Sterols and Related Compounds. A Series of Three Lectures delivered at the Institute of Biochemistry, Cambridge.* By Professor E. Friedmann, M.D., Ph.D. With a Foreword by Sir Frederick Gowland Hopkins, O.M., F.R.S. (Pp. 100, 7s. 6d. net.) Cambridge: W. Heffer and Sons, 1937.

These lectures were delivered by Professor Friedmann in 1936. Sir F. Gowland Hopkins in a foreword points out the rapid development of the importance of the sterol compounds for both chemistry and biology. As always happens in such cases the mass of resultant literature is such as to make it inaccessible to all but specialists and hence an authoritative review on the subject is of great general value. The sterol group includes substances with an extraordinary variety of important physiological and pharmacological actions. This variety is fully indicated by the chapter headings which read: sterols, bile acids, heart poisons, saponins, vitamin D, sex hormones and carcinogenic agents. Even this list does not exhaust the activities of sterol derivatives since the same group also includes the adrenal cortex hormone, vitamin E and the organizers which regulate development in embryonic tissues.

The author treats the subject from the chemical aspect and gives a brief but lucid account of the brilliant researches whereby the relationships between these different groups have been established. The order of the complexity of the subject is indicated by the fact that irradiation of ergosterol produces at least six different derivatives, only one of which (calciferol or vitamin D<sub>2</sub>) is antirachitic while antirachitic principle of fish liver oils (vitamin D<sub>3</sub>) is yet another related compound. Similarly the author describes seven different forms under the general term follicular hormone. Facts such as these indicate the intricacy of the problems with which he deals. The chemistry of this group is of exceptional importance from many points of view and it is particularly important to medical science because advance in this field is the only hope of obtaining a number of important

hormones and vitamins in quantities adequate for general clinical use.

The volume is short (100 pages) but is liberally illustrated with structural formulae. The reason for its brevity is indicated by Sir F. Gowland Hopkins. The author has the gift of conveying clear and adequate information in the fewest possible words. The book contains, I believe, no single redundant sentence nor one unnecessary word.

### LEGAL MEDICINE IN AMERICA

*Legal Medicine and Toxicology.* By Thomas A. Gonzales, M.D., Morgan Vance, M.D., and Milton Helfern, M.D. (Pp. 744, 24s. 6d. net.) New York and London: D. Appleton-Century Company, 1937.

Medical jurisprudence in the sense of the science of criminal necrology is practical or nothing. It grows in the unsavoury soil of the mortuary and flourishes in large and turbulent cities. These authors have for years been investigating violent, sudden and suspicious deaths in the police department of New York. Few better opportunities could be imagined for acquiring a familiarity with the victims of suicide, murder and accident. In the city of New York the medical examiner's office investigates about 15,000 deaths every year. Since 1918 when the coroner was abolished it has investigated over a quarter of a million deaths. The authors are pupils and close associates of the late Dr. Charles Norris, the first chief medical examiner of the city and form one of the most famous teaching organizations for legal medicine in the world. They are therefore excellently qualified to write a classical textbook and they have written one which may well be adopted in all English-speaking countries as a guide to the solution of medico-legal problems of every kind. Its bias is naturally upon criminology, but no part of the science is neglected.

Toxicology is treated in a separate section and from a practical point of view. The various poisons are dealt with in separate chapters under their main headings—for example, poisonous gases, corrosives, metals and salts—and their analyses are treated in detail in three more chapters. The authors discuss in close detail the routine work of the medico-legal expert and the section on blood grouping is full and up to date. The rights and obligations of physicians are taken rather shortly, but adequate attention is given to the medical side of insurance and compensation. There is probably more to be said about forensic psychiatry than the authors say in six pages, but into those six pages they have compressed much valuable information. Briefly the book has no gaps and hardly a word is superfluous. It is beautifully classified and the detailed table of contents almost makes the index superfluous. Its most striking feature is its enormous number of excellent photographs, mostly of corpses in various stages of decomposition or mutilation. One drawback is the immense weight of the volume, perhaps due to the demand of the half-tone blocks for a heavily loaded paper.

### Notes on Books

In his small book *Failure of the Heart and Circulation* which is one of a series termed Pocket-Monographs on Practical Medicine, Dr. TERENCE EAST has by the use of an epigrammatic style and the complete exclusion of padding succeeded in comprising more real information than is contained in some large textbooks. The modern views on the mechanism, types and causes of heart failure are given not in any detail but so that the student may understand the principles, and symptoms are likewise dis-

cussed in the light of recent work on pathological physiology. The relatively long section on treatment is an admirable summary of essentials, though it is difficult to understand the author's luke-warm approval of digitalis for failure with normal rhythm. There are occasional other points on which cardiologists might differ, but as a whole the book gives the student and practitioner a sound outline of cardiology presented in the best way—that is, on the basis of physiology. In spite of the terse style it is clear and readable. The publishers are J. Bale, Sons and Curnow, and the price is half-a-crown.

*The Baths of Bath in the Sixteenth and Early Seventeenth Centuries* is a little book by P. ROWLAND JAMES, M.A. (J. W. Arrowsmith, 5s). Visitors to Bath are so accustomed to think of the city as a beautiful town peopled by the brilliant company known to Jane Austen that Mr. Rowland James has done good service by describing its rise. It was a small-walled city in the reign of Henry VIII inhabited by cloth-workers, the baths were negligible, and spa treatment had not yet come into vogue. A hundred years later William Turner, Doctor of Medicine, Dean of Wells, and a great botanist, Dr. Jorden, and Toby Venner had drawn attention to the baths. Anne of Denmark, Queen of James I, Charles I, and Henrietta Maria visited them, their reputation was made, and the cloth-workers became keepers of lodging houses. Mr. Rowland James tells the story of the change, going to original documents for his facts and illustrating them with maps and copies of old engravings. Appendices contain a list of distinguished visitors to Bath from 1573 to 1624, among them are Queen Elizabeth, the Earl of Essex, Sir Walter Raleigh, Thomas Howard Earl of Arundel, and many others. There is a record of the companies of players who were present in Bath between 1569 and 1617, and a hand-list of the manuscripts and principal works consulted.

Dr. E. P. STIBBE's *Introduction to Physical Anthropology* (Edward Arnold, 10s. 6d.) has satisfied an urgent demand for a short book giving the necessary information for field workers in anthropology, and the new edition of his manual, which has been fully revised and enlarged, will be very welcome. The general trend of the first edition has been maintained—namely, a clear account of the aims and scope of physical anthropology combined with detailed information of just those points which it is necessary for a non-professional worker to know. The new edition includes an excellent elementary account of modern statistical methods by Dr. W. A. M. Smart, some new illustrations, and a considerable amount of recent information on anthropological discoveries, such as the newly found skulls of *Manthropus*.

A new paper (No. VII) by John R. Baker, M.A., D.Phil., lecturer in cytology in the University of Oxford, on *The Spermicidal Powers of Chemical Contraceptives: Approved Tests* is now available from the office of the National Birth Control Association, 69, Eccleston Square, London, S.W.1, price 6d., post free 7½d.

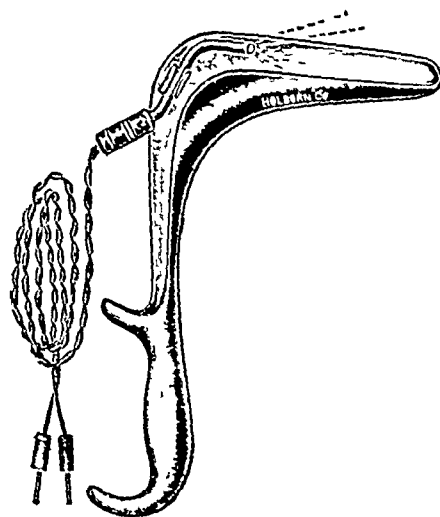
Dr. WALTER RUHMANN of Berlin issues a translation into German of the *Liber de Rheumatismo et pleuritide dorsali* which appears appropriately enough at a time when rheumatism is attracting general attention. The original treatise was published in Paris in 1542 by Biliarius (1538-1616), one of the great teachers of the French school of medicine. Biliarius, known to his contemporaries as Guillaume de Baillou, was urgent that medicine should go back to Hippocratic methods and was thus in some sort a forerunner of Sydenham in our own country. Dr. Ruhmann, in addition to the translation supplies an introduction, an appendix, and a list of the works consulted. He also reproduces a pleasing engraving of Biliarius at the age of 43. The book is published at Mittenwald by Arthur Nemayer, price RM. 1.80 or RM. 3 bound. It is entitled *Das Rheumabuch des Doktor Biliarius*.

## Preparations and Appliances

### INDUCTION SPECULUM

Mr. A. LEECH-WILKINSON and Dr. D. A. MITCHELL (Bath) write

This instrument has been devised for the special purpose of induction of labour by the Drew Smythe catheter method, or by simple puncture of the membranes without anaesthesia. It has been found particularly useful in multiparae, in whom the voluminous folds of the vagina are apt to bury the ordinary Sims speculum and prevent vision of the cervix, which may be situated high up behind the total head. The distal (cervical) end of the instrument is exactly



the same width as the ordinary Sims speculum but shallower, from this point backwards it broadens generously to its proximal extremity, the sides being deepened and the length increased. A retractor type of handle is employed as giving the best command of the blade and, with the patient in the left lateral position, the clip of the light carrier lies on the inner aspect of the upper side.

The instrument has been made for us by the Holborn Surgical Instrument Company, Ltd., 26, Thieves' Inn, London, E.C.1.

### HOMOGENIZED INFANTS' FOODS

Libby's homogenized baby foods (Libby, McNeill and Libby, Ltd.) represent an interesting advance in infant feeding. Vegetables, fruits, and cereals are treated by a special method which breaks down the cells and subdivides fibres into fine particles. The material is thus reduced to a fine powder, which can be digested in the absence of the enzymes necessary to break down vegetable cells.

The manufacturers provide pamphlets which report on an extensive series of laboratory and clinical experiments. Vitamin assays showed a high vitamin content. *In vitro* tests with digestive enzymes showed a rapid conversion of starch to lower carbohydrates. X-ray examination showed that homogenized vegetables left the stomach about four times as quickly as did strained vegetables. A dietary study of seventy infants showed that homogenized vegetables did not cause gastro-intestinal disturbance and prevented the development of nutritional anaemia.

The makers claim that these homogenized preparations make it possible to supply infants with vegetables at the age of three months. The introduction of these preparations would appear to constitute an important advance in infant feeding and the manufacturers are to be congratulated on the care with which they have organized exhaustive tests of the properties of their products.

## ANTE-NATAL CARE AND SOME COMPLICATIONS OF LABOUR

BY

D. J. MacRae, M.B., F.R.C.S.D., M.C.O.G.

*Obstetric Registrar St. Mary's Hospital*

It is commonly understood that the first stage of labour begins with the establishment of uterine contractions. It would however be of greater benefit if it were considered that this stage began during the last few weeks of pregnancy with the formation of the lower uterine segment and a slow moulding and reconnoitring of the presenting part into the most acceptable pelvic position. At this time there arise also in the patient's mind those vague doubts and fears which it not allayed may influence injuriously the course of labour. It is during these latter weeks too that many fundamental decisions are made and skilled guidance given which will have a profound effect on the ultimate labour.

### Pelvic Measurements

It is well to obtain a mental picture of the physical and sexual development of the patient before beginning the examination of the pelvis. A short squat figure and absence of femininity often reflects a similar lack of female characteristics in the bony pelvis and may be associated with indifferent pains at parturition. Knowledge of the external pelvic measurements alone is of little value and the teaching that the foetal head is the best pelvimeter is but partially true. There are cases with normal external measurements in which internal examination may reveal a jutting sacral promontory or undue prominence of the ischial spines. Again cases are seen in which the foetal head cannot be made to engage in the pelvis although an easy labour may ensue or in which the head may engage but labour be prolonged and even difficult. If a foetal head passes through the pelvic inlet it should likewise in the great majority of cases pass through the outlet. Yet experience shows that many such cases are liable to end in stillbirth. Minor degrees of pelvic contraction while permitting delivery may so delay descent or initiate uterine inertia that there is a prolonged and dangerous compression of the foetal head. It is only by means of a careful examination of the pelvic cavity and outlet that such difficulties can be foreseen. Routine internal examination educates the fingers to the normal pelvic roominess and permits estimation of the available space in the anterior and posterior segments of the pelvis so that when any abnormality is encountered it is readily appreciated.

Gauging the width of the subpubic angle is difficult and requires practice but the posterior segment can readily be measured. The method of Caldwell and Mollov is preferable to that of the estimation of the posterior sagittal diameter. In the former the distance between the sacrum and the ischial spine is measured along the sacro spinous ligament and in the normal female pelvis this should accommodate three fingers. With a normally curved sacrum a shorter measurement here suggests a small sacro sciatic notch conforming with that found in the male type of pelvis in which delay of the head at the outlet is liable to occur. When as often happens with this kind of pelvis the head has engaged in a posterior position the narrowing outlet may lead to a failure in rotation and result in the typical deep transverse arrest of the foetal head. The smallness of the subpubic angle also leads to outlet delay the occiput finds difficulty in slipping below the pubic arch and if the perineum is firm an episiotomy or the application of forceps to the low-lying head will be necessary.

### Position of the Foetal Head

A careful palpation is made of the abdomen to reveal the position of the foetal head. In the majority of cases

it will be found lying in the transverse diameter of the pelvic inlet with the occiput to one or other side and in patients with a normal pelvis and development no difficulty is to be expected at parturition. A posterior position of the occiput on the other hand is sometimes associated with an abnormal pelvis and especially one with male tendencies. At one time Buisson pads were used to induce an anterior rotation of the occiput and Herrman practised an external rotation of the head and body. Such methods however are neither sufficiently successful nor are they always indicated in certain types of pelvis. It is normal for the head to descend in a posterior position. If immediate correction is undertaken it is usually found at the next ante natal examination that the foetal head has reverted to its previous position. The majority of cases ending as they do successfully for mother and child are hence at this stage best left alone. When in the absence of pelvic abnormalities or tumours the foetal head is found in the latter weeks of pregnancy in an abnormal position—in the fundus or iliac fossa—and being corrected persists in moving away from the lower pole of the uterus a low insertion of the placenta may be suspected. Such patients may well be treated on the lines of those suffering from ante partum haemorrhage and be admitted to hospital for the appropriate investigations.

### The Non engaged Head

There is no manoeuvre better suited for demonstrating whether a non engaged head will or will not enter the pelvis than that used by Fahmy. With the index finger and the thumb exerting pressure upon the occiput and sinciput respectively the patient is asked to sit upon the examination couch. On doing so unaided her abdominal muscles tighten often pressing the foetal head into the pelvis. If however the head does not descend with digital pressure as may happen in the patient with an increased pelvic inclination an additional manoeuvre can be attempted. The patient is made to lean as far forward as possible relaxing the abdominal muscles and thereby enabling the uterus to fall more into line with this less vertical axis of the pelvic inlet. Then digital pressure often causes the head to enter the pelvis with an ease and spontaneity which is at once surprising and comforting. Any overlapping of the foetal head on the symphysis pubis is readily appreciated at this time by the palm of the examining hand which can feel simultaneously the foetal head and the pubes.

Some of the cases of non engagement of the foetal head left to have a trial labour belong to the class with increased pelvic inclination. The quick descent of the head which is so often seen after rupture of the membranes in these cases can be understood. The head resting uneasily upon the pelvic brim when labour starts allows the liquor amnii freely to escape below it with each contraction there is therefore in the early stages of labour a failure of descent of the foetal head. The bag of waters meanwhile allows of a slow taking up of the cervix but as soon as the external os begins to dilate there is the risk of rupture of the membrane. With the membranes ruptured the uterus is able to push directly on the foetus usually causing the head to enter the pelvis in the position of anterior asynclitism. Good contractions and the direct pressure of the foetal head allow the thin lower uterine segment and the os to be pulled up and dilated.

### The Patient's Mental Attitude

There is no physiological process in which the mental attitude of the patient exerts a more profound influence than during pregnancy and labour. Its effects in inducing pathological conditions and serious mental disturbances are well known and it is equally important to recognize the physical effect this mental attitude can produce in relation to the actual birth of the child. There is no greater error than to omit to treat especially in primigravidae incipient fears and misgivings. Furthermore, a

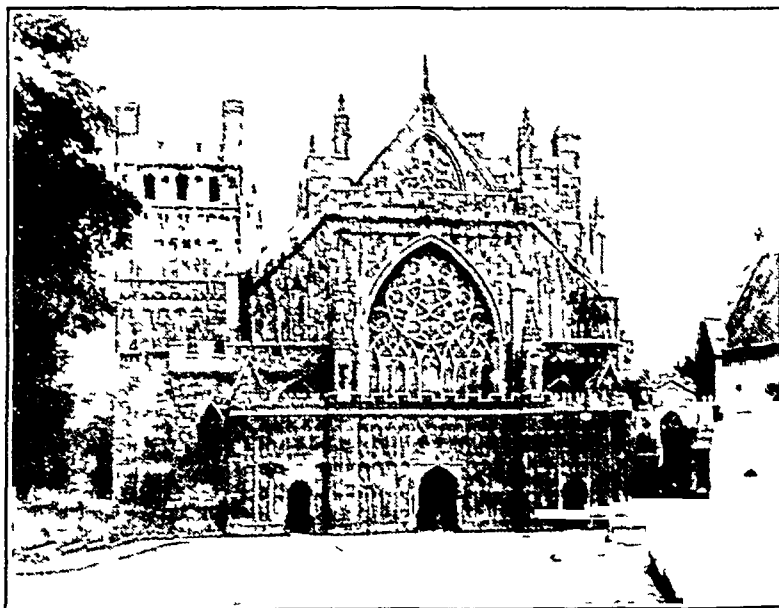
# ONE HUNDRED AND SIXTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION PLYMOUTH, 1938

**T**HE one hundred and sixth Annual Meeting of the British Medical Association will be held in Plymouth next summer under the presidency of Dr Colin D Lindsay, senior physician to the Prince of Wales's Hospital Plymouth. He will deliver his address to the Association on the evening of Tuesday, July 19. The Sectional Meetings for scientific and clinical work will be held on Wednesday, Thursday, and Friday, July 20, 21, and 22, the morning sessions being given up to discussions and the reading of papers. The Annual Representative Meeting for the transaction of medico-political business will begin on the previous Friday, July 15. The full list of presidents, vice-presidents, and honorary secretaries of the seventeen Scientific Sections, the provisional programme and time-table, information about accommodation, and other details of the arrangements for the Annual Meeting were published in the *Supplement* of April 9. We publish below the third of a series of descriptive and historical articles on Plymouth. The first and second articles appeared on January 1 (p. 32) and March 5 (p. 518).

## DEVON AND CORNWALL

Few counties can compare with Devon and Cornwall for richness of scenery, the chief characteristic of which is probably its vivid contrasts. Compare that vast tableland of Dartmoor with its rugged tors, its wide expanses of sparse moorland, its tumbling streams and its panoramic views, with the winding lanes in the softer lowlands leading to the coast, flanked by high hedges in brilliant greens of grass and fern, and gemmed with a rich variety of wild flowers, which thrive in profusion. Again, compare the romantic cliffs of North Cornwall, those huge natural battlements presenting passive yet impregnable resistance to the never-ceasing onslaught of Atlantic rollers, with the quiet retreat of Dartmeet, where two rivulets born among the crags of the moor join forces on their journey to the sea, 'making sweet music with their enamelled stones'.

Beauties are here for visitors to enjoy, and excursions have been arranged to enable them to appreciate all that the two counties have to offer. Any who are interested in history or in archaeology as well as natural beauty will find much to appeal to their tastes. The West is rich in both. This may be judged from some of the salient features of places to be visited.



EXETER CATHEDRAL

(Henry Wykes Exeter by courtesy of Corporation of City of Exeter)

## Exeter

Exeter is the county town. Parliamentary and municipal borough, seat of a bishopric, head of an archdeaconry, a city and shire with its own sheriff and under-sheriff, and a county borough. Its situation is both picturesque and commanding and it is a notable fact that from prehistoric times it has maintained unbroken its position as the local capital. Long before the Roman invasion it was the most ancient of British cities, and though the Roman dominion ceased early in the fifth century, it became the head of Damnonia and the chief city of the West. When its recorded history began towards the close

of the ninth century it was the leading city of the West Saxon kingdom. The origin of its municipal constitution is not on record, although it was presumably governed by reeves. Its first charter was granted by Henry II, and it elected parliamentary representatives as far back as 1264.

Exeter preserves much of the past and yet is up to date, possessing fine modern buildings and old historic houses. A magnificent and venerable pile is the Cathedral with its bold and massive design, rich in the decorated tracery of its windows. Of its original erection nothing is known. A local historian of the sixteenth century said there were within the precincts of the close three religious houses:

a nunnery—now the Deans' house—and two monasteries, one founded in 868 and the other in 937. The Chapter House dates back to 1224 and the Cathedral register to 1194 but the episcopal register contains entries from 1255. The peal of bells is stated to be the heaviest in England. One large bell, known as Great Peter and weighing over 55 tons, was presented to Bishop Peter Courtenay in 1480. The Guildhall, another notable building, was built in 1310 and re-erected in 1464. Rougemont Castle, at one time a fortress, stands on a rocky eminence on the north angle of the

city wall, two hundred feet above sea level. The corporation possesses many treasures: there is a fine museum as well as the up-to-date buildings of the University College of the South-West.

## Torquay

From whatever point of vantage one looks down on Torbay, Torquay is always a beautiful sight. To-day the space called Torbay is covered with water, and this has been its condition for thousands of years, but such has not always been the case. At least twice previous to the luxuriant forests have flourished here where now the sea

ebb and flow. Geologists can point out the raised beaches indicating its former possession by the sea and any day at low water relics of the more recent forest may be seen on the Torre Abbey sands.

In 1588 one of the captured galleons (the *Capitana*) of the so-called invincible Armada was brought into Torbay and her soldiers and sailors placed as prisoners in the tide barn of Torre Abbey. Their memory still haunts the place for it has been called 'The Spanish Barn' ever since. In 1685 the Prince of Orange afterwards William III came here and landed at Brixham whence he marched to Exeter on his way to London. The Jacobite Duke of Ormonde sailed into the bay in 1715 with the object of raising Devonshire on behalf of the Pretender but as no response was made to his signals he sailed back to France. During the wars preceding and accompanying the French Revolution Torbay was the place of assembly for a long succession of fleets. Maritime war preparations were constantly present until the arrival of Napoleon on board the *Bellerophon* in 1815 after which beyond the occasional appearance of a few warships peace descended on these waters.

It was during these French wars that Torquay began to grow. A ship would be ordered to Torbay to await the arrival of her consorts and might be lying there for months before the requisite complement to form the fleet was assembled and nearly all our celebrated admirals, including Nelson, St Vincent and Howe came here hoisted their flags and sailed away. The coming of these strangers encouraged the natives to build a few small houses to accommodate them and their families. Very few of these families lacked an ailing member and it was soon apparent that many of these benefited by their stay in Devon so the beginning of Torquay's climatic reputation may really be ascribed to the French wars.

Every visitor must be struck by the beauty of Torquay. The town is built on a series of hills on which are innumerable villas each in its own well wooded garden. The view of the town from the sea is really enchanting.

Leaving Torre Abbey and following the coast line there is a long panorama of beautiful buildings, hotels and villas and the terraces and architecture give the impression of an Italian seaside town. The town is built round the harbour and it is interesting to see the water so close to the principal thoroughfares especially when the water is dotted with boats and yachts. The flowers give ample testimony to the mildness of the climate. Even in February one can see out of doors the flower

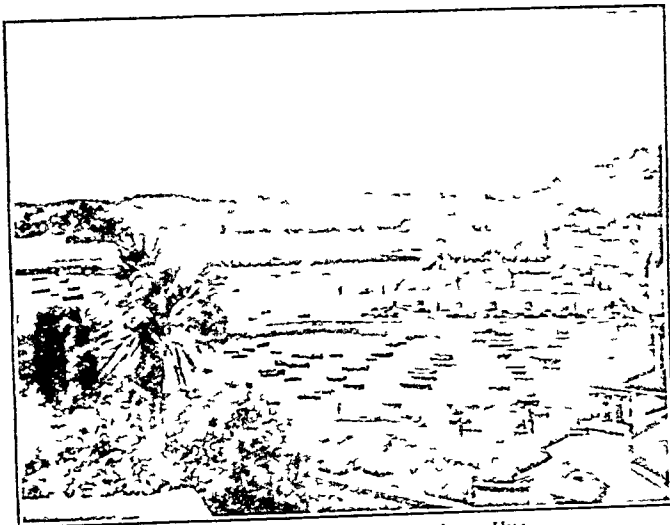
of the magnolia blooming beside the crimson camellia. The aloes flourish easily and so do flax, myrtle, bamboo and various sorts of palm.

There is an idea among those who do not know Torquay that because the climate is mild in winter it is hot in summer but this is fallacious. Torquay is built on a promontory dividing Paignton from Babbacombe. The surrounding water of Torbay together with the breezes from the hills tend to keep this resort cool. The advantages of so equable a climate so much natural beauty and such ample provision for the entertainment and comfort of visitors make Torquay most suitable for physical treatment and it is fortunate in possessing a splendidly equipped modern marine spa under the control of the corporation staffed by fully certified assistants. It possesses too in the Meadfoot Spring a water having medicinal value.

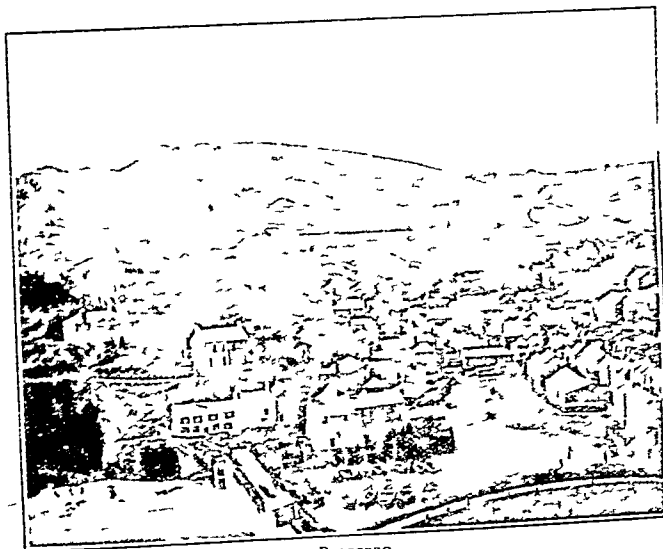
#### Other Historic Beauty Spots

**Moretonhampstead** on Dartmoor near the eastern border was originally a borough by prescription and formerly governed by a Portreeve. The annual courts at one time held by the Earl of Devon have been

discontinued. A typical moorland town its link with the past may be judged from the fact that its Charter for the market and two fairs was obtained by Hugh de Courtenay in 1335. The Church of St Andrew built in the Perpendicular style has two good pieces of granite in the stained glass windows. The church register dates from 1603. George Parker Bidder the famous calculator and engineer a friend of George Stephenson, was born here in 1806.



TORQUAY LOOKING WEST FROM VANE HILL  
(Re produced by courtesy of the G.W.R. Company)



POLPERRO  
(Western Morning News Co. Ltd. Plymouth)

have set us fine examples in the patient ascertainment of data bearing on the question of heredity. In the immense volume of effort devoted to the study of cancer in this country a place should be found for this analytical type of research on the broader basis which the "follow-down system" would require.

## HEALTH IN PUBLIC SCHOOLS

The public schools of England, their good points and bad points, have been discussed by innumerable writers, great and small, particularly during the last century, we do not think, however, that as a class they have been the subject of a Stationery Office publication since the Royal Commission of 1864, when girls did not sport old school ties. Elsewhere in this issue we print a brief abstract of a Stationery Office publication—*Epidemics in Schools*—which is concerned with that aspect of public school life of special interest to our profession. It is a valuable document, the historical introduction to which is pleasant reading in these pessimistic times, because the contrast between hygienic conditions now and even a century ago is great, and it is made plain that the public spirit of the medical profession has been a powerful factor in the improvement.

The main object of the report, which is an interim report, is to give a precise account of the frequency and severity of disease, particularly infectious disease, in the schools. Although the period of observation is only five years, the data are so extensive that, so far as concerns the age and sex incidence of sickness and the attribution of time lost through sickness to various diagnostic groups, it is unlikely that further data would modify the impression conveyed. Differences as between particular schools and as between boys and girls in the aggregate are striking. Sometimes an obvious explanation suggests itself. That minor nasopharyngeal infections—coughs, colds, and sore throats—should have a heavier statistical incidence upon girls than upon boys and upon younger than upon older children is not surprising, girls are likely to be looked after more sharply than boys, and young children are under closer supervision than the dignitaries of the sixth form. Why there should be a contrast in the incidence of serious illnesses such as otitis media, pneumonia, and acute rheumatism is less obvious. No doubt here, too, closer supervision plays its part. Again, droplet infection in sleeping quarters may be hindered by the greater use of cubicles or separate bedrooms in girls' schools. But the general problem is unsolved. Particular attention was given to the

dynamics of the common epidemic diseases. Here also are unsolved problems. Scarlet fever was introduced many times, but there are only eight instances of ten or more cases, and in the largest outbreak (twenty-five cases) only 3 per cent of those not previously attacked took the disease. It is common knowledge—the historical introduction gives specific instances—that in the days of our grandparents scarlet fever was a scourge of schools. The low fatality of scarlet fever now may perhaps be attributed to a change of type in the infecting organisms. How far this explains the low infectivity in school experience and to what extent improved sleeping accommodation and closer medical supervision are responsible are questions not yet satisfactorily answered. Turning to a directly practical matter, we note that the report expresses some fear that tonsillectomy is becoming a routine measure and doubts whether "this mass attack upon one of the normal structures of the body was justified." This is a subject upon which there is much to be said, the conclusion reached and the evidence upon which it is based deserve careful attention.

The committee has done pioneer work in epidemiological research and has had to fashion a new technique. Unlike psychological novelists, who make so many lurid discoveries in our public schools, it has no sensational results to record. The scientific pioneer does not expect to reach El Dorado in a day's journey: indeed if that city seemed to have been reached so soon he would know it to be a mirage. To the general reader perhaps even to the medical reader, this volume of 288 pages may not seem of much interest. Probably few readers of the *Philosophical Transactions* 250 years ago gave more than a glance at Halley's Life Table or realized that a new organon had been forged. A page or two of figures are not exciting, many pages are soporific. Yet this report may perhaps date a new epoch as surely as did Halley's Table. It is the first example of pure co-operative research in the field of school hygiene. We do not undervalue the immensely important work of the national school service, that deals with numbers of young lives in comparison with which the statistics of all the public schools are puny. But this smaller population is mainly a boarding-school population, a set of semi-isolated groups the epidemiological history of which may in the long run provide solutions for fundamental problems of group disease. Hence we should be grateful both to the committee and to its numerous collaborators. The first stage of a long journey has been completed—a journey which will gradually increase knowledge of epidemiology in general and the hygiene of youth in particular.



## HORMONAL REGULATION

The growth both of interest and of knowledge of the hormonal regulation of the body is exemplified by the publication of the reports presented to the

Journées Médicales de Paris Internationales for 1937<sup>1</sup>. They form a volume of 850 pages, contributed by chemists, biologists and clinicians most of whom have been engaged in active research on the subject in different countries. Professor Carnot's introduction is perhaps somewhat of the nature of a rhapsody, but he rightly emphasizes the part in this advance that has been played respectively by work on the chemical structure of hormones, histological studies of the glands themselves, clinical observation and particularly by the recognition of the mutual interplay between nervous and glandular mechanisms. All this has led to a much more accurate conception not only of the integration of the endocrine system but of the integration of the body as a whole. Even more, endocrinology is seen to have relationship with carcinogenic substances, vitamins and vegetable auxins, thus taking its appropriate place in a scheme of general biology.

Nothing has done more to clarify our views on the endocrine system than the realization of the manifold functions of the hypothalamus. Itself the mechanism controlling the expression of the emotions, it has ties on the one side with the cerebral cortex and on the other with the vegetative nervous system. In addition to this it is in such close relations with the pituitary body anatomically and physiologically that one may justifiably speak of a unit—the hypothalamic-pituitary apparatus. Indeed the nervous portion of this apparatus has even been observed to take on secretory functions after ablation of the glandular portion. This apparatus thus falls into line with the general law that nervous mechanisms operate through chemical intermediaries, or as Hopkins phrased it, chemical substances locally produced interpret for the tissues the messages received from the nerves. Doubtless the endocrine glands exert an autonomous activity of their own, here as Professor Loeper says in his admirably balanced summing up, they work in silence and in secret. But we now see as we did not at first, that this is only one half of the story. For through the sympathetic and parasympathetic, and also through the moderator action of the anterior pituitary, the whole endocrine system can be influenced by the central nervous system and mobilized for the benefit of the body as a whole. It is of course also true that the glands in their

turn can influence the activities of the central nervous system.

All this and more is fully discussed in these reports starting with Dr Roussy's article entitled 'Neuro-hormonal and Hormono-neural Regulation' but it is impossible to do more in the space at our disposal than to indicate the general trend of the discussions by this brief paraphrase. We must however call attention to Professor P. E. Smith's short communication in which he deals with the great difficulty of visualizing the existence of such a large number of hormones as separate entities as has been claimed for the anterior pituitary. He finds a partial solution in the variations in the receptivity of the structures on which these hormones are called upon to act. This is the other side of the problem: the nature of the hormonal stimulus has been intensively studied as these reports bear witness, but the study of the way in which the tissues receive the stimuli and differentiate between them has hardly begun.

## THE FLAVINE ANTISEPTICS

There has recently been correspondence in this *Journal* on the merits and uses of acriflavine which was of interest in reviving a long standing controversy dating indeed from the days of the war. This discussion was concerned simply with acriflavine itself but acriflavine is only one of several antiseptics similar in composition and in action. The best known of these are rivinol (ethoxydiaminoacridine lactate), proflavine (2,8-diaminoacridine sulphate) and those antiseptics which consist of a mixture of 2,8-diaminoacridine and its methochloride. A mixture of these substances in the basic condition is known under the names of euflavine, tryptaflavine and neutroflavine, while a mixture of the corresponding hydrochlorides is acriflavine. The proportions in these mixtures are undefined and variable, hence the desirability of identifying a single substance having merits at least equal to those of the best samples of acriflavine. As in so many other fields of therapeutic research, by no means all related compounds, any of which may possess a similar and perhaps superior action, have been synthesized and it is important that the properties of new compounds should be placed on record even if they are not of outstanding merit, since such extension of knowledge allows useful conclusions to be drawn on the general relationship between chemical constitution and biological action. A. Albert, A. E. Francis, L. P. Garrod and W. H. Lunnell<sup>2</sup> have now reported the synthesis of ten new acridine compounds together with a study of their biological properties from the points of view both of their capacity for killing or restraining the growth of bacteria and of their power to damage the body. From their results it appears that the science of antiseptics is far more complex than is generally imagined, an intri-

<sup>1</sup> Les Régulations Hormonales en Biologie, en Clinique et en Thérapeutique. Paris: J. B. Baillière et Fils, 1938, 100 fr.



cate series of differences in effect is revealed, some of which have important bearings on clinical application. For example, of the bacteria tested *Streptococcus pyogenes* is decidedly the most susceptible to the action of all acridine antiseptics, *Ps. pyocyanea*, on the other hand is unaffected by any of them, which means that one common type of wound infection is quite outside the scope of this treatment. The frequently quoted observation that serum actually enhances the antiseptic effect of acriflavine—instead of diminishing or even abolishing it, as is the case with agents of other kinds—is confirmed only to a limited degree and for the bacteria (which do not include *St. pyogenes*) with which Browning originally observed this effect. Tests of toxicity by two methods in some cases gave contrasting results, it appears that a compound may be more lethal than another to the whole body, but at the same time less lethal to leucocytes, and this difference no doubt reflects a varying susceptibility of different tissues, corresponding to the similar variation observed among bacteria. These facts would influence the choice of an antiseptic for different purposes, one being more suitable for local application to a wound on account of its harmlessness to leucocytes, another for internal use, as in treatment aimed at the urinary tract, on account of the tolerance to it of the body as a whole. The main conclusion emerging clearly from this study is that the more efficient of these compounds will stop the growth of bacteria, or even kill them, in spite of the presence of blood or serum, in concentrations which do not prevent the activity of leucocytes as judged by either motility or the phagocytosis of bacteria. In this their claim is unique, and no class of antiseptic has a better title to be regarded as the ideal prophylactic, particularly against streptococcal infection. There is all the difference in the world between prophylaxis and treatment, the former is still the province of old-established antiseptics, while the purposes of treatment, for which antiseptic applications have never been really satisfactory, are now likely to be better served by other means.

### ENZYME CHEMISTRY

Professor Carl Oppenheimer continues to work steadily at his task of summarizing recent advances in the huge subject of enzyme chemistry. During the past year he has brought out four more parts of the supplement to his encyclopaedic work on ferments and their action.<sup>1</sup> These parts complete the study of the proteases deal with the desmolases and begin the study of the zymases which cause the breakdown of hexose. Among the proteases considered are trypsin, pepsin, and thrombase. The outstanding advance recorded in the matter of trypsin and pepsin is their isolation in crystalline form by Northrop. Thrombase and blood coagulation occupy sixty pages but although numerous minor advances are recorded few major discoveries have been made recently in this subject. The section on the

desmolases opens with a review of modern ideas on the mode of oxygen uptake by cells a subject that has developed very rapidly during the past few years. These enzyme systems are of dominant importance in biology, since they supply the energy which maintains the activities of the great majority of living forms. The uptake of oxygen by cells appears to be effected by chain processes, each process is complex, and several parallel mechanisms exist even in a single cell. The complexity of the subject is indicated by the fact that a tabular summary of the known hydrogen and oxygen "acceptors" occupies five pages. Oxidative mechanisms have lately engaged particular attention, and knowledge in this field has advanced with exceptional rapidity, the general result has been to reveal enzyme systems of a hitherto unsuspected complexity. It seems probable that an equal complexity will be found in other fields of enzyme activity when these are examined with equal care. The living cell is forced to work under very strict limitations as regards variations of temperature, osmotic pressure, etc., and these limitations appear the probable cause for the remarkably complicated nature of biological enzyme processes. This general tendency towards complexity rather than simplicity adds much to the difficulty of enzyme chemistry, and is one of the primary causes for the enormous output of writings on this subject. Oppenheimer's encyclopaedic work is the only comprehensive guide to this literature and is of corresponding importance.

### BEE VENOM FOR ARTHRITIS

Tradition has it that bee-keepers are immune to rheumatism, and the sting of bees has for long been a popular remedy for sufferers from this disease, though it has only been employed by the medical profession during the last half-century. Since bee venom became available in a purified form its use by intradermal injection has grown more popular. The idea that the beneficial effects were due to formic acid was accepted for a long time, but recent research has shown that the explanation is less simple and that the action is analogous to that of snake venom. As with so many remedies, the value of published observations has been impaired by the unscientific way in which much of the work was carried out. The cases have not been carefully selected and defined, and controls have not been used. In such a disease as rheumatoid arthritis, which varies so much in severity and in which periods of improvement or quiescence often occur under favourable conditions without any special treatment, the difficulty of assessing the value of any remedy is great. Recently Kroner and a group of colleagues working in the medical department of Cornell University have carried out observations<sup>1</sup> on 100 patients. They were divided into three groups: in the first the disease was of an active and advanced type, in the second condition was less severe but characteristic features were present—usually fusiform swelling of the

<sup>1</sup> *Die Fermente und Ihre Wirkungen*. By Professor Carl Oppenheimer. Parts 6, 7, 8 and 9 of Supplement. The Hague: D. W. Junk. (10 Dutch florins each.)

joints in the third group there were no objective signs but there was complaint of pain in and tenderness of the joints. In all three there was an increased sedimentation rate. Definite improvement was observed in seventy three patients and seventeen were entirely free from symptoms six months to a year later. Naturally the proportion of improved cases was greatest in the least severe type but benefit was experienced by six out of the ten most severe cases with an improvement in the sedimentation rate also. No controls were used but the results were compared with those obtained in a series of 103 patients treated by other observers (for example by tonsillectomy and the administration of a haemolytic streptococcal vaccine) improvement was noted in 58.3 per cent. It must be noted that Kroner chose for the most part patients who had previously had a focus of infection removed and in his statistics does not distinguish these from those in whom tonsillectomy was thought to be contra indicated. All the patients were ambulatory they were prescribed cod liver oil a diet rich in vitamins and heat to the joints and to this regime undoubtedly some part of the improvement must be attributed. The importance of rest and measures for the improvement of the general health without any specific treatment is shown by the results which were published by Pemberton. He reported a series of 300 cases treated in this way so effective was it that in a considerable number no other treatment was found necessary. The lesson is obvious but a good case has been made out for a careful trial of treatment by bee venom in suitable cases.

### THE MIDWIFERY SERVICE

The report on the work of the Central Midwives Board for the year ended March 31 1937 has been published by H.M. Stationery Office price 4d. The period under review was one of far reaching development in the midwifery service in England and Wales. It may perhaps be regarded by future generations as approaching very near in importance the year 1902 during which the first Midwives Act for England and Wales was placed on the statute book and the foundations were laid for the establishment of a well ordered properly trained profession of midwives. The report gives statistics of the number of women on the Roll of Certified Midwives (65 046) and of those in practice (16 648). The number actually engaged in the practice of the profession was thus little more than a quarter of the total. Of the midwives enrolled 63 543 were trained women. A report of the examinations held both for pupil midwives and for midwives who wish to train pupils is included together with notes of various decisions by the Board on midwives' training etiquette and practice. During the year under review the Minister of Health approved the revised training and examination rules on the preparation of which the Board had been engaged for a considerable time. The two most important changes effected by the new rules are (a) an extension of the period of midwifery training both for trained nurses and for other pupil

midwives and (b) the division of the course of training into two parts each of which will be completed by an examination those successful in the second being awarded the certificate of the Board and admitted to the Roll of Midwives. Rules have also been framed and submitted to the Minister of Health for approval regulating the post certificate courses for practising midwives in accordance with the provisions of the Midwives Act of 1936. An important decision during the year was the permission given to midwives to administer nitrous oxide and air to women in childbirth under certain conditions. On the subject of teachers and teaching the report says

In the firm belief that the generally desired further improvement in the standard of skill and proficiency of midwives cannot be effected until there is an adequate supply of teachers possessing not only skill in the practice of midwifery but also teaching ability of a high order the Board has devoted special attention to the question of how best to secure quickly sufficient teachers of the type required. Almost without exception the midwives who are responsible at the present time for the instruction of pupil midwives are most skilful midwives but unfortunately the most skilled practitioner is not always the best teacher. Some of the existing teachers do not possess any real aptitude for teaching others would become good teachers if they were given the opportunity of receiving proper training in the difficult art of teaching. The main problems before the Board have been (i) how to discover the midwives who possess a natural aptitude for teaching and (ii) how best to instruct such midwives in teaching methods.

While the Midwives Act was in preparation and when it was before Parliament the Central Midwives Board had opportunities of conveying to the Minister of Health its views and suggestions on the various provisions. It is in complete sympathy with the aims of the Act and is confident that its provisions can be made the basis of a material improvement in the efficiency of the midwifery service. The Board has studied closely the requirements of the new domiciliary service of whole time midwives and the effect of its establishment on other branches of the Board's statutory duties. At the end of July the headquarters of the C.M.B. were removed to larger premises at 23 Great Peter Street Westminster S.W.1.

### FOOD POISONING FROM MILK

An outbreak of gastro-enteritis at Wilton in Wiltshire due to ingestion of contaminated raw milk is described in a report issued last week by the Ministry of Health.<sup>1</sup> The outbreak involved about one hundred individuals mostly school children on October 28 and 29 1936. It followed consumption of the milk at an interval of twelve to twenty four hours and was characterized by headache nausea vomiting and later by diarrhoea accompanied in some instances by much dehydration and collapse. The stools were frequent and watery but contained neither blood nor mucus. The diarrhoea lasted for one to three days. Pyrexia of 99° to 103° F. in the initial stages was commonly noted all the patients made rapid recoveries. Food poisoning from

<sup>1</sup> Report on an Outbreak of Food Poisoning due to *Salmonella* Type 'Dublin' and Conveyed by Raw Milk. Ministry of Health London 1938.

ingestion of preformed toxins, such as the toxin of *Staphylococcus aureus*, was thought unlikely, since a shorter interval—some three to four hours—is a characteristic feature of that condition. On the other hand, the absence of mucus and blood from the faeces and the rapid subsidence of symptoms were points against bacillary dysentery. Bacteriological examinations of the faeces were not carried out until six days after the onset and yielded negative results in every instance. From a specimen of the suspected milk on the second day a *Salmonella* organism, later identified as a "Dublin" type was isolated, and four days afterwards a sample of milk from the same producer yielded a similar result. Confirmatory evidence that this was the causative organism was provided by the finding of high-titre specific agglutination of the organism by the serum of nine of the children during convalescence. The serum of three out of fifty-one cows showed the presence of specific agglutinins but three examinations of milk were negative. On the other hand the dung of one of these three cows repeatedly gave positive results. Although the blood of one of the workmen at the distributing dairy gave a positive agglutination reaction, the evidence pointed to the conclusion that he was a victim rather than the cause of the outbreak. Investigation revealed that, owing to certain defects in the technique of operation of the mechanical milking-plant, contamination of the milk could have occurred. Reference is made in the report to outbreaks of enteric fever, scarlet fever and streptococcal tonsillitis in recent years, in all of which the infected milk had passed routine bacteriological standards for cleanliness. It is hinted that gastro enteritis or "summer diarrhoea" in children may sometimes be attributable to milk or other food contaminated in this way. The main conclusion to be drawn from this particular outbreak is that all milk should be efficiently pasteurized before being passed on to the consumer. The objection usually advanced against general application of this measure has lost any weight it had since it has been established beyond doubt that there is no significant difference in the nutritive values of raw and pasteurized milk.

### CONFIDENTIAL CERTIFICATION OF DEATHS

In the February issue of the *Quarterly Bulletin* published by the Health Department of the City of New York (vol vi, p 16) reference is made to a new procedure to secure confidential certification of the causes of death, worked out by Mr J Duffield and approved by committees of the New York Academy of Medicine and the Five County Medical Societies. The certifying practitioner will be asked to furnish two certificates: one contains only a general statement of the cause of death—for example, "natural cause", the other is a confidential report to be handed in a sealed envelope to the undertaker and to be transmitted by him to the Department of Health. This latter document must not be copied, the open certificate alone may be copied for legal or insurance purposes. Over an experimental period the new forms will be limited to the boroughs of Manhattan and the Bronx, so that the

continued use of the old form of certificates in Brooklyn, Queen's, and Richmond may serve to test the value of the change. The experiment will be watched with interest. The details are not quite clear. It is stated that the name, age, sex, nativity, address, and other identifying particulars will appear on the open certificate. Presumably age, sex, nativity, and occupation will be required for the tabulation of the confidential data. We believe that in the Swiss system anonymity is secured by transmission to the Central Statistical Department unopened of a confidential report which does not record the name or address of the deceased. In fact the local registration official himself never sees the confidential particulars. The essence of such a system is absolute security against leakage.

### THE INCISION FOR APPENDICECTOMY

In November, 1934, among correspondence in the desk of the late Dr L L McArthur of Chicago was found a letter from Charles McBurney, written from Highgate Springs, Vermont, and dated October 10, 1894. Now in the John Crerar Medical Library of Chicago, this is a reply to a letter Dr McArthur had written on August 24 of that year congratulating McBurney on the account of his muscle-splitting incision, which had appeared in the *Annals of Surgery* for July, 1894. With it Dr McArthur had enclosed a copy of a paper describing the same incision, which he had been about to present to a meeting of the Medical Society of Chicago in the previous June. He had been unable to do so because of the length of the agenda at that meeting. Dr S W McArthur of Chicago describes this example of two men converging on the same line of work at the same time and unknown to each other. McBurney wrote of the muscle splitting incision: "I think it is destined to supplant all other operations for the removal of the normal or of the chronically inflamed appendix." To-day it is also widely used for appendicectomy in acute cases and has its supporters the world over. Mr W H Bowen of Cambridge, however, reserves the McBurney method of approach for appendicitis complicating pregnancy and in most cases prefers the pararectal incision introduced by the late W H Battle of St Thomas's. Mr James Sherrin and other surgeons have been equally ardent advocates of the paramedian incision. These three incisions—the McBurney, Battle's, and the right paramedian—probably constitute the practice of the great majority of surgeons. Each has its advantages and disadvantages which are influenced by both the type of patient and the stage and type of the disease. Most surgeons of experience will probably agree that no one incision is to be slavishly adopted for all cases.

At the statutory meeting of the Royal College of Physicians of London held on Monday, April 11 Dr Robert Hutchison was elected President in succession to Viscount Dawson of Penn.

<sup>1</sup> *Surg. Gynec. Obstet.* 1937 65 715  
<sup>2</sup> *Appendicitis* (Clinical Study) By W H Bowen. Cambridge University Press 1937

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## THE TREATMENT OF MINOR CONDITIONS IN THE EYE

BY

N. BISHOP HARMAN, F.R.C.S.

Conjunctivitis may be one of the minor diseases of the eyes, but it may be so severe as to constitute a major emergency and endanger the sight.

The conjunctiva is the delicate mucous membrane lining the inside of the eyelids and the exposed part of the eyeball. It is moistened by the mucin from its epithelium and by the tears which pass from the lacrimal gland embedded under the outer prominence of the brow to the puncta at the inner canthus and so down the tear duct into the nose. Since the membrane is exposed to the dust of all the winds that blow and to touching by dirty hands it is liable to infection. The tears prevent many an infection both by washing the eyes and also by reason of a dissolving effect they have upon germs.

### Examining the Conjunctiva

It is easy to examine the conjunctiva lining the lower lid. It is not easy to do this for the upper lid and turnix unless the knack of everting the lid has been mastered. Yet the upper fornix is the more important by reason of its depth. To the practised hand the eversion is a simple and nice performance. Instruments should not be used; they alarm children. The lashes should not be employed as lifts; ladies dislike losing these adornments. All that is needed is the worker's own thumb and index finger and the patient's lower lid. Stand facing the patient. Use the right hand for the left eye and the left hand for the right eye. Tell the patient to look down. Place the inner edge of the thumb parallel with the lower lid and on its outer half a quarter of an inch below the lashes. Lay the inner edge of the index finger lightly on the upper lid just above the lashes and gently push up the skin; this will cause the edge of the lid to lift from the globe and pout a little. Now with the thumb in position slip the lower lid under the upper lid and the thumb following the lower lid, will get under the upper lid which can be held firmly between thumb and first finger and everted even against a vigorous orbicular spasm. The secret of the trick is to make the lower lid serve as a wedge to get under the upper lid.

### Conjunctivitis Irritant

The delicacy of the conjunctiva allows the classical signs of inflammation to be clearly noted: redness from distension of the vessels which since they have little support are apt to bleed, heat from the hyperaemia, swelling that may be a slight oedema or an intense chemosis rendering the lids and globe immobile and the skin of the lids glossy, and pain which is described as like grit in the eyes even to a severity as though broken glass were rolling under the lids. Besides these there is discharge consisting of excess of tears, frothy secretion from the Meibomian glands, mucin from the epithelium and escaped leucocytes. So there will be a muco-purulent, a purulent or a sanious discharge according to the severity of the attack. Vision is always disturbed.

Conjunctivitis may be caused by local or by reflex irritation. Mild attacks follow exposure to wind, dust, smoke, fumes or heat. Reflex irritation due to septic teeth, nasal douches, gastritis or the taking of stimulating foods will produce the symptoms. Exposure to bright light such as the arc lamp, ultra violet rays or snow fields in the high Alps will cause smart attacks known as snow blindness. Drugs—for example arsenic—are often excreted by the mucous membrane and if irritating will produce conjunctivitis. Tired eyes from late hours or errors of refraction cause mild attacks which if repeated may become chronic. In all these conditions discovery and removal of the irritant will be followed by improvement in the condition. The patient will be comforted by the use of a lotion of boric acid (2 per cent) in laurel water.

### Conjunctivitis Contagious

Conjunctivitis due to microbial infection is more common among children than among adults and among dirty ill kept folk than among those of cleanly habits. Two forms are common: (1) angular conjunctivitis, (2) pink eye. Angular conjunctivitis is a mild but chronic condition causing redness of the lids particularly at their angles whence the name angular. The ocular conjunctiva is but little affected. The secretion may contain minute bubbles so that it appears like frothed white of egg; this is caused by the excessive blinking of the lids. When the lids are screwed up the secretion is squeezed out at the angles where it erodes the surface epithelium of the skin. It is slightly more common with women than with men and in adults than in children. The cornea is rarely affected. The organism causing the disease is a thick square ended diplobacillus; it stains well with aniline dyes but is decolorized by Gram's treatment. It is easily demonstrated in film preparations and grows on dried serum slants liquefying the serum into deep sharp edged pools of turbid fluid. The treatment of angular conjunctivitis is simple: zinc sulphate is a specific which may be used freely either in 1% or 1.2 per cent strength as an eye lotion or better it may be dropped into the lower eyelids with a pipette. It is the success of zinc sulphate in the treatment of this disease that has made it almost a household remedy for eye troubles. But good as it is in this common form of conjunctivitis it may be noxious in other types of inflammation.

The most common epidemic form of conjunctivitis is that known as muco-purulent conjunctivitis. It is very contagious. If one member of a family is infected all the members are likely to be attacked. It is the common pink eye of schools. The occurrence of such an epidemic is a reflection upon the toilet arrangements of the home or school. The inflamed eyes show marked hyperaemia of the whole conjunctiva; there is a velvety look about the upper tarsal membrane and minute haemorrhages will be noted about the loosely supported vessels of the ocular conjunctiva. The lymph follicles of the lids are swollen and appear as slightly raised pinkish grey bodies about one half to one millimetre in diameter. The discharge shows pale greyish yellow pledgets of muco-pus floating in the tears and collected in the lower fornix and lacus lacrimalis. Commonly the attack begins in

one eye and then affects the other. Sometimes the preauricular gland is inflamed. In severe cases, such as are seen in Eastern countries, the discharge may be profuse and almost purulent sharp-edged crescentic ulcers, "catarrhal ulcers," erode the margins of the cornea and sight may be damaged by their effects. In England they are rarely dangerous. The organism known as the Koch-Weeks bacillus is rod-shaped, and is minute and delicate. In most of its features and reactions it is like *H. influenzae*—in fact, some workers have sought to prove that the organisms are one and the same.

The prevention of pink-eye in schools depends upon attention to toilet arrangements. Each child should have its own handkerchiefs, towels, and brushes; exchanges should be strictly prohibited. Exclusiveness in clothing, toilet, and sanitary articles is the basis of civilized cleanliness. On an outbreak of the disease in a school or family those affected should be isolated. The unaffected may be further protected by the use of eye drops of zinc sulphate 1/2 per cent morning and evening. The treatment of the disease should be initiated by the surgeon. The conjunctival sac should be washed out with boracic lotion and the everted lids, fornices, and particularly the folds of the inner canthus then painted with a solution of silver nitrate. The solution must be fresh; it works best and is less painful when it contains 20 per cent of glycerin. The strength of the silver salt in solution should be 1/2 or at most 1 per cent. The silver solution should be applied by the surgeon. He should not order it as 'drops' for the patient's own use. Patients have a habit of continuing treatment indefinitely. Silver salts if long used are absorbed and deposited in the elastic fibres of the submucosa so that the conjunctiva and cornea may become stained blue black (argyrosis). For the patient's own use a lotion of zinc chloride 1/8 per cent is beneficial, and in the stages of convalescence recourse to the zinc sulphate drops is good practice. In no circumstances should lead lotions be employed. Lead is readily absorbed by an abraded cornea and leaves a permanent white mark, which may obscure vision.

#### Ophthalmia Neonatorum

Purulent conjunctivitis is a severe and dangerous disease. In this country it is most often seen in infants. The eyes of the child are infected at birth by vaginal discharge. The gonococcus is responsible for the majority of the infections, but the streptococcus will produce disastrous results. Ophthalmia neonatorum usually begins about the third day after birth. The lids become red and swollen and their edges stick together. On opening them yellowish pus exudes. The everted lids show a rich velvety mucosa. The cornea may be affected by ulceration or it may slough with consequent incurable blindness. The disease is preventable. Gibson of Manchester in 1807 recommended that (1) the leucorrhoea of the mother ought, if possible, to be cured during pregnancy; (2) when this has not been done the noxious secretion ought to be removed from the vagina during delivery; (3) the infant's eyes ought, immediately after birth, to be cleansed with a fluid which either removes the noxious matter or is able to prevent its injurious effects. That is the treatment of to-day. The disease is notifiable. A purulent discharge from the eyes of an infant commencing within twenty-one days from the date of its birth must be notified (L.G.B. Order 1914). The measures taken to prevent and treat the disease have materially reduced the tale of blindness among children. They are

1 Directly the head of the infant is born wipe the eyelids dry with clean cotton-wool. Use a fresh piece for each eye.

2 As soon as the mother is settled wash the infant's eyelids freely with a simple lotion—boracic or Condy 2 per cent. Run the fluid freely between the lids. The water for the child's first bath must not get into its eyes. Separate water and a fresh towel must be employed for the infant's face. At no time may the mother's toilet articles be used for the child.

3 If at delivery there is a suspicion of a purulent discharge from the vagina of the mother cleanse the baby's eyes as suggested, then instil a drop of silver nitrate 1 per cent between the lids. The eyes must be examined and washed after eight hours, and if there is a suspicion of discharge make and stain film preparations for microscopic examination. The gonococcus is easy to demonstrate with methylene blue staining; the groups of biscuit-shaped cocci within the leucocytes are characteristic.

Treatment consists in (1) cleansing, (2) use of a germicide. Special nurses must be put in charge or the child should be taken into hospital, preferably with its mother. The surgeon in charge should never omit to examine and note down the state of the cornea as soon as he sees the case. The cleansing is the chief part of the treatment. The eyes should be washed free from pus every hour and irrigated every four hours with plenty of boracic lotion. Syringes and large irrigators are dangerous. Retractors should not be used. The lids should be parted with the fingers and the lotion run in from a cotton-wool swab or with an undine; the nozzle of which is protected with rubber tubing. The silver nitrate solution, 1 per cent, or other chosen germicide should be painted over the conjunctiva once a day by the surgeon. Gonorrhoeal conjunctivitis in adults is now very rare. It is usually due to the transfer of urethral discharge by the contaminated fingers. The symptoms are intense, and the danger to sight is grave. Such a case should be removed to hospital immediately.

In outlining the treatment of conjunctivitis painting the lids has been mentioned. Brushes should not be used for this purpose. They are rarely surgically clean and the hairs are apt to get loose. The surgeon should make a fresh cotton-wool brush for each eye treated. Take a wisp of cotton-wool about the size of a postage stamp and a tapered glass rod or a thin wax taper. Hold the cotton-wool between the tips of the left thumb and finger, press the end of the rod upon the wool, then lightly pinch the wool on to the rod and twist the rod at the same time. The wool will be securely twisted on to the rod.

#### Hyperaemia as a Diagnostic Symptom

Pink eye or hyperaemia, is a symptom common to many diseases of the eyes; it is therefore necessary to be able so to read other signs as to determine the real nature of the trouble. Three diseases may be named: acute conjunctivitis, acute iritis and acute glaucoma. All cause hyperaemia, pain and disturbance of sight. A liability will be some distinction. Conjunctivitis is not common in children, iritis in young adults, and glaucoma in elders. But the most valuable distinction is to be found in the state of the pupil. If the pupil is normal the disease is probably conjunctivitis; if the pupil is small and irregular it is probably iritis; if the pupil is enlarged slightly oval and immobile glaucoma may be present. When examination with a magnifying glass does not reveal the condition clear the test should be done with a mydriatic. Put one drop of 1 per cent homatropine within the lower lid of the eye and let the patient

with the eyes closed for half an hour. If then the pupil is found to be dilated evenly and well the condition is certainly not iritis. If the pupil has dilated but little and its outline is irregular there is iritis. If the pupil has dilated with almost alarming rapidity there is likely to be glaucoma, and then the mydriatic should be neutralized immediately with eserine. (Atropine should not be used for this test since it is such a powerful mydriatic that it cannot be neutralized by eserine.) Of all the means of differential diagnosis the state of the pupil is the most valuable and also the most objective.

#### Lacrimal Obstruction Infants

On occasions a baby will be brought for examination with the complaint that in eye has been inflamed since birth. The infant may be a few days to a fortnight old. The unwary may jump to the conclusion that this is a case of ophthalmia neonatorum. Examination of the eyes will show that the condition is quite different. First it will be noted that one eye is healthy and the other is in a messy state. The lid margins are clogged and mucus and pus hang about the inner canthus. When the discharge is wiped off with cotton wool the eye and lids will look healthy except that the conjunctiva will be too wet. If now the little finger be pressed down between the inner canthus and the nose the reason for the trouble will be shown: mucus pus will regurgitate from the lacrimal puncta. The trouble is due to obstruction of the lacrimal duct which carries the tears from the eye into the interior meatus of the nose. The lacrimal duct develops as an epithelial cord which becomes embedded in the nose and is then canalized. A plug of epithelial debris may block the duct.

#### TREATMENT

For a fortnight the effect of drops such as zinc chloride 1/8 per cent may be tried. The mother should be taught to increase the natural pumping action of the lid movements. The infant is laid on its back and some warmed lotion is poured into the hollow of the inner canthus. Now the lower lid is pulled outwards away from the nose; this brings the cord of the tensor tarsi into action and so opens the sac and sucks the lotion into it. The little finger is then pressed down on the sac the contents of which are forced down the duct. If this treatment fails the duct must be syringed through with plenty of fluid. One operation is usually successful. A general anaesthetic is needed. The lower punctum is stretched with a dilator a rod the size of a dance programme pencil with a tapered blunt pointed end. The dilator is pressed downwards into the minute hole of the punctum for one millimetre then the handle is depressed so as to be parallel with the lid margin and with a rolling movement the dilator is insinuated a little way into the canaliculus, so that both this and the punctum are stretched without being split. The nozzle of a lacrimal syringe is now passed in the same way first downwards then inwards until the nozzle can be felt pressing upon the wall of the sac against the nasal bones and lastly the body of the syringe is raised to lie alongside the nose with the nozzle pointing down the duct. The contents of the syringe are driven out. If the fluid passes into the nose it runs back into the throat, and the child will be seen to swallow.

#### Lacrimal Obstruction Adults

Epiphora or a watery eye is an annoyance. In certain walks of life it may be a real danger to the sight of

the eye. An interference with the muscular mechanism of the lids or the position of the puncta or any obstruction to the drainage apparatus will cause tears to flow over the cheek. It may be an after effect of facial paralysis or chronic blepharitis or of scarring of the lid. Obstruction in the duct is due to some nasal trouble. There may be disease of the nasal bones from syphilis; it has been known to follow periostitis arising from dental disease and it may be caused by fracture of the nose from falls or blows. In some cases nasal catarrh may spread upward into the duct and cause more or less temporary obstruction. Apart from the annoyance or the condition it is dangerous when it occurs in those whose work renders them liable to exposure to dust or flying sparks such as smiths or road makers. A septic tear will infect a corneal abrasion and a hypopyon ulcer with the loss of the sight of the eye may follow.

In any complaint of epiphora first note the position of the lids and puncta then test the patency of the tear passages. Place within the lower lid a fragment of dry fluorescein close the lids pinch the nose to make the tears flow then pump the tears down the duct (as described in the section dealing with the infant). If the passages are normal the stain will pass into the nose and can be blown out in a minute or so. If the stain does not come through the duct may be explored by (1) syringing (2) probing.

The method of syringing has been given above. In cases in which there is inflammatory swelling of the mucous lining of the duct regular syringing with hydrogen peroxide 3 volumes will often effect a cure. In cases of long duration where there is a mucocele in the sac and especially if the contents are purulent there is probably an organic stricture either of the bone or of the lining membrane. The suspected stricture should be searched for with a probe. Use a drop of cocaine and adrenaline. Then after dilating the punctum pass the probe as directed for the nozzle of the syringe. When the probe is in the duct slide it down gently until the stoppage can be felt. If it is elastic it is probably membranous; if it is tough and resistant it is probably bony. In the latter case there is no doubt as to the proper procedure. The sac canaliculi and the remnants of the duct should be extirpated by operation or a passage from the sac directly into the nose may be made by a plastic operation. When the stricture is probably membranous the decision as to treatment is more difficult. To force the stricture by probes and then leave it will be useless for the subsequent scarring will be denser than before. If the probe can be gently insinuated through some part of the stricture there is a prospect of success by long continued syringing. It is dangerous to syringe immediately after passing a probe a false passage may have been made and the syringing will drive the possibly septic contents of the tear passages into the cellular tissues and may set up acute cellulitis. A leaden style solid or hollow may be passed down the duct if a probe will dilate it sufficiently without force. The upper end of the lead is lipped over the lid to prevent it slipping down. Styles may be worn for months without discomfort but they must be removed periodically and cleaned. In most such cases it is better to remove the sac or make a direct passage into the nose. Some plastic operations succeed well though there may be trouble from the puffing up of the tissues when the nose is blown. After removing the sac and blocking the canaliculi the excess of tears gradually ceases and there is no inconvenience, except in cold winds or emotional states.

## EPIDEMICS IN PUBLIC SCHOOLS

## A STATISTICAL ANALYSIS

The committee whose interim report is now published<sup>1</sup> was appointed by the Medical Research Council eight years ago under the chairmanship of Sir George Newman, who when he retired was succeeded by the present Chief Medical Officer of the Ministry of Health, Sir Arthur MacNalty. The reasons which led the Council to take this step were, first, that much experimental work had been done—largely under the auspices of the Council—on the phenomena of infectious disease spreading in communities of mice and, next, that careful observations had been made and recorded of similar phenomena in a boarding school of a certain type. It seemed desirable, therefore, to test the analogies suggested by laboratory experiment and the findings of a particular set of observations of human beings, in a wider field—namely, a representative sample of British public schools.

The committee was fortunate in securing the co-operation of many schools, and this report is an account of the first five years' investigations. Section I (the work of Dr L. R. Lempriere, a member of the committee) is a most interesting historical account of the hygienic conditions of various great public schools through the ages. In the next section is described the elaborate system of recording adopted in the twenty-one boys' schools and ten girls' schools which participated. The average numbers per term under observation were 10,270 boys (8,287 of these in boarding schools) and 3,503 girls (3,061 of these in boarding schools). In all, 22,166 boys and 7,600 girls came under observation for one or more terms. Sections III to XIX treat of special clinical groups—namely, nasopharyngeal infection, sore throat, rheumatism, otitis media, sinusitis, pneumonia, influenza, tonsillectomy, infectious diseases, the relation between chicken-pox and herpes zoster, gastro-intestinal disorders, appendicitis, jaundice, tuberculosis, trauma, conjunctivitis, and tinea cruris.

## Method of Analysis

The general method of analysis may be illustrated by the lay-out of the chapter on nasopharyngeal infection. For this survey the diagnoses influenza, sore throat, cold, P.U.O. and chill, and cough were chosen; these are also shown as totals, two totals being given—namely, including and excluding influenza (a very large contributor). First we have a general table of attack rates for boarding schools (sexes, of course, shown separately), then tables of terminal attack rates and of weekly rates (boarding schools), a number of graphs, and rates for separate schools. Finally, the records of boys (in six schools) under observation continuously for at least three years are analysed with the object of discovering whether boys who suffered much (or little) from colds at, say, the age of 13 had a heavier (or lighter) incidence of colds at the age of 16. It was found that no relation could be proved to exist between the records—that is, what happened at 13 exerted no influence on what was to happen at 16. This method of arrangement is, so far as practicable, followed in the subsequent chapters, so that it will be sufficient to refer later to striking results noted in the general summary. Section XX very briefly refers to mortality. Since only forty-two boys and eight girls died this section is a mere matter of record. Section XXI is a very complete account of time lost and sickness in age-groups both for the whole population and individual schools—a most valuable piece of documentation. Section XXII (by Dr F. Griffith, a member of the committee) reports bacteriological findings. Thus of 199 instances of otitis media and mastoid disease the organism was not determined in sixty; in eighty cases *Str. pyogenes* (type

was determined in sixty-one) and in fifty-nine a pneumococcus (type determined in forty-seven) were responsible.

## Illness Rates in the Sexes

In Section XXIII—a general summary—it is first noted that, as the data were limited to illnesses which caused at least one day's absence from school, the great difference in rates in boys and girls for minor respiratory illnesses might be due rather to stricter surveillance than to greater susceptibility. A similar possibility has to be considered if the decreasing attack rate with age is attributed to natural immunization. It might be that younger children are more likely to be kept out of school than the older and less strictly supervised pupils. Only the accurate reporting of every cold, whether causing loss of school time or not, would tell us to what extent natural immunization is operating, and we gravely doubt whether there is any practicable method of obtaining such data. Not only influenza but many other diseases (otitis media, pneumonia, sinusitis) have a maximum in the Lent term. Trauma among boys is maximal in the Christmas term when general sickness rates are usually low (although the gastro-intestinal group is highest in that term). Among boys 90 per cent of infectious diseases (measles, German measles, chicken-pox, whooping cough, mumps, scarlet fever, and diphtheria) are equally divided between the first two terms of the calendar year; among girls more than 60 per cent of the cases were in the Lent term.

The ability of infectious diseases to work themselves out before the end of term varied greatly. About half the epidemics of measles may be said to have come to a natural end, but no epidemics of German measles and few epidemics of mumps, chicken-pox, and scarlet fever could be said to have ended before the holidays began. "It is impossible to explain this phenomenon on any theory dependent on the number of susceptibles exposed to risk, since examination of an adequate sample shows that about 70 per cent of public school boys have had measles, chicken-pox, and whooping cough before entry, about 30 per cent have had German measles and mumps, and less than 10 per cent have had scarlet fever, the corresponding figures for the girls are somewhat lower but of the same order. One might say that with an almost unlimited supply of susceptibles—usually 70 to 90 per cent—outbreaks of German measles, mumps, and scarlet fever might be expected to drag on until the end of term, but there is no obvious reason why epidemics of measles should tend to behave differently from those of chicken-pox in this respect, since the proportion of susceptibles is approximately the same—about 30 per cent—for these two diseases."

## The Question of Artificial Immunization

It is remarked that while one may be excused to regard those who have not passed through a clinical attack of measles, German measles, chicken-pox, and mumps as "susceptible" this can hardly apply to scarlet fever. In one school 30 per cent of 366 boys (out of 429) were found Dick-negative and about half the entrants in subsequent terms. The test has proved relatively reliable in the hands of many workers who used it as the object of artificially immunizing positive reactors. In view of the fact that scarlet fever has never attacked more than 3 to 4 per cent of the not previously attacked, this experience, it is doubted whether the advantages of artificial immunization in a public school outweigh the disadvantages. With regard to the relation of chicken-pox to herpes zoster, it is shown that on eighteen out of twenty occasions when zoster preceded chicken-pox, the first case of chicken-pox might from the point of view of time have arisen out of the case of zoster. The data of influenza disregarding the experience of a school show no evidence of an actively acquired infection lasting for as long as a year.

<sup>1</sup> Medical Research Council Special Report Series, No. 227. H.M. Stationery Office (4s. 6d. net).



## Influence of Tonsillectomy

About half the population was found to have had the tonsils removed and the proportion so treated was increasing. No satisfactory proof that tonsillectomy as a routine measure diminished the incidence of nasopharyngeal infections was obtained. Though reducing the value of the operation in carefully selected cases we have grave doubts as to whether the majority of tonsillectomies performed to day are the result of true disinclination rather than of routine ritual. The difficulties of interpreting sex differences have already been mentioned but the greater stringency of reporting could hardly account for differences in such serious infections as *etitis media*, pneumonia and acute rheumatism: the two former are more than twice and the last eleven times as frequent among boys as among girls. Closer supervision of minor illness and less close contact in sleeping quarters are possible factors. We believe that it is of the utmost importance that every effort should be made to discover the underlying cause of this fundamental difference in experience between the sexes so that the boys may if possible be freed from this heavy incidence of diseases which always cause anxiety and may produce serious disability or even death.

ROYAL MEDICAL BENEVOLENT FUND  
ANNUAL MEETING

The annual general meeting of the Royal Medical Benevolent Fund took place on April 5 with Sir Thomas Barlow its president in the chair. The financial statement was presented by Dr I. G. Glover, the honorary treasurer, who said that subscriptions and donations were up by £1,739 as compared with the year before, but legacies had fallen by nearly £1,000. In explaining an increase of £700 in income tax recoverable under deeds of covenant Dr Glover said that the Medical Insurance Agency which was in the habit of giving the Fund £1,600 a year had come to the conclusion that it might equally well under take a covenant to give that sum annually for seven years and so enable income tax to be recovered on the amount. On the expenditure side 431 maintenance grants had been made amounting to £12,125 and 236 annuities amounting to £6,248. The total distribution including special grants some of them on behalf of other societies and the Christmas gifts was over £22,000. The investments of the Fund stood at purchase price at just over £200,000. One of the most encouraging things that happened last year was the response to Sir Thomas Barlow's Christmas appeal which brought in 1979 and enabled each of the beneficiaries to receive thirty shillings. Another interesting happening was the Davis bequest: it was not possible to carry out the letter of the testator's wishes but the spirit would be met by allocating the invested income for the benefit of those helped by the Fund who were in need of a holiday or treatment in a nursing or convalescent home at the seaside. Dr Glover also presented the financial statement of the Ladies Guild which he said had done more work than ever before in its thirty years history. Mr R. M. Handfield Jones, the honorary secretary, said that for a long time the Fund had been compelled by force of circumstances to limit its grants to the inadequate amounts of £40 for men and £26 for women, but now there were at least twenty-five beneficiaries who were receiving more than £50 a year and several were receiving £100.

The report was adopted on the motion of Dr Glover, seconded by Dr Herbert Spencer. The president, treasurer and honorary secretary were re-elected on the motion of Sir D. Arcey Power, seconded by Professor Grey Turner, and on the motion of Dr C. O. Hawthorne, seconded by Mr Handfield Jones, the members of the committee of management who retire by rotation, were re-elected,

together with Dr N. G. Horner, Dr Egbert Morland, Mr C. P. G. Wakley, and Dr Henry Robinson who was nominated by the Medical Insurance Agency. Dr Hawthorne said that the three editors had the opportunity of speaking week by week to the whole of the medical profession of the country and had frequently used the opportunity in the interests of medical benevolence. He also welcomed the addition to the committee of Dr Robinson who was chairman of council of Epsom College and chairman of the Charities Committee of the British Medical Association. Sir Thomas Barlow proposed an omnibus vote of thanks to the British Medical Association and its Charities Committee, the Medical Insurance Agency, the Medical Sicknes's Annuity and Life Assurance Society, the Ladies Guild and the medical and law journals. He said that the Fund had very good friends. He too welcomed the editors of the medical journals, saying that their presence on the committee would help to identify the work with the profession generally throughout the country. It was stated that it was the intention of the committee instead of issuing a formal report to send a personal letter to all the subscribers and donors explaining again the objects of the Fund and describing the work.

## New Beneficiaries

At a recent meeting of the committee nineteen annuitants were elected, the total amount voted being £355. In addition forty-five beneficiaries (eight new applicants) were awarded grants amounting to £1,120. The following are particulars of three cases.

Widow, aged 69, of MRCS, LRCP, who died in January. Under the will the property and personal effects were left to the widow but the estate consisted only of the house now occupied by a 19-40 hp car and the four hold furniture. After the sale of the house etc. and after out standing debts had been paid it was expected that the capital remaining would not exceed £300. The widow had received no money since her husband's death. The Fund sent an immediate gift of £5 and has voted a further £56 for this year.

Widow, aged 83, of LRCP and S, who died in 1915. The widow is living with her two sisters. One sister is a skilled nurse, looks after the widow and her other sister who is also an invalid. The doctor in attendance reported that the widow was suffering from arthritis and was completely crippled and emphasized the need for the widow to have a permanent attendant but her financial position would not allow of this. The Fund voted £26.

Doctor, aged 65, wife aged 53. The husband is suffering from progressive muscular atrophy. The Fund voted £80 per annum to him and £26 per annum to his wife. The nursing firm for which he worked as a surgeon is contributing £20 per annum.

New annual subscribers are urgently needed by the Fund. Cheques may be sent to the Honorary Treasurer, Royal Medical Benevolent Fund, 11 Chandos Street, Cavendish Square, London W1.

In December 1937 the French Minister of Labour established in Paris an institute for the study and prevention of occupational diseases. This institute the first of its kind in France includes not only a modern well-equipped examination room but also a laboratory permitting extensive chemical and toxicological research and a special photographic laboratory. A library offers to its readers literature, bibliographies and all specialized publications in French, English, Dutch, German and Russian as well as the publications of the International Labour Office. A complete catalogue classifies under the various headings all published articles dealing with the subject of occupational pathology and hygiene. The institute directed by Dr G. Hausser includes on its scientific board such well-known French scientists as Prof. J. Balthazard, Tiffeneau, Duvour, Etienne Martin, Fabre, Kohn, Abrest, Laugier, Godard and Mazel. A publication appearing every two months, *Archives des Maladies Professionnelles d'Hygiène et de Toxicologie Industrielles* will include scientific papers and a complete bibliographical section. The address of the Institut d'Etude et de Prévention des Maladies Professionnelles is 6 Rue de la Douane, Paris, 12.



## Reports of Societies

### SPREAD OF STREPTOCOCCAL INFECTION

At a meeting of the Fever Hospital Medical Service Group of the Society of Medical Officers of Health in London on March 25 a discussion was held on the spread of streptococcal infection as ascertained by type determination. Dr J. A. H. BRINCKER was in the chair.

Dr V. D. ALLISON (Ministry of Health Pathological Laboratory) referred to the classification of haemolytic streptococci into groups by Lancefield's precipitation method, the importance of group A in human disease, and the identification within this group by Griffith of some twenty-six serological types using specific agglutinating sera. The multiplicity of types was of real help in tracing the sources and paths of the spread of infection, while group classification was of little value in this connection, as by it one could not free from suspicion subjects who might be harbouring group A streptococci of types other than those causing the outbreak under investigation. The main value of type determination in infections caused by *St. pyogenes* was in (1) the investigation of the source and paths of infection in explosive outbreaks of streptococcal infection, due, for example, to milk, and in outbreaks of puerperal fever in maternity homes and hospitals, and (2) the investigation of the paths of spread of infection in the wards of general and fever hospitals, and of the effects of reinfection and cross-infection as the cause of grave complications. The advantages of type determination had been well exemplified in many outbreaks some of major importance, during the last few years—for example, the Denham, Chelmsford, and Doncaster outbreaks caused by milk infected with *St. pyogenes*, the source of infection being definitely established in each instance. In numerous outbreaks of puerperal fever the identification of the infecting strain had given a clue leading to the discovery of the source of infection.

Quoting from his own experience Dr Allison said that epidemiological investigations of streptococcal infections in multiple-bed scarlet fever wards and in cubicles had proved conclusively certain facts:

- 1 Patients nursed throughout their illness in cubicles or chambers show no change of the serological type of the infecting streptococcus. Segregation of patients in small wards according to the serological type of the infecting streptococcus revealed that if a change of type did occur it was due to the introduction of fresh infection by a member of the ward staff.

- 2 Infection with one serological type of *St. pyogenes* does not necessarily protect a patient against infection with another type.

- 3 The so-called relapse in scarlet fever is due to fresh infection with a streptococcus conveyed by another patient in the ward and differing in serological type from that causing the primary infection.

- 4 In multiple-bed wards for scarlet fever 50 to 70 per cent of the patients become reinfected with one or more fresh types of *St. pyogenes* during their stay in hospital.

- 5 Such reinfections may be latent or manifest.

- 6 Complications in scarlet fever occurring during the third week and subsequently in multiple bed wards are in the great majority of cases caused by reinfecting types of *St. pyogenes*.

Dr Allison quoted experimental proofs of spread of infection by direct and indirect contact and pointed out the importance of infected toys, handkerchiefs, and eating utensils as vehicles of infection. Air-borne infection by droplets was also a well-recognized means of spread, but the part played by dry dust particles, in which *St. pyogenes* could survive for a considerable time, was only beginning to be recognized. Exposure of blood-agar

plates for short periods in scarlet fever wards and examination of the resulting cultures indicated a surprising high degree of air infection with *St. pyogenes*. The types isolated from the air were exactly those found as infecting agents in the patients in the ward. Finally Dr Allison showed that the problem of the spread of streptococcal infection was of equal importance in measles wards and in the wards of general hospitals. In the epidemiological investigation of streptococcal cross infection in a measles ward over a period of seven weeks, *St. pyogenes* was isolated at some time during their stay in hospital from thirty-five out of forty-three patients and in twenty-two cases had resulted from cross infection occurring in the ward, of seventeen cases of otitis media in the series eight were due to cross infection with types of *St. pyogenes* from other patients in the ward.

### Air-borne Infection

Dr R. CRUICKSHANK (L.C.C. Group Laboratory North Western Hospital) spoke on air-borne infection. By this he meant not "droplet" or "spray infection," which had only a very limited spread, but the dissemination of bacteria by the air. Recent epidemiological and bacteriological work suggested that infection—and not only respiratory tract infection—was spread in spite of rigid precautions to prevent transference manually, by fomites, or by carriers. Wells in America had shown that droplets expelled into the air by coughing and sneezing did not always fall immediately to the ground within a few feet of the individual. If the droplets were not more than 0.1 mm in diameter, evaporation rapidly reduced them to so small a compass that they remained suspended in the air like particles of smoke. Larger droplets or other infective material that had settled might also be evaporated and lifted into the air again as dust. The potentiality of these "droplet nuclei," as Wells called them for spreading infection depended, among other factors on their viability and their concentration. Wells found that certain organisms which commonly occurred in the upper respiratory tract—for example, haemolytic streptococci, pneumococci and *C. diphtheriae*—remained viable in the atmosphere for two days, whereas intestinal bacteria such as *Bact. coli* and *Bact. typhosum* died off within eight hours.

Dr Cruickshank went on to give examples from his own experience of the air-borne spread of streptococcal infection. On one occasion it was found that eight cases of burns in the same ward were infected with the same type of *St. pyogenes*, that the dust and atmosphere of the ward contained numerous haemolytic streptococci, and that a strain isolated from the dust was of the same serological type as that obtained on culture from an infected burn. Great care was taken to prevent manual spread from case to case, and throat carriers among the nursing staff were not common. The second example was that of a small outbreak of puerperal sepsis in which throat carriers and direct transference could be almost certainly excluded, again the epidemic type of *St. pyogenes* was found in the atmosphere of the ward. The occurrence of streptococcal infections (tonsillitis, otitis media, and vaginitis) in a diphtheria ward of young children furnished the third example. In addition to the clinical infections most of the children had haemolytic streptococci in the nose or throat, more particularly in the nose, whereas there were no carriers among the nursing staff. Haemolytic streptococci of the same infecting types were present on plates exposed in the ward and were most numerous where the infected cases were occurring (although the plates were beyond the reach of "droplets") and after the dust of the ward had been stirred up by sweeping and dusting. In conclusion Dr Cruickshank suggested that the nursing staff should not be blamed too readily for the spread of infection, that too much dependence should not be placed on isolation, and that wet dusting should be the routine practice in infected wards.

## General Discussion

Dr R. A. O'BRIEN thought that some of the findings mentioned by the previous two speakers might be open to criticism if they were based on the examination of a single swab from the patient on admission. Mr J. B. LAYTON commented on the tendency to remove otitis cases from earlet fever wards in order that they might be isolated and observed that it was not the otitis case which required isolation but the pre-otitis cases. Dr I. GIBSBY said that however desirable the practice of swabbing and typing of streptococci might be from a scientific point of view, information thus obtained might be misinterpreted in a court of law if an action were brought against a local authority in consequence of cross-infection. With regard to cubicle and chamber nursing he thought it should be remembered that a policy which was practicable in large infectious diseases hospitals might be quite impracticable in the case of the vast majority of small isolation hospitals in this country. Some attempt might be made in these small hospitals to reduce the incidence of so-called relapses in scarlet fever by avoiding any overcrowding of the wards and by grouping cases in such a way that convalescents without complications were not brought into contact with newly admitted acute cases. Dr A. TOLPINE suggested that there was a tendency to attribute the occurrence of puerperal sepsis in a case to a nurse or midwife who happened to harbour a haemolytic streptococcus in her throat or nose without excluding other more likely causes, the *post hoc ergo propter hoc* theory if adopted without full investigation could lead to entirely wrong conclusions.

Dr E. H. R. HARRIES referred to C. V. Chapin's classical *Sources and Modes of Infection* (1910). Chapin discounted the importance of air-borne infection and stressed the part played by droplet spray and by utensils and the hands of attendants. It was at one time believed that by aerial convection the virus of small pox might be transmitted to the unvaccinated over distances such as a quarter of a mile. If dry sweeping was permitted in wards then clouds of dust were inevitable. Damp-sweeping or better still the use of vacuum cleaners was an essential part of the technique of bed isolation. Nobody would intentionally admit patients in the early stage of chicken pox or measles to a bed isolation ward. The infectious conditions most safely managed in these wards without spread were those due to the haemolytic streptococcus. Patients suffering from scarlet fever, erysipelas or puerperal sepsis had in his own experience been nursed at the same time in the same ward under bed isolation conditions without spread of infection to other patients. Nevertheless other factors remaining unaltered it was possible so to increase the load of streptococcal infections in the ward that the system broke down and cross infection occurred. Dr HARRIES stressed the importance of Sheldon Dudley's conception of the "velocities of infection".

Dr SLEIGH, medical officer of health Chatham (late medical officer of health Chelmsford) discussed the Chelmsford outbreak mentioned by Dr Allison. A curious feature of the outbreak was that of thirty-three cases of scarlet fever with onset in the fortnight previous to the milkman infecting the milk, twenty-eight received their milk from the infected source. They were late notifications and so were not typed but this suggested that the milk had been infected earlier than the milkman was infected from his own milk and that the passage through the human host had raised markedly the virulence of the strain leading to the explosive outbreak. Typing had been continued since the outbreak with the assistance of Dr Camps and it was found that in a comparatively small district there were seldom more than three or four types at any one time. All cases showing secondary rises of temperature were re-typed and always showed a different type from that obtained on admission. Recently all his cases were kept in bed till they were fit for discharge. This had lowered considerably the amount of cross infection. Typing also helped in separating out true return cases. A case had been admitted as a probable case of mastoiditis due to Type 6 streptococci. The condition cleared up and he was discharged. Within thirty-six hours he had to be readmitted almost moribund and died within twenty-four

hours of streptococcal meningitis. On typing the pus from the brain it was found to show streptococci of Type 1. There were no other Type 1 cases in the hospital at that time. In regard to swabbing midwives' throats he thought that unless the streptococci found could be typed it was unwise to take swabs at all.

Dr J. MCGARRITY stressed the value of fresh air and bed isolation in ordinary wards and deprecated overcrowding. In Birmingham there were three bed isolation wards where all sorts of doubtful cases were isolated. In these wards cross infection had not been seen at all during recent years. The technique of bed isolation was most carefully carried out and the windows were wide open all the time both night and day even in the winter. The temperature of the ward did not matter, the patients could easily be kept warm with the help of extra blankets and hot water bottles. Dr E. C. BESS (Leeds) speaking of the immunity of Dick-negative reactors to streptococcal infections said that a fall in the relapse rate of earlet fever to less than 1 per cent followed artificial immunization by earlet fever toxin of those children who remained Dick-positive in the second week of the disease. He also mentioned the frequent occurrence of streptococcal tonsillitis in fever nurses during the first four or six weeks of hospital service. As their immunity to streptococcal infection increased either naturally from exposure to infection or as a result of artificial immunization the incidence of streptococcal tonsillitis showed a sharp fall. Dr M. MITCHELL conceded the possibility of aerial contamination by suspended infectious particles but thought that if it occurred it was in most instances the result of droplet spray. Infection in the air or dust became diluted rapidly as the result of drying, the action of sunlight and the movement of air in a well-ventilated ward. In consequence the mass of infection was usually insufficient to initiate an attack of the disease. Direct droplet infection was still the most important mode of transmission of infectious diseases. In investigating the contamination of the atmosphere with suspended particles he suggested as a possible alternative to the elaborate air centrifuge a blood agar plate moving slowly in a vertical direction through the air. An adjacent stationary plate could provide evidence of infection from falling particles. In this way a comparison between floating and falling particles could be obtained. He believed that Dick-negative subjects were on the whole more resistant to haemolytic streptococcal infections than Dick-positive ones. An individual in acquiring immunity to the antigens of the toxin must also have had an opportunity of acquiring some immunity to the antigens of the organism itself such as those responsible for its invasive properties. Although the Dick test was no measure of this bacterial immunity a negative result indicated a previous acquaintance with the organism. Differences in the behaviour of the same type of streptococcus gaining access to the body through different portals of entry was attributable, he thought, to differences in local immunity.

## SILICEOUS DUSTS

At a meeting of the Society of Public Analysts and Other Analytical Chemists held at Burlington House on March 6, Dr H. E. COX presented a paper on the chemistry and analysis of henna. He described the constituents of henna leaf and pointed out that contrary to some earlier literature henna did not contain tannin. The constituent to which its dyeing properties were due was 2-hydroxy-1,4-naphthoquinone. This substance alone or in henna powder could be very satisfactorily determined by means of a volumetric method and apparatus described. The dyeing of hair with the hydroxynaphthoquinone depended on the pH value of the liquid. It required an acid reaction and no satisfactory dyeing could be obtained in neutral or alkaline solutions. This was probably why curious defects or colours sometimes appeared in hair dyed with henna.

Dr JANET W. MATTHEWS gave an account of work carried out in collaboration with Professor H. V. A.

Briscoe P F Holt, and P M Sanderson, the main object of which was to investigate the characters of dusts liable to produce silicosis. Two methods devised for collecting dusts from air in mines and factories, without contact with moisture, were described, in one the air was filtered by suction through a layer of salicylic acid crystals which were subsequently removed by solution in absolute alcohol, and in the other the air was passed through a long chamber (labyrinth) divided by baffles into numerous compartments in which fractional deposition took place. Micro-chemical methods employed in analysing the dusts were briefly described. It was found that siliceous materials were much more hygroscopic in the form of fine dust than in the macro-form and that in the former condition an appreciable quantity of their silica becomes soluble in water. Dusts of calcined flint and asbestos, for example, which were dangerous in respect of silicosis, yielded 12 mg and 30 mg of silica per gramme to 100 ml of water, while cement and sillimanite dusts, which were regarded as innocuous in respect of silicosis, yielded only about 1 mg. The effect of addition of other materials to the siliceous dusts was investigated, and it was found that admixture with an equal proportion of lime greatly reduced the quantity of silica dissolved by water.

### CHRONIC CERVICITIS

At a meeting of the Edinburgh Obstetrical Society on January 12, with the president, Professor JAMES HENDRY in the chair, Dr G DOUGLAS MATTHEW read a paper on the treatment of chronic cervicitis.

Dr Matthew said that some degree of cervical laceration was a common accompaniment of labour, whether spontaneous or instrumental, and this predisposed to cervical infection. Cervicitis in its chronic form was seen characteristically in the multiparous patient with a history dating from a previous confinement. While the majority of cases arose in this way, others followed abortion, instrumental trauma, or direct gonococcal infection. Cervicitis led to much suffering, discomfort, and ill-health, and the outstanding symptoms were pain, discharge, and menstrual irregularity. In some cases urinary symptoms might result from bladder irritation, or involvement by actual infection, while in others the cervix might act as a focus of infection in co-existent systemic disease. There was a definite connexion between chronic infection and carcinoma of the cervix. He believed that some sort of classification of cases was of assistance in the selection of suitable treatment for the individual. He suggested division into the following four groups: superficial cervicitis, endocervicitis with erosion, endocervicitis, and diffuse cervicitis.

The aim of treatment was to eradicate all infection and repair laceration and eversion. The final result should be a smooth supple cervix with a patent canal. Treatment might be conservative, by douching by the local application of antiseptics or caustics, or by ionization, thermal, using the methods of cauterization, electrical coagulation, or diathermy excision, radiotherapeutic, or surgical. He had had the opportunity of using many of these methods in the treatment of patients under the care of Professor Johnstone in the wards of the Royal Infirmary during the past two years. From the results obtained and from a consideration of other methods he had arrived at certain conclusions as to the best form of therapy to be used in each of the four types of cervicitis which he had described. In superficial cervicitis he recommended superficial electrical coagulation without dilatation of the cervix. This could be done in the out-patient department. In cases of endocervicitis with erosion he advocated excision of the affected tissues by diathermy after full dilatation of the cervix. This treatment should be carried out under anaesthesia with the patient in hospital. Bourne's zinc-chloride method might be the ideal treatment for cases of uncomplicated endocervicitis

and diffuse cervicitis was best treated by surgical excision and repair of the cervix, or by amputation in older patients where pregnancy was unlikely.

Dr Matthew concluded by referring to the treatment of cases during the post-natal period, and mentioned results which had been obtained at the Royal Maternity Hospital with electrocoagulation six to eight weeks after delivery. He believed that as this post-natal treatment became more universally adopted the number of patients attending gynaecological out-patient clinics with symptoms of chronic cervicitis would gradually diminish.

At the same meeting Mr HUGH MILLER (Inverness) reported in detail a case of unruptured tubal pregnancy continuing to full term.

### BUNDLE BRANCH BLOCK

A meeting of the section of medicine of the Royal Academy of Medicine in Ireland was held on March 14, with the president, Dr E T FREEMAN, in the chair.

Professor HENRY MOORE, with Drs E KELVIN, W R O FARRELL, and M A MORIARTY made a communication on bundle branch block. Of 2,080 patients examined electrocardiographically thirty-seven showed bundle branch block, an incidence of 1.77 per cent, and eight an indeterminate form of intraventricular conduction defect, the QRS wave being more than 0.12 second in duration. Thirty-five cases gave the common curve of bundle branch block, two the uncommon type of curve. The heaviest incidence was in the sixth decade, and 62 per cent were males. The aetiological factor was apparently vascular hypertension in twenty of the thirty-seven cases, and disease of the coronary arteries without hypertension in five. It was possible to trace thirty-six of the patients, 60 per cent were dead, the average duration of life since the diagnosis was made being 20.4 months, but four patients had lived for more than six years. The presence of intraventricular block was suspected on clinical grounds in twenty-one out of twenty-six cases, such a block was present but clinically unsuspected in five cases. The diagnosis could only be made with certainty, however, by the electrocardiograph.

### Findings at Necropsy

Four cases came to necropsy, the hearts were carefully studied in serial sections, the whole conducting system being followed down to the finer ramifications of the bundle branches in order to discover the interrupting lesion and so to obtain evidence as to whether the new or old nomenclature for the electrocardiographic diagnosis of bundle branch block was correct. Using the new electrocardiographic nomenclature Case 1 had right bundle branch block, Case 2 had left bundle branch block, Case 3 originally showed a left bundle branch block but later the curve became indeterminate in character. Case 4 showed an indeterminate form of curve throughout. In Case 1 a fatty fibrotic lesion interrupted the right bundle branch, in Case 2 a fibrotic lesion had destroyed the left branch. In Case 3, in addition to some congestion of the trunk with, however, apparently healthy fibres an old fibrotic lesion almost completely destroyed the left branch and a lesion of more recent origin in the congestive and to a slight degree fibrotic) caused interruption of a minority of the right bundle branch. The fourth heart (indeterminate form of intraventricular conduction defect) showed no lesion interrupting the conducting tissues down to the finer ramifications of the bundle branch subdivisions but there was a rounded infiltration of about 2 mm in circumference at the apex of the papillary muscle in the right ventricle and was a small old infarct at the apex of the left ventricle. On the whole the results suggested that the new nomenclature was correct. The pathology of the main coronary and coronary arteries was also studied and described.

About 220 000 sections were cut on the four hearts. The anatomical and pathological part of the work was carried out under a grant made by the Medical Research Council of Ireland.

### General Discussion

The president Dr L. J. FREEMAN said that this was the first account which had been presented to the Academy of any work that had been done with monetary help from the Research Council. Dr P. O'FARRELL said that he had seen eleven cases of bundle branch block ill in miles. Ten were of the common type, one of the rare type. Of these patients six had died within two years—three of them died suddenly—three were alive and two he had not been able to trace. It was possible that bundle branch block might be in expression of coronary disease.

Dr W. J. E. JESSOP and Dr ALAN THOMSON also took part in the discussion to which Professor MOORE replied.

At the same meeting Dr C. J. McSWINEY showed a new and improved model of the Briggs-Paul pulsator.

## Local News

### FRANCE

[FROM OUR OWN CORRESPONDENT IN PARIS]

#### The Medical Examination of all Motor Drivers

Hitherto in France a special medical examination has been required only of the drivers of motor lorries, omnibuses and other heavy motor vehicles. The extension of this privilege or imposition of it at what you like to the drivers of all motor vehicles has recently been debated with much keenness at meetings of the Academy of Medicine which has finally decided in favour of it in spite of the misgivings voiced by several speakers. The resolution adopted on March 8 says in effect that such a medical examination would be useful for every driver and necessary in the interests of all motorists. It concludes with the proposal that the Minister of Public Works should appoint a commission to examine this problem. The critics of this measure within the Academy dwelt on the difficulties which would be encountered when a limited number of medical examiners would be called on to deal with an unlimited number running into millions of candidates for medical certificates. It was also pointed out that motor accidents are more often due to flaws in a man's character than to flaws in his physique and that one can not expect the ordinary medical examiner to be gifted with such transcendent psychological insight that he can spot the road hog in advance. One speaker quoted statistics supposed to show that only 0.74 per cent of road accidents had been traced to the faulty physique of the driver. On the other hand there must be many physically ailing motorists including elderly country doctors whose earnings would be seriously threatened by the proposed measure although the likelihood of such drivers causing a serious accident would be very small indeed. What was perhaps the most effective answer to all these inhibitory considerations was the question put by one speaker: Is there a single one of our colleagues who would consent to be driven from Paris to Nice by an epileptic chauffeur? It is remarkable how such a pertinent question can crystallize opinion during a debate conducted with so much ability on both sides that many a listener must have felt that both were in the right or very nearly so.

#### The late Dr Rumond Sibouraud

Though many obituary notices fail to carry conviction because of the well known and on the whole laudible inclination of the writer to give his subject the benefit of the doubt one cannot help being charmed and im-

pressed by the volume and quality of the tributes paid by his friends to the late Dr Sibouraud. He is a remarkable illustration of the proverb imputed to a certain biblical while that you cannot keep a good man down. From the very outset of his medical career Sibouraud was recognized as a coming man. Then a rude check awaited him, a thesis which he had prepared on the subject of ringworm and which represented four years' research was rejected by his examiners in favour of another thesis whose comparative mediocrity was obvious. This judgment a mere incident for the examiners made Sibouraud decide once and for all not to seek promotion by the usual paths but by the intrinsic merit of his own researches. For some time this decision cut him off from the laboratory and hospital appointments that normally go to those who best succeed in pleasing their examiners. But with the support of Roux and others Sibouraud was enabled to pursue his studies in a bacteriologically minded dermatologist and in due course the importance of his work was universally recognized that the hospital appointment he had refused to seek sought him and he was installed at the Saint Louis Hospital where for some thirty years he was the presiding genius to whom the whole world of dermatology came to pay homage. But with all his success he remained the kindly genial modest helpful man at the service of all who sought his advice. The motto up to which Sibouraud lived throughout nearly the whole of his scientific career was: When you are someone you need not be something.

#### Insurance against Professional Risks by *Sou Médical*

*Sou Médical* is a co-operative enterprise all of the profits of which go to swell a reserve guarantee fund. For an annual subscription of 100 francs each its members are insured against all the risks entailed by the practice of medicine. The lively appreciation of these risks by the medical profession is shown by the fact that in only two years the membership of this body has risen from 7 019 to more than 8 000. In 1937 it dealt with 461 affairs, 109 of which concerned disputed doctors' bills. Third party actions accounted for twenty-two cases, medical care for twenty occupational accidents for fifty-eight, conflicts with the tax authorities for seventy-five and misunderstandings between colleagues for twelve. There were eight cases of slander and four penal cases. Only about 10 per cent of all the cases dealt with in 1937 would have been taken up by an ordinary insurance society confining its liabilities only to professional responsibilities. *Sou Médical* is linked up with the weekly journal *Concours Médical* the annual subscription to which is 70 francs. Thus for a total of 170 francs every French doctor who wants to can enjoy a first class medical journal and insurance against the almost countless risks of legal troubles in this highly contentious age.

#### Retirement of Professor Emile Sergent

When a medal was presented to Professor Sergent recently on the occasion of his retirement several among his most distinguished colleagues recalled various incidents in his career. Professor Roger went back some thirty-seven years and called to mind his first meeting with Professor Sergent when in 1901 they had sat opposite each other at an examination table. A fellow examinee whispered on this occasion to Professor Roger: Look at his head! He is going to be Potain's successor! This remarkable prognostication came true and for many years Professor Sergent drew crowded audiences at the *Charité* where Potain had taught. Professor Sergent's gifts as a teacher were so conspicuous that in 1921 a unanimous vote of the council of the Faculty of Medicine endowed him with a new chair as professor of clinical propeaedeutics at the *Charité*. He was not only a great teacher however he was also a brilliant research worker who has contributed much to our knowledge of endocrinology, the diseases of the respiratory system and tuberculosis of this system and of the bile passages.

## Correspondence

### Classification of Adventitious Sounds

SIR—I have been much interested in the correspondence on this subject, and especially by Dr Hutchison's letter in which he pleads for simplification. Personally I always taught my students the original classification of Laennec with as exact an English translation as possible. He introduced the word *râle* which he derived from the 'death-rattle', but he explained that he would take a rather wider application of the word than the accepted one.

Je designeraï sous ce nom tous les bruits contre nature que le passage de l'air pendant l'acte respiratoire peut produire soit en traversant des liquides qui se trouvent dans les bronches ou dans le tissu pulmonaire soit à raison d'un rétrécissement partiel des conduits aériens.

There is no doubt that he used the word *râle* in the widest possible sense that attaches to the English word rattle. Laennec goes on to distinguish five principal kinds of *râle*—as follows:

- 1 Le râle humide ou crépitation
- 2 Le râle muqueux ou gargouillement
- 3 Le râle sec sonore ou ronflement
- 4 Le râle sibilant sec ou sifflement
- 5 Le râle crépitant sec à grosses bulles ou craquement

The two English translators, Herbert (in 1846) and Forbes in his fourth edition of 1834 used the following English equivalents:

Forbes	Herbert
1 Moist crepitous rhonchus or <i>crepitation</i>	Moist crepitant râle or <i>crepitation</i>
2 Mucous rhonchus or <i>gurgling</i>	Mucous or gurgling râle
3 Dry sonorous rhonchus or <i>snoring</i>	Dry sonorous râle or <i>snoring</i>
4 Dry sibilous rhonchus or <i>whistling</i>	Dry sibilant râle or <i>whistling</i>
5 Dry crepitous rhonchus, with large bubbles or <i>crackling</i>	Dry crepitant râle with large bubbles or <i>crackling</i>

These three lists will show how much confusion Dr Forbes caused when he introduced the word 'rhonchus,' saying it was employed by Laennec, but I cannot find that Laennec used it as a complete equivalent of *râle*. In the table alphabetique to the second edition of Laennec's *Traité de l'Auscultation Médiate* (1826) there is the entry RHONCHUS RONFLEMENT VOI RÂLE, but this implies that *rhonchus* is identical with *ronflement* or snoring. Unfortunately Forbes's translation met with wide acceptance and his substitution of *rhonchus* for *râle* has served to puzzle every medical student from that day to this.

A reversion to Laennec's original classification is perhaps the best simplification, provided that the word *râle* is frankly translated by rattle. With that substitution Herbert's version of the classification will be intelligible. Whether Laennec's division of rattles into dry and moist is justifiable must remain debatable.

It has always seemed to me that whilst one may accurately describe sounds as gurgling whistling snoring and crackling to call them wet and dry involves more guesswork than is acoustically or musically permissible. I am not sure whether *craquement* is accurately rendered by crackling; the word used by both Forbes and Herbert. Laennec explains that it is the pathognomonic sign of pulmonary emphysema is only heard during inspiration and resembles the sensation experienced when one presses the stethoscope over a part affected by subcutaneous emphysema—so perhaps crackling is the right word.

There is really no difficulty in finding English equivalents for Laennec's five sorts of rattles with the exception of his first *râle humide ou crépitation*. The word 'crepitation' is not in common English use. Laennec says the sound is like that caused by making salt crackle by warming it slightly in a basin or by blowing up a dry bladder. He explains the sound as caused by the air vesicles containing a liquid almost as thin as water which does not prevent the air penetrating them. The bubbles which form it appear extremely small. This is the crepitation heard in the early stages of pneumonia which disappears during complete consolidation of the lung and reappears (as Laennec described) when resolution occurs. "Crepitation" thus described and defined seems to be a word which we must allow to be adopted into English. With these original explanations which Laennec used we shall do well, in my opinion, to be content. But if we are compelled to read Laennec in a translation not in the original French, I recommend Herbert's translation, not Forbes's—I am, etc.,

Clifton Bristol April 5

J A NIXON

### Ascorbic Acid in Bronchial Asthma

SIR—Dr H B Hunt's article (*Journal* April 2, p 770) concludes by saying that his investigations do not show "ascorbic acid to be of any value in the treatment of bronchial asthma when given in comparatively large doses." There are ample reasons for questioning this statement. Clinically one knows and patients themselves have emphasized the benefit to asthmatics of plenty of fresh fruit. Secondly the adrenals are richer in vitamin C than any other organ in the body. Thirdly, the urinary excretion of ascorbic acid for twenty-four hours was investigated in thirty-two asthmatic patients at Stobhill Hospital. In twenty (60 per cent) it was nil and the average excretion of the remaining twelve patients was only 4.8 mg, the highest being 12 mg (normal 15 to 30 mg). Of course, the series is small and belongs to the hospital class in which the excretion of ascorbic acid is likely to be low but surely it is significant that in all the patients the figure was so far below normal sometimes even after eating fruit.

The mode of action of ascorbic acid is admittedly obscure as regards asthma it is probably indirect but not the less potent. It has some relation to vascular spasm. The last two cases of Meniere's disease that I saw promptly got well on taking abundant fruit. The one of one was examined and contained no ascorbic acid. Meniere's disease is the aural analogue of migraine though unlike migraine, it does not often consist in asthma—I am, etc.,

Asthma Clinic Stobhill Hospital,  
Glasgow April 6

JAMES ADAM

### After-effects of Modern Treatment of Carcinoma

SIR—The original account by Mr Percy Funnell which led to this correspondence served to show in his own experience that the results of radiotherapeutic treatment like those of other forms of treatment can be stated simply as success or failure according to survival or death of the individual treated. By his case history he demonstrated that the elimination of cancer from certain situations by radiotherapeutic treatment can be associated with such a degree of persistent partial survival may scarcely be desirable. Surgery is although successful in the sense that the disease is

radical may also demand a heavy price in disfigurement from the survivor. Few radiotherapists of experience would seek to deny that considerable room for improvement exists both in technique and in the assessment of cases in their comparatively young branch of medical science.

Some of those whose letters followed Mr Furnivall's have unfortunately expressed exaggerated likes or dislikes for radiotherapy. Either of these attitudes can serve only to retard that co-operation between surgeon and radiotherapist which their respective limitations and the gravity of the subject demand. Dr Douglas Webster (March 26 p 699) for example undoubtedly overstates the case for radiotherapy while Mr W S Dickie (April 2 p 757) verges on the intemperate in his criticism from the supposed surgical point of view. If all Mr Dickie's cases were treated by recognized experts and all had necrosis of soft and bony tissue then something was wrong with his recognition either of necrosis or of experts. From the tone of Mr Furnivall's note it is evident that he only sought to state facts within the range of his own intimate knowledge and had no intention of disparaging radiotherapy or of encouraging others to do so. The pursuit of this branch of treatment to a high standard is difficult from many standpoints—practical, economic and administrative—and the number of well qualified men in training in this country at the moment is inadequate. The painful aftermath of the elimination of disease in Mr Furnivall's case may possibly serve as a stimulus to the establishment of the team work which is the chief promise of future developments in the attack upon cancer.—I am etc

Edinburgh April 4

J J M SRAW

SIR—Mr W S Dickie's letter (April 2 p 757) scarcely does justice to modern radium therapy. I think everybody must feel grateful to Mr Percy Furnivall (February 26 p 450) for so generously giving the results of his own personal and rather painful experience. But looked at in the light of after events there can be little doubt that he received an overdose. Such warnings as that given by Mr Furnivall and in the letter from Mr Dickie serve to emphasize the fact that in dealing with radium as a substitute for surgery we are making use of a powerful weapon, capable of doing harm as well as good and in dealing with large malignant growths only safely made use of by team work. Such a team should be composed of a surgeon, with practical experience not only of operating in the area involved but of the effect of the application of radium assisted by a pathologist and with the dosage controlled by an expert physicist who may or may not be styled a radium officer.

One important principle I think is now being established—that it is unwise to vary the types of irradiation in one and the same case, or, in other words, Do not mix your methods. The worst results I have seen were in two cases in which necrosis of the larynx took place and in one in which the face necrosed—all were treated first of all with radium needles and subsequently by heavy doses of deep x rays. Assuming that the position of the growth and the degree of malignancy as shown by the microscope, remain constant, there is still a considerable variation in the soil in which it grows. It is probable that the surrounding parts offer a resistance to invasion which differs in the individual. Further when the soil has been damaged by years of absorption of alcohol or has been affected by syphilis or even impoverished in its vascular supply by arteriosclerosis it easily undergoes necrosis. Each case

should be carefully judged on its merits at a consultation between the surgeon and the radium officer when the size and distribution of the growth will be estimated as will the character of the soil in which it is found and the proximity to bone. Experience has shown that some bones are much more prone to radium necrosis than others and it is my own practice in dealing with the fauces whenever the growth approaches the ascending ramus of the jaw to remove it and attack the growth from the outside. I think this simple procedure would have saved a great deal of the distress and suffering to which Mr Dickie refers in his letter—I am etc

Birmingham April 8

MUSGRAVE WOODMAN

## Causation of Cancer

SIR—In the *British Medical Journal* of February 24 1934 (p 352) there appeared a letter of mine on cancer research in which I suggested that the key to the prevention of cancer lay in the reinstatement by simple means of man's natural resistance to the development of the disease. It seems to me that what we know about this disease as it occurs in man shows that the search for a so called cancer cure is a futile one and only tends to raise hopes for the future which can never be realized. In connection with the question of cancer prevention it is necessary clearly to visualize the fundamental difference between cancer genesis and cancer growth. We know now both from clinical and experimental evidence that man and animals possess a natural resistance to cancer genesis varying greatly in different individuals. As a general rule the younger the individual the greater is the natural resistance to cancer genesis and the more rapid the actual growth of the cancer. It is obvious that cancer genesis and cancer growth do not run on parallel lines and consequently it can be readily understood that certain agents which have no effect upon the established disease may nevertheless influence the development of the morbid process.

I think that with our present knowledge of physiology it is not beyond the wit of man to visualize the mechanism of the natural resistance to cancer genesis and further more to conceive of simple means which will assist this mechanism to function at its inherent optimal potency. In recent years it has been demonstrated that various agents—chemical, actinic and animate—possess carcinogenic properties. I believe that certain chemical compounds contained in these substances or produced by their action on the body enter the system and act by diminishing the natural resistance to cancer genesis and that the tumour site is determined by local irritation. In this connexion it is suggestive that a chemical compound may have a markedly carcinogenic action and yet may produce little or even no local irritation. I think that in the conception of cancer as a preventable disease lies our real hope for its future control.—I am etc

Cardiff April 5

W MITCHELL STEVENS

## To Nail or Not to Nail Abduction Fractures?

SIR—In the *Journal* of April 9 (p 773) Mr H A Brittain disagrees with my view and Bohler's (who thought it first) that abduction fractures should not be disimpacted and nailed but should be allowed to join spontaneously in the usual slight valgus deformity. I am certainly an advocate of nailing but not a blind advocate. I restrict the operation to those adducted subcapital and

transcervical fractures which are notoriously reluctant to unite by any other means. I do not, however, operate upon patients previously bed-ridden or upon those with a short expectation of life, still less as a cure for pneumonia.

The three-flanged nail has its disadvantages. Though Smith-Petersen's nails increase the chances of union, they slow it down considerably and make it difficult to decide when it has occurred. They break completely across in 8 per cent of cases and, in addition, pieces chip off in about half this proportion. Nail erosion is so common that nobody mentions it. I say nothing of osteo arthritis and aseptic necrosis because these may occur without any operation, but there are occasions when the risks of leaving a nail or removing it seem almost equal. Surely it is better to get union without using a nail when, as in pertrochanteric, intertrochanteric, and abduction fractures, one can feel confident of doing so? Mr Brittain's claim of 85.7 per cent bony union in all cases lacks the support of dates, but Watson-Jones, at Belfast this year, frankly admitted that his figure of 91 per cent (*British Journal of Surgery* April, 1936) had proved optimistic. If surgeons would be content to wait three years for their end-results they would be on safer ground.

The bad results of nailing are generally the results of bad nailing. This applies to reduction and to x-ray technique as well as to the nailing itself. It is so important to put the nail exactly where it is needed (generally axial in both planes) that I have discarded my director which gave mathematical precision with insufficient stability for one designed and made for me by Mr Raymond Fox, which promises to fulfil both requirements. It may be asked how I can still label myself an advocate of nailing. The answer is (*pace* McMurray) that I believe it to be the best method so far discovered, but I confess that my own results—if I could bring myself to think of them in under three years—would remind me of the little girl who had a little curl right in the middle of her forehead—I am, etc.,

London, W 1, April 4

ERIC I. LLOYD

### Multiple Benign Sarcoid and Tuberculous Ulceration

SIR—I am surprised that the case reported by Dr R. Howitt Wiseman under this heading on March 26 (p. 673) has evoked no discussion. It is a pity that the report was not accompanied by any clinical photographs or illustrations of the histological picture. If Dr Wiseman's diagnosis and the interpretation of his findings is accepted, it must be regarded as solving the difficult problem of Boeck's sarcoid. On the evidence submitted I have great difficulty in accepting either his diagnosis or his interpretation of his findings. There is no mention of the Mantoux reaction or of x-ray investigation of the chest or of bone, all of which is of first importance in discussing the problem of sarcoid. If there is a microscopic picture typical of the benign sarcoid it is not that described in this case, and I think I should not be alone in questioning the value of bacteriological examination of scrapings from the edge of an ulcer to confirm the diagnosis of tuberculosis. It will be interesting to learn the further history of this case beyond the investigation stage, and to know whether the question of mycosis fungoides or allied affections was considered. I should have thought the diagnosis rested between this group and leprosy—I am, etc.,

Leeds, April 2

JOHN T. INGRAM

### "Gonococcus Antitoxin" for Gonorrhoea

SIR—It is with much interest that I have followed in your columns the papers by Dr Anwyl Davies and by Drs Burke, Harkness, Gabe, and King in regard to the treatment of gonorrhoea with antitoxin. The difference in their results is most instructive.

All scientific workers would probably agree that the careful planning of an experiment so that it may at least be reasonably expected to prove or disprove that which it sets out to prove or disprove is the first essential towards obtaining a result of practical value. It would seem that whereas in the work of Drs Burke, Harkness, Gabe, and King the method adopted was carefully thought out and suitably controlled with a particular end in view that of Dr Anwyl-Davies would appear to fall far short of this standard. Moreover, it seems that the former authors carried out their work entirely independently of each other and only afterwards pooled their results—a fact which materially enhances the value of their experiments. In the case of Dr Anwyl-Davies's work it is very difficult to determine what scientific method of approach was adopted or what bearing the results obtained have upon the efficacy or otherwise of the antitoxin in the treatment of gonorrhoea because of the "adjuvant treatment" which was given at the same time. What strikes one very forcibly is that the deductions made by Dr Anwyl Davies as a result of his work appear to be very much at fault.

Let us suppose that he had done his work in the light of the more recent experiments of Dr Burke and his co-workers (and it would seem that it could only be of some value *after* these experiments), one would have expected his deductions to confirm in some degree, and not confound, the findings of these workers. Here are two sets of workers, one using antitoxin together with a recognized modern method for the treatment of gonorrhoea (called "adjuvant") and the other using antitoxin alone. One set of experiments yields good results and the other bad results. The deductions are, of course (1) that the "adjuvant" is most likely responsible for the good results, since it is the only important thing that is not common to all the workers, and as a corollary to this (2) that the antitoxin has no beneficial effect in the treatment of gonorrhoea—as Drs Burke, Harkness, Gabe, and King suggest. Furthermore, in a number of their cases severe local and general reactions were noticed, whereas in Dr Anwyl Davies's work these were by no means such a formidable feature. Again the 'adjuvant' probably explains the discrepancy. The deduction here is that not only is the antitoxin of no benefit, but in a number of cases it would appear to be positively harmful—again as suggested by Dr Burke and his co-workers. Finally, it would be interesting to know whether or not Dr Anwyl Davies used protosil or some allied substance in some or all of his cases 'by way of adjuvant'—I am, etc.,

N. SEDDON-TAYLOR M.B., Ch.B.

London W 2, April 10

### Use of Measles Serum in a School

SIR—On January 18, 1938, the spring term began, and on January 20 information was received that the sister of a boy in the school had that day developed measles. The boy was at once removed to the sanatorium, and on the same day showed signs of measles. Consultations held by the head master and medical officers predicted the introduction that there were in the school thirty boys who had



had measles. This small number is due to the fact that there had been an epidemic of measles in the school two years before. Of this number there were five who were — contacts a — standing for dormitory house or term contact. These were at once segregated and it was decided to attempt control of what might prove to be an epidemic by the use of measles serum. While permission was being sought and obtained from the parents of the contacts adult serum was with considerable difficulty obtained largely through the help and interest of Dr E M Darmid, assistant pathologist Salisbury. Each of the contacts was given 10 ccm adult serum. Incidentally the parents of one boy who was not a contact and had not had measles asked for inoculation. After an interval of nine days new cases reported and this continued until a total of sixteen boys came under treatment. Of this number six were boys who had serum. The epidemic was not of a severe type.

The main object of this note is to stress the advantage of using measles serum. The clinical contrast during the course of the disease was most spectacular. The patients who had serum were never ill. The rash was at no time fully developed. Its distribution was very uneven and I found it lasted longer. There was an entire absence of coryza and photophobia. Laryngeal and bronchial symptoms were negligible. The average period of pyrexia was two days. In the case of the un inoculated patients it was five days. There was no complication of any kind in the boys who had serum and it will certainly be commended in any future outbreak. The injection of the serum produced no reaction. The injections were always given in the evening and each boy was instructed to stay in bed next morning; he did not feel quite fit. In no case did he take advantage of this; he got up and did full justice to a good breakfast.

As will be noted from the above remarks there is no evidence of temporary immunity but there is undoubted evidence of attenuation of the disease and absence of complications. With such a strong weapon now added to the equipment of the physician it is hoped there will be in the immediate future provision made for the speedy supply of serum for the needs of the community.

I gladly acknowledge the helpful assistance of Sir Kave Le Fleming in interview and correspondence—I am etc.,

W J GRAY LRCP LRCS

Littleton Panell Wilts. March 31

### Unequal Pupils in Unconvicted Prisoners

SIR—As more than once I have had occasion to relieve doctors' worries about unequal pupils occurring not only in their patients but in themselves it seems desirable to comment upon the statement by Dr H K Snell and Dr G A Cormack (*Journal* March 26 p 672) that 'anisocoria associated with changes in the pupillary reaction invariably indicates a definite organic lesion and is often accompanied by other signs of the disease. That it can indicate such a lesion is common knowledge but Adie showed some years ago that dilated and inactive pupils can even be associated with absence of knee jerks and yet be a benign condition. Of course there may be an organic lesion to explain the syndrome but I am not aware that it has been discovered and for the peace of mind of the sufferers the term 'functional' had better be used to describe the phenomenon. For many years I have been making observations upon anisocoria and have come to the conclusion that in ophthalmic practice a common cause is emotional stress. I published in this *Journal* notes

of a case illustrating how such stress could work even at long range (1925 2 1179). Long before that Professor Millus Culpin had told me of the occurrence of unequal pupils in his shell shocked patients.

Dr Snell and Dr Cormack in their article state that none of our cases showed evidence of mental disorder associated with anisocoria. The value of this observation depends upon the definition of mental disorder. It has long been my custom to regard pronounced inequality of the pupils especially when of sudden onset as a sign of an anxiety state, an all too common mental disorder. Is it not significant that in many cases the inequality noted overnight was no longer present at the second examination the following morning? The suggestion that fatigue was the determining factor seems an inadequate explanation without qualification as to the nature of the fatigue. Since the state of mind of most offenders while wondering what fate awaits them must be the most exhausting process they undergo I presume that the authors refer to mental and not physical fatigue. Is not the situation comparable to that of soldiers waiting to go over the top? In the 90 per cent of cases that recovered after a night's rest some adaptation to evil circumstances may be assumed.

To sleep upon it is a well known way of settling conflict and securing peace of mind. But I think that an experienced psychologist would have little difficulty in showing temperamental differences between those who recovered so quickly and those whose nervous system had received a more lasting impression. Direct official questioning about feelings is not likely to get at the truth. Just as in the great war soldiers would not admit fear so may unconvicted prisoners repress emotion. But as is shown by the traditional custom in India of detecting criminals by giving suspects a mouthful of rice and noticing which of them failed to insalivate it the nervous system has its own way of revealing emotional secrets. A case in point may perhaps be quoted.

A man aged 40 came to me on December 10 1928 with a widely dilated right pupil virtually inactive to light and accommodation the left pupil was normal. His sight for distance and reading was unimpaired. The day before he had got a flake into his eye from his brother's wireless battery. He was frightened for a few minutes but the eye soon became comfortable and it was not until he returned to his own home four hours later that he learned from his mother that his eyes looked odd. I asked a colleague sceptical of my views to explain the phenomenon on purely physical lines. He failed and I undertook to explain it from the emotional point of view. As I pointed out in 1925 and again in 1927 grief can cause such a lesion and I began now by asking the patient if his father or mother had just died. He replied 'No but my father lay dying in hospital yesterday morning. And then with great rashness I offered to tell the rest of the story. I said 'You wanted to listen to the morning bulletin about King George's health yesterday and were preparing the wireless set for that purpose. You were very anxious for while you contemplated the King's apparently long struggle for life in spite of the attentions of many eminent physicians you were thinking with a sinking heart how little chance your father had in a small cottage hospital. I should not be surprised to learn that your father had the same disease as the King. The guess was right, even to the last particular. His father had an empyema and was not expected to live through the day actually he recovered. At this point my colleague halted convinced urged. But you maintain that when the dilatation is monocular it is usually on the left side here the right eye is affected. To which I replied 'My experience is limited but if you ask the patient you will find he is left-handed. He has merely changed sides. Again the guess was right. Anisocoria has its uses. The pupil slowly recovered in the next few weeks and a month later was normal.



My patient had other symptoms indicative of a neurotic disposition. He suffered from depression easily disturbed sleep, claustrophobia, fear of the dark, had fever, and nervousness when riding on a bicycle or in a motor car. The vaso-motor disturbances so commonly associated with these symptoms were manifest in his cold, clammy, bluish-red hands. Occasionally even in summer and especially at meal-times his fingers and toes would become white and dead. Several years later when investigating the psychogenesis of pritch-crythema of the face and neck I asked this same patient to come for a further examination. His pupils were then normal, but he had a pale face and very red ears and neck. With the psychological significance of 'getting it in the neck' in my mind, I used a stock inquiry and asked, 'How do you react to anything rather tight, like a scarf or collar round your neck?' He replied 'I awake at night fairly often with a sensation as if someone had a piece of rope round my neck and was gradually tightening it. When it becomes really tight I awake in a great fright and call out. My parents often hear the cry.' He was indeed "getting it in the neck" in his dream life, and I was not surprised when in answer to my next question, he said, 'I never read detective tales—they are not even allowed in the house.' If such a man were ever in the plight of an unconvicted prisoner he would not be amongst those whose pupillary inequality adjusts itself in a single night.

The very word "pupil"—from *pupilla* a ward or minor—arouses curiosity as to why the opening in the iris was thus named, and the literal meaning of belladonna—beautiful lady—shows the strange emotional value attached to larger pupils, even when artificially induced. Can any useful conclusions as regards guilt be drawn from emotionally determined inequality of the pupils? I cannot say as far as conscious guilt goes. A tough lag might not bit an eyelid or dilate a pupil anyhow, it might be different if a conscience-stricken elder of the kirk were suddenly called upon to declare, in a police court, whether he had really been his brother's keeper or not. My patient I feel sure, was a thoroughly worthy citizen, but one equally worthy once said when watching a felon being taken to execution, "There, but for the grace of God"—I am, etc.,

Portsmouth, April 3

W S INMAN

### Abuse of Ephedrine

SIR,—In Professor J H Gaddum's interesting article on ephedrine, appearing in the *Journal* of April 2 (p 713), I notice that he states that this drug is 'having rather a vogue for local application to the nose, where it produces vasoconstriction and dries up secretions.'

For many years I have regarded this drug as being one of the most dangerous decorations of the average bathroom shelf. It appears in various forms of gaudy bottle, complete with nasal dropper, and is advised in all forms of nasal congestion. The contents give temporary relief in acute coryzal congestion. Such relief is sought by the patient repeatedly, and secretions are kept dried up. Inflammation of the antrum is the usual end-result. This may certainly be mild and transitory, but frequently is more serious, the degree of damage being to a certain extent proportionate to the number of applications of the contents of the dropper.

I consider that it is the ephedrine content of the oily emulsions which should be banned from the treatment of acute coryza. I speak from the observation of innumerable cases seen in general practice, and I should be interested to hear whether it receives the confirmation of other practitioners—I am, etc.,

Maidenhead April 5 R R FOOTE, M R C S, L R C P

### Food Supplies and Defence

SIR,—You kindly published in your issue of May 23 1936 (p 1079), a letter of mine indicating the possibility and urging the necessity for this country of self-sufficiency in essential foods. True there has been some movement in this direction, for which we may be thankful to the Government, but it has been perilously slow, and now, with a situation abroad more menacing to this country than any since 1918 it is manifest there is widespread apprehension of defeat through starvation in the event of war. In my opinion it is unwise to count on assistance from beyond the confines of the British Empire, if not, indeed, from beyond the shores of Britain. Armaments alone are inadequate. However gigantic they may be, panic as to the inadequacy of our food supplies may still be inevitable unless we hasten to assure our home supplies.

I invite a reference to the report of the Committee on Nutrition, issued by the British Medical Association in November, 1933. Page 12 contains "Table II—Daily Requirements of an Adult Male in Calories, Protein, Fat, and Carbohydrates." These are

First class protein	50 grammes
Second class protein	50 "
Fat	100 "
Carbohydrate	500 "

The second-class protein and some of the fat can be supplied by cereals, as the table shows. If only by reason of the certain lack of shipping in the event of war, surely it has been folly not to produce the carbohydrates from the home soil, as that soil can produce all we need. Every million pounds spent on cereal production will obviate the spending of ten times as much on armaments. Page 24 of the B M A report gives "Diet No 3—Adult Ration No Meat or Fish," and it is stated "This diet has been devised to enable those persons who object to eating flesh foods to obtain a diet which is satisfactory as regards its constituents. The first-class protein in this diet is derived from milk and cheese. The cost is approximately the same as that of the preceding diet." As an acre of land when used for dairy farming produces at least twice as much first-class protein and fats as when producing meat it is astonishing that at the present juncture the Government should encourage meat production, especially as, without such encouragement, there would still be ample meat when the land is producing essential foods.

The Government appears to be averse to formulating and enforcing an agricultural policy that will assure us against starvation in war time. I venture to submit this policy must be one that is in normal operation in time of peace, and that assures essential foods with the minimum of labour-cost, thus setting free the maximum number for active service in the event of war. Maybe it is but envisaging this policy from another aspect to say a national policy should aim at the maximum production that can be supported in health on the produce of the home soil. This is the policy of Germany and Italy. It is, indeed, the policy on which the sages of all religions have been agreed. It has no place for our so-called high standard of living, advocates of which are generally also advocates of a restricted population. Britain can support in health double its present population on the produce of its own soil. Had it that population at the present moment we should be living free from all apprehensions of war!—I am, etc.,

London, W 14, April 5

E BATHFLORE, F C S (ret)

## Chemotherapy of Virus Diseases

SIR—In view of the number of different bacteria which are influenced by prontosil sulphamidamide and allied compounds it is only natural that the effect of the drugs should have been tested on virus infections. Although a number of workers have obtained negative results in virus diseases Rosenthal Woolley and Bauer (1937) claim to have influenced lymphocytic choriomeningitis infections in mice with prontosil rubrum. Employing two strains of the virus of lymphocytic choriomeningitis isolated in this country and employing the same technique as the American workers we have failed entirely to influence this infection in any way with prontosil rubrum. These results are in agreement with those recently published by Rouse (1938) and Levaditi (1938). Yellow fever infections in the monkey and mouse and Rift Valley fever in the mouse have also been unaffected by prontosil and allied drugs. A fuller account of these experiments will be published in due course—We are etc

G M FINDLAY  
F O MACCALLUM

The Wellcome Bureau of Scientific Research  
London N.W.1 April 11

## Sodium Sulphanilyl Sulphanilate and Canine Distemper

SIR—Since the appearance of the paper by Dochez and Slancetz (*Science* 1938 87 142) in which they reported their observation that sodium sulphanilyl sulphanilate was of value in the prevention and treatment of canine distemper a number of veterinary practitioners have inquired as to the effect of this drug. A considerable number of experiments have been completed in these laboratories and our results are not in parallel with those described in the American publication. In our hands this drug has not influenced the course of infection with the Carre Laidlaw Dunkin distemper virus either in ferrets or in dogs. At present we know of no obvious explanation for this complete discrepancy and we hope at an early date to publish the details of our experiments.

The above drug should not be confused with sulphanilamide which in our preliminary experiments appears to have little or no influence on the course of infection with the distemper virus but does seem to control the secondary infections.

We are in communication with Dr Dochez but in view of the interest which has been aroused by the original paper commented on in the *Journal* of April 9 (p 791) felt that a short note of our results would be of interest—We are etc

A B MACINTYRE  
R F MONTGOMERIE

Wellcome Physiological Research Laboratories  
April 10

## Smoking and Longevity

SIR—In your annotation on this subject in the *Journal* of April 9 (p 791) you appear to be in some doubt as to the existence of an anti tobacco league. May I lighten your darkness by informing you that a National Society of Non Smokers was founded in 1926 with an organ entitled *Clean Air*. The aim of the society is the maintenance of the right of every non smoker to clean air unpolluted by tobacco smoke in which to take his or her food, to travel to do business or to seek entertainment. Further information about this society which numbers over 1 300 members may be obtained from the secretary 20 Essex Street, W.C.2—I am etc

London W.8 April 9

J D ROLLESTON

## Obituary

Dr DAVID EDWARD RICHARDS who has died at his residence in Tondur near Bridgend South Wales received his medical education at Anderson College St Mungo's College and the Western Infirmary Glasgow. In 1892 he took the triple Scottish Diploma L.R.C.P. L.R.C.S.E.D. and L.R.F.P.S.Glas. and ten years later proceeded to the Fellowship of the Royal College of Surgeons of Edinburgh. He practised near Bridgend and was surgeon to the cottage hospital there consulting surgeon to the Great Western Railway and medical officer and public vaccinator. He was also a medical officer to the Post Office and the Board of Education as well as to various assurance societies. He joined the British Medical Association in 1901.

Mr EDWARD JOSEPH FOX of Warrington died on March 31 at the age of 65. Born in Warrington in 1873 the son of the late Dr Edward Austin Fox he was at Stonyhurst College from 1885 to 1890 when he went to Owens College Manchester and later to St Bartholomew's Hospital. In 1894 he graduated B.Sc. Lond. with honours in physiology and three years later obtained the diplomas M.R.C.S. L.R.C.P. He proceeded F.R.C.S. Eng. in 1899. He held the posts of house surgeon to Manchester Royal Infirmary Manchester Southern Hospital and Saltord Royal Hospital. Having determined to specialize in diseases of the eye he became clinical assistant to the Royal London Ophthalmic Hospital and subsequently began to practise in Warrington where he was appointed ophthalmic surgeon to the Royal Infirmary. He was a member of the North of England Ophthalmological Society and joined the British Medical Association in 1911.

Dr JAMES GODDING O.B.E. died on March 31 at his residence in Worthing aged 74. He received his medical education at the London Hospital and obtained the diplomas M.R.C.S. L.R.C.P. in 1889. After a period of general practice and having been medical officer for the London District to the Corporation of Trinity House he became in 1896 medical officer to the London and India Docks Joint Committee and medical examiner to the Shipping Federation and various steamship lines. In 1907 he was appointed deputy coroner for the eastern division of the County of London and then joined Gray's Inn being called to the Bar in 1911. In 1898 Dr Godding held the commission of surgeon lieutenant in the 1st Middlesex Regiment which was a volunteer corps recruited from the staffs of the docks companies and H.M. Customs in the Port of London. He subsequently transferred to the combatant corps which eventually became the 17th London Regiment in the Territorial Army. He was in command of this regiment at the outbreak of the last war and was on active service with it in France and Egypt until 1917 when he transferred to the Royal Army Medical Corps and as lieutenant colonel was in charge of No 17 General Hospital E.E.F. He was mentioned four times in despatches. In 1920 he became full time medical officer to the Port of London Authority. He was a member of the B.M.A. Ship Surgeons Subcommittee from 1919 to 1920. On his retirement from the Port of London Authority in 1930 he received a presentation of silver plate and the value of his work was very highly commended. He held the Territorial Decoration.

Dr JAMES W. PUTNAM neurologist who was expert witness for the State at the trial in 1901 of Leon Czolgosz, alias Fred Nieman assassin of President William McKinley died at Buffalo New York on March 23 aged 77.

Dr LOUIS WILLIAM STERN since 1934 professor of psychology at Duke University Durham North Carolina and formerly of Breslau and Hamburg died on March 27 aged 67. He originated the concept of the IQ (Intelligence Quotient) which is so popular in the U.S.A.

## Medical Notes in Parliament

The House of Commons rose for Easter on April 14. It is due to reassemble on April 26, when the Budget will be opened.

The Housing (Agricultural Population) (Scotland) Bill was read a second time by the House of Lords on April 7. On the same day the Lords read the Army and Air Force (Annual) Bill. Lord Strathcona and Mount Royal pointed out that Clause 6 of this Bill abolished an obsolete class of "hospital apprentice" in India.

On April 6 the House of Commons supported a motion brought forward by Mr Roland Robinson advocating the even distribution of holidays through the summer months and calling on the Minister of Education and the Minister of Labour to consult together with a view to eliminating obstacles to this. Sir Henry Morris-Jones, speaking as a medical man who had practised in a seaside resort, said it was pernicious that the holiday season should be concentrated into one month of the year. In the same debate Mr Chuter Ede and other speakers advocated altering the season at which the academic year began at universities and schools. Mr Ernest Brown said the co-operation which was advised between his Department and the Board of Education would be assured. Mr Robinson then withdrew his motion.

On the same day the House nominated six members to join with six Peers in a Joint Select Committee on the Collecting Charities (Regulation) Bill.

When the House of Commons read the Patents, etc (International Conventions) Bill a second time on April 8 Captain Wallace said one clause gave effect to amendment in the international agreement for the prevention of false indications of origin on goods, as revised in 1934. By this change the agreement covered the use of all indications in the nature of publicity capable of deceiving the public as to the origin of the goods and appearing not only on the goods themselves but on signs, advertisements, business letters, or any other commercial communications.

Dr Edith Summerskill took her seat in the House of Commons on April 11 as member for West Fulham, in the room of the late Sir Cyril Cobb. She was introduced by Sir Charles Edwards and Sir Stafford Cripps.

Sir Francis Fremantle has been appointed to the Select Committee of Lords and Commons on the Food and Drugs Bill.

Reference books on medicine and medical jurisprudence have been added to the library of the House of Commons. The lack of these had been remarked by the Parliamentary Medical Committee.

### Infanticide Bill

VISCOUNT DAWSON OF PENN moved on April 7 that the House of Lords resolve itself into a Committee on the Infanticide Bill to which the House had on March 22 unanimously given a second reading. He interpreted that manifestation of opinion as meaning the House felt that if it was once proved in court that a defendant was not responsible for her actions by reason of the state of her mind at the time of the offence the possibility should be removed of that defendant being exposed to a possible charge of murder to a verdict of guilty of murder or as an alternative to guilty but insane. Either of those verdicts denied the principle of the Bill. He had hoped to put this question beyond all doubt by two simple amendments in committee. He had hoped in this Bill to make clear that when a court of assize had satisfied itself that a defendant was irresponsible by reason of the then state of her mind it would be possible to return a verdict of insane at the time therefore not responsible therefore not guilty, a term of verdict in vogue before an Act of 1883. Lord Atkins's committee had unanimously recommended fifteen

years ago that there should be a reversion to the old form of verdict. Lord Dawson said he had consulted his legal friends who favoured an alteration of the law but said it should not be altered for this group of cases only. In many other cases of irresponsibility they would wish to go back to the verdict of insane at the time, therefore not guilty. These legal friends were firmly of opinion that it would be better to bring in a separate Bill, to which they would be favourable. He must bow to this opinion, although he did so with great regret.

The ARCHBISHOP OF CANTERBURY said he shared Lord Dawson's disappointment at finding it was not possible to introduce the suggested amendment in this Bill. It would be well if early legislation were brought in to give effect to the recommendations of Lord Atkins's committee. The EARL OF MUMSTER on behalf of the Government said he would convey to the Home Secretary the views that had been expressed.

The House then went into committee on the Bill and agreed without debate to amendments proposed by Lord Dawson. By these a recently born child is defined to be a child under the age of 12 months, and the circumstances for applying the provisions of the Bill to a mother were defined as being that 'the balance of her mind was disturbed by reason of her not having fully recovered from the effect of giving birth to the child or by reason of the effect of lactation consequent upon the birth of the child'. A further amendment was accepted to provide that the Infanticide Act, 1922 be repealed. The long title of the Bill was amended so that the phrase 'a woman who wilfully causes the death of her child' no longer appears in it.

The report stage was set down for April 12.

### Measles Serum

MR W LEACH asked on April 7 whether disappointing results had followed the recent use of measles serum in London County Council hospitals. He asked for strict investigation of the claims made for the various serums in use in view of recent criticism of a medical officer of health in regard to the employment of measles serum. Sir KINGSTLEY WOOD replied that special reports published by the London County Council on the epidemics of 1931-2 and 1933-4 stated that both convalescent and adult measles serum had proved of great value. The report on the epidemic of 1935-6 had not yet been published, but there was no diminution of confidence on the part of this authority in the value of the serum. There would not appear to be grounds for a special investigation.

*Hospital Appointment in Seychelles*—On April 4 Mr KELLY asked the Secretary of State for the Colonies if he had considered a petition asking that a doctor, not a dentist should be appointed to the Government hospital in the Isle of Seychelles. Mr ORMSBY GORE said that a petition was addressed to him last November protesting against the employment of a Government dentist at the Government hospital in the Seychelles. The petition contained no reference to the appointment of a doctor. He did not see his way to interfere.

*Health Insurance Benefits in Incurable Illness*—On April 6 Mr PARKER asked the Minister of Health whether he proposed to use the national health insurance funds to increase benefits to those disabled by incurable illness. Mr BERNAYS replied that provision was already made under the scheme of national health insurance for persons who were insured under the Acts at the time when they became disabled. Such persons, as soon as they had paid 104 weekly contributions, became entitled to disablement benefit up to the age of 65, and thereafter to an old age pension for the rest of life. Any approved society which had a disposable surplus on valuation might apply part of it to increasing the standard rate of disablement benefit and societies covering a large percentage of the whole insured population had already done so.

*Contributory Hospital Scheme for Government Staff*—Colonel COLVILLE announced on April 6 that a scheme would be made available to all Government staffs at home and abroad.

and ten industrial to make contributions for hospital purposes. The non-industrial staff numbered approximately 70000.

**Tuberculosis Inquiry in Wales**—Mr. B. Evans replied to Mr. J. Griffiths on April 11 and that a committee of which Mr. L. C. Davies was chairman had not yet completed its inquiries into the problem of tuberculosis in Wales. It proposed to hold a further sitting towards the end of this month. The Minister of Health would consider the question of the publication of the report as soon as he received it.

**Health of Abyssinian Refugees**—The number of Ethiopian refugees in Kenya is 6181. In a report prepared at the end of October last by the medical officer in charge of the camp it was stated that as a result of measures taken by the authorities in Kenya a great improvement had taken place in the health of the refugees, especially of the children.

#### News in Brief

During the year ended March 31 1937 thirty-eight pedestrians were killed and 1778 injured in Great Britain while crossing the road at junctions where traffic lights are installed.

The scheme for giving additional nutritive food to expectant and nursing mothers in the p.e.t. area is being followed with the closest attention by the Medical Research Council and by the Minister of Health but in the opinion of the latter be regarded as in the experimental stage. The Minister is not in a position to make any general statement upon the results obtained.

The Government cannot provide special facilities for the Contraceptives Bill during the present session.

Returns received from 1271 local authorities in England and Wales show that during the seven years ending on that date 621,578 houses had been reconditioned under the Housing Acts 1920 and 1926 in the areas of those authorities.

Slum clearance programmes of the local authorities outside London affect some 387,000 houses. Of these about 240,000 have been included in clearance and demolition orders. Up to the end of last year about 150,000 of the houses had been demolished and about 161,000 new dwellings provided for persons so displaced.

## The Services

### AUXILIARY RAMC FUNDS

The annual meeting of the members of the Auxiliary RAMC Funds will be held at 5.15 pm on Friday April 29 at 11 Chandos Street Cavendish Square W. When the annual report and financial statement for the year ended December 31 1937 will be presented and the officers and committee for the current year elected.

### No 4 FIELD AMBULANCE OLD COMRADES ASSOCIATION

Staff Sergeant J. McKEOWN, RAMC, writes from 90 Ashurst Road North Finchley N.12. As organizer of the reunion and dinner of the above unit I am desirous of getting in touch with all the officers who served with the unit during 1914-19. Will any officer who has not heard from me please communicate with me at the above address? I should also be pleased to hear from any medical officer who served with the No 3 or No 9 Field Ambulance or in the Guards Division.

### DEATHS IN THE SERVICES

Major DANIEL MCKELVEY, MC, RAMC, died recently in the Queen Alexandra Military Hospital Millbank London aged 46. He was born on September 5 1891 the elder son of John H. McKelvey of Dunbunraver Gortin Co. Tyrone and

was educated at Edinburgh University. He graduated MB ChB in 1914. He proceeded MD in 1919. He also held at St. Mary's and Guy's Hospitals and took the F.R.C.S. in 1927. After filling the posts of resident physician at Edinburgh Royal Infirmary and at the Dreadnought Hospital Greenwich during the war he began a temporary commission as lieutenant in the Royal Army Medical Corps. On November 1 1914 he became temporary captain took a permanent commission in that rank on May 1 1915 and became major on November 1 1926. He served throughout the war of 1914-18 when he gained the Military Cross and later two bars to the Cross. Also the French Croix de Guerre with palm leaves. He was once taken prisoner but escaped. After the war he served in Egypt Hong Kong and India. He gained the Alexander Memorial Prize and Gold Medal at the Royal Army Medical College in 1921. He is unmarried. He had been a member of the British Medical Association since 1915 and from November 1931 officer and 1933 president of the Hong Kong and China Branch.

## Universities and Colleges

### UNIVERSITY OF OXFORD

The George Herbert Hunt Travelling Scholarship for 1938 has been awarded to W. E. Gibb B.M. of Oriel College.

### UNIVERSITY OF LONDON

#### Recognition of Teachers

The following have been recognized as teachers of the University in the subjects indicated in parenthesis.

University College Dr. Matthew Young (Anaesthetics). St. Thomas's Hospital Medical School Dr. Evan Jones (Medicine).

Westminster Hospital Medical School Mr. E. S. Lee (Surgey).

London (The St. Free Hospital) School of Medicine Dr. F. P. Lee Larder (Medicine).

University College Hospital Medical School Dr. M. W. P. Hudon (Anæsthetics). Dr. A. J. Morland and Dr. E. A. B. Pritenard (Medicine). and Mr. S. G. Suggett (Otolaryngology).

### MB B.S. Examination—Annulment of Regulations

New regulations for internal and external students with come into force in and after the session 1938-9 but up to and including May 1940 internal and external students are permitted to proceed to the MB B.S. degree either under the present regulations or under the revised regulations.

### Presentation Days

The ceremony of presentation for degrees will take place at the Royal Albert Hall on Wednesday May 11 at 2.0 pm and at 7.0 pm the same day the annual service for members of the University will be held at St. Paul's Cathedral when the preacher will be the Right Reverend Mervin Blackie Dean of Rochester. Applicant for tickets should enclose a stamped addressed envelope and state their sex and whether they are teachers in the University (graduates (giving degree) or undergraduate.

### Lectures

A lecture on Comparative Histophysiology of the Vertebrate Nephron will be given by Dr. Pol Gerard professor of histology in the Université Libre de Bruxelles at King's College Strand W.C. on May 1 at 5.30 pm. The lecture will be taken by Dr. F. R. Winton.

Dr. J. W. Trevan will give a course of three lectures on "Variation in the Response of Animals to Drugs" at the Wellcome Institute for Medical Research Euston Road N.W. on May 2<sup>nd</sup> 3<sup>rd</sup> and 25<sup>th</sup> at 5.30 pm. At the first lecture the chair will be taken by Sir Henry Dale F.R.S.

A public lecture on "Some Aspects of Heart Sounds in Normal Pathological Conditions" will be delivered by Dr. E. Braun Menéndez of the Institute of Physiology in the Faculty of Medical Sciences Buenos Aires at University College Gower Street W.C. on Tuesday May 3 at 5 pm.

### UNIVERSITY OF MANCHESTER

On Founder's Day May 18 the honorary degree of Doctor of Science will be conferred on Sir Henry Dale M.D. F.R.S., who was unable to attend to receive it last year.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended April 2, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths and of Deaths recorded under each infectious disease, are for (a) The 125 great towns (122 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 15 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever	32	6	12	3	—	24	4	7	3	1		
Deaths		1	4				3	1				
Diphtheria	1,388	144	239	76	38	926	119	181	46	33	1,053	157
Deaths	25	5	6	3	1	26	4	7	7	2		
Dysentery	111	21	54	—	—	9	2	9	—	—		
Deaths			—					—				
Encephalitis lethargica, acute	13	—	—	—	—	3	—	1	—	—		
Deaths		1	1					1				
Enteric (typhoid and paratyphoid) fever	8	1	6	2	3	16	2	6	3	4	20	—
Deaths	—	—	1	—	—	2	—	—	—	—		
Erysipelas			70	3	5			78		7		
Deaths		3	—				1	1	7			
Infective enteritis or diarrhoea under 2 years	33	14	9	7	3	47	14	9	6	2		
Deaths												
Measles	38	12	1,421	2	63*	23	—	174		4		
Deaths			19		8			1	2	—		
Ophthalmia neonatorum	105	13	31	1	—	108	7	22		1		
Deaths												
Pneumonia, influenzal &	1,205	120	14	5	23	1,337	101	20	7	8	1,394	163
Deaths (from Influenza)	74	13	5	1	1	101	17	6	10	5		
Pneumonia, primary		29	211	12	13		23	241	10	15		
Deaths				21					22			
Polio encephalitis, acute	3	—	—	—	—	1	—	—	—	—		
Deaths												
Polomyelitis, acute	4	—	—	—	—	4	1	1	—	—		
Deaths												
Puerperal fever	8†	8	21	2	1	27	1	24	3	—		
Deaths		3‡					—					
Puerperal pyrexia	190	25	33		1	110	6	26		2		
Deaths												
Relapsing fever	—	—	—	—	—	—	—	—	—	—		
Deaths												
Scarlet fever	2,323	188	367	88	69	1,661	176	352	84	24	2,087	251
Deaths	5	—	6	—	1	5	1	—	1	—		
Small pox	—	—	—	—	—	—	—	—	—	—		
Deaths												
Typhus fever	—	—	—	—	—	—	—	—	—	—		
Deaths												
Whooping cough			85		12			401		2		
Deaths	28	4	4	1	1	31	8	25	4	—		
Deaths (0-1 year)	357	64	78	52	24	436	73	97	46	20		
Infant mortality rate (per 1 000 live births)	59	52				76	61					
Deaths (excluding stillbirths)	4 720	916	698	239	155	5,517	1 107	769	278	156		
Annual death rate (per 1 000 persons living)	11 6	11 5	14 2	16 1	13 7	13 7	13 8	15 7	19 0	14 9		
Live births	6 739	1,323	934	392	216	6 126	1 150	1,050	329	227		
Annual rate per 1,000 persons living	16 6	16 7	19 1	26 5	19 1	15 2	14 3	21 5	22 4	21 7		
Stillbirths	290	42				274	38					
Rate per 1 000 total births (including stillborn)	41	31				43	32					

\* 60 cases in Belfast alone

† After October 1 1937 puerperal fever was made notifiable only in the Administrative County of London

‡ Deaths from puerperal sepsis  
§ Includes primary form in figures for England and Wales (London Administrative County) and Northern Ireland

## EPIDEMIOLOGICAL NOTES

## Diphtheria and Scarlet Fever

The incidence of diphtheria in England and Wales and in London showed a slight fall compared with the previous week. On the other hand slight increases in notifications were recorded in Scotland, Eire, and Northern Ireland. Fewer deaths were reported in the 125 Great Towns including London, and in the sixteen principal towns of Scotland, in Eire deaths rose from 1 to 3, and in Northern Ireland 1 death each week was recorded. There was a slight rise in the notifications of scarlet fever in England and Wales, Scotland, and Eire, and a slight fall in London and in Northern Ireland.

## Pneumonia

There were slightly fewer cases of pneumonia (influenza and primary torrid) in England and Wales, and the figures are considerably less than in the corresponding week last year and than the median value for the last nine years. There were fewer deaths from influenza in the 125 Great Towns compared with the previous week, while in London it fell there was an increase (from 2 to 13). In all the towns or groups of towns from which figures are available there was a decided increase in deaths from influenza compared with the corresponding week last year. Although influenza has not been observed in epidemic form either in Europe or in the U.S.A., a number of mild outbreaks have been reported in Switzerland, Hungary, and Denmark, as well as a slight increase in influenza mortality in the towns of Germany and of England and Wales.

## Measles and Whooping-cough

In the 125 Great Towns there were 38 deaths from measles, compared with 67 in the previous week, of these 12 (23) occurred in London, 3 (5) in Liverpool, 4 (3) in Manchester. The figures in parentheses denote the deaths in the previous week. The London epidemic appears definitely to have passed its peak, 2,095 cases were reported from the L.C.C. elementary schools compared with 2,477 last week, and the average daily admissions to the L.C.C. fever hospitals dropped from 103 to 92. The number of cases of measles under treatment in the L.C.C. fever hospitals on April 1 was 2,339 compared with 2,284 on March 25 and 2,079 on March 18. The increase of cases under treatment is likely to be maintained for a week or two as severe and complicated cases may remain in hospital for several weeks. On April 1 there were under treatment in the L.C.C. fever hospitals 1,128 (1,182) cases of diphtheria, 838 (844) cases of scarlet fever, 307 (312) cases of whooping-cough. The figures in parentheses refer to the numbers in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notified were, for the week ended April 2, 1,113 distributed thus: Battersea 144 (136), Bermondsey 76 (94), Finsbury 30 (28), Fulham 77 (73), Greenwich 136 (112), Hampstead 47 (105), Lambeth 264 (322), St. Pancras 123 (171), Shoreditch 35 (38), Southwark 124 (202), Stepney 57 (54). The figures in parentheses denote the numbers for the previous week.

In Scotland 1,421 cases were notified compared with 1,495 in the previous week, the figures for Glasgow were 692 (893), for Aberdeen 246 (210), Dundee 224 (132), Edinburgh 102 (78), Paisley 29 (51). The figures in parentheses refer to the numbers in the previous week. During the week there were in Scotland 19 deaths from measles compared with 36 in the previous week, of these 12 occurred in Glasgow, in the previous week there were 27 deaths in Glasgow and 1 in Edinburgh. In Northern Ireland there were 63 cases of measles, of which 60 were in Belfast alone, compared with 80 and 76 respectively in the previous week, while there were 8 deaths (all of which were in Belfast) compared with 12 in the previous week. During the week under review there were 2 deaths from

measles in Eire, both in Dublin. The available figures appear to indicate that the incidence and mortality of measles are alike decreasing. Mortality from whooping-cough on the other hand seems to be on the increase, the deaths for the week were 28 (13) in the Great Towns, 4 (1) in London, 4 (1) in Scotland, 1 (1) in the 13 principal towns of Eire, 1 (0) in the 10 principal towns of Northern Ireland.

## Small pox

In the week ended April 2 there were 162 cases of small pox in Hong Kong with 112 deaths compared with 151 cases and 131 deaths in the previous week. In Calcutta there were in the week ended March 26, 208 (261) cases of small pox with 161 deaths, and in Bombay 164 (212) cases with 100 deaths. The figures in parentheses denote the numbers for the previous week.

## Typhus

In the week ended March 26 there were in Morocco 254 (372) cases of typhus with 14 deaths, of these 82 (122) occurred in Marrakesh, 26 (78) in Casablanca, 21 (20) in Rabat, 6 (6) in Agadir. The figures in parentheses refer to the number of cases in the previous week. In the same week there were in Egypt 98 cases with 11 deaths compared with 85 cases reported in the previous week. The disease appears to be widely spread there being 32 cases at Qena, 12 at Giza, 3 at Cairo, and 3 at Alexandria.

## Medical News

A meeting of the Medical Legal Society will be held at 26 Portland Place W. on Thursday, April 28 at 8.0 p.m. when a paper will be read by Mr. William Laton on "Medical Legal Aspects of the Matrimonial Causes Act 1957".

A meeting of the Royal Microscopical Society will be held at B.M.A. House, Tavistock Square W.C. on Wednesday, April 20 at 5.30 p.m. when papers will be read by Prof. R. Ruegjes Gates, F.R.S. on "The Structure of the Chromosome" and by Dr. Miles Johnston (communicated by Dr. J. A. Murray, F.R.S.) on "Some Methods of Preparing Fish Otoliths for Examination".

The planning of hospitals will be discussed at a seasonal meeting of the Royal Sanitary Institute at the new Pervale Maternity Hospital, Western Avenue, Ealing, on Thursday, April 21 at 2.30 p.m. The discussion will be opened by Mr. L. G. Pearson, who will deal with the architectural aspect, and by Dr. James Ferguson and Dr. Thomas Orr, who will deal with general hospitals and maternity hospitals respectively. The chair will be taken by Professor J. M. Munro Kerr. Before the meeting at 11.20 a.m. an inspection will be made of the hospital.

The annual Students' Club ball of the Charing Cross Hospital Medical School will be held on Tuesday, April 26 at Grosvenor House, Park Lane W.

The annual congress of the Ophthalmological Society of the United Kingdom will be held at the Royal Society of Medicine, 1 Wimpole Street W. on Thursday, Friday, and Saturday, April 28, 29, and 30, under the presidency of Dr. Gordon M. Holmes, F.R.S. The morning of the first day will be devoted to a discussion on differential diagnosis of the causes of exophthalmos; in the afternoon papers will be read, and in the evening the annual dinner of the society will take place at the Langham Hotel. The whole of the second day from 10 a.m. to 10 p.m. will be given up to the reading of papers, with the exception of a demonstration by Mr. A. Sorsby. On April 30 papers will be read in the morning from 10 a.m. the annual general meeting of the society will be held at 12 noon, and the proceedings will close with a visit to the General Post Office. Full particulars of the congress may be obtained from the secretary, Mr. L. H. Savin, F.R.C.S., 7 Queen Street, Maffair, London W.1.

doubtful value and may even be harmful. They do not stimulate the testicular secretion and may even cause disuse atrophy of the secreting cells. The injection of the gonadotropic hormone of the pituitary is less objectionable, but in view of the potential production of anti-hormones and of the possible role of injected hormones in the causation of tumours should be used with great caution.

### 314 Dupuytren's Contracture

That in addition to occupational trauma as a determining cause constitutional and hereditary factors play a part in the production of Dupuytren's contracture is shown, according to M. CONSTANTINESCU (*Zbl. Chir.*, January 22, 1938, p. 191), by the reports in the literature of nine cases (to which a tenth is here added) of its congenital occurrence, and also by its not infrequent familial incidence—in four out of twenty-two cases studied by Krogus and in twelve out of thirty-one investigated by Schroder. There is also evidence that organic nervous lesions are concerned in certain cases, the contracture has been noted in sufferers from tabes, general paralysis, and syringomyelia after injury to the brachial plexus or ulnar nerve, in association with lesions of the eighth cervical and first dorsal segments, and in combination with the Horner syndrome. In three of four brothers affected Testi was able to find at necropsy evidence of syringomyelia. Constantinescu's patient, a boy aged 15, in whom the deformity caused little or no inconvenience, had been delivered through a flat contracted pelvis, his genital organs were hypoplastic, but the blood calcium was normal. The deformity was bilateral.

## Therapeutics

### 315 Copper in Pulmonary Tuberculosis

N. BONARRIGO (*Rass. Fisiopat. Clin. Ter.*, November, 1937, p. 670) records his observations on twenty cases of pulmonary tuberculosis in patients aged from 24 to 64 who were treated by weekly intravenous injections of 5 c.c. of a double cyanide of copper and potassium. He found that favourable results were obtained in early cases and in those running a slow course. No symptoms of intolerance were observed in the form of digestive or renal disturbances or skin eruptions such as may occur in treatment by gold salts.

### 316 Vitamin B<sub>1</sub> in Herpetic Keratitis

J. NITZULESCU and E. TRIANDAF (*Brit. J. Ophthalm.*, December, 1937, p. 654) report the effect of injections of vitamin B<sub>1</sub> in two cases of herpetic keratitis. The pain was rapidly relieved, the progress of the condition arrested, and cure accelerated. The authors regard the vitamin as exerting a specific action on the trophic functions of the nerves. In these two patients there was no clinical or other evidence of avitaminosis.

### 317 Light Therapy and Carbohydrate Metabolism

L. PINCUSSEN (*Arch. phys. Ther.*, December, 1937, p. 750) has found that ultra-violet and visible rays greatly influence the carbohydrate metabolism, the most obvious effect was a lowering of the blood sugar. He was able to prove in animals that the decrease of the blood sugar goes side by side with an increase of the glycogen content of the liver and muscles and with a decrease of the lactic acid so that the ratio of carbohydrate to lactic acid increases and the glycogen which has disappeared from the blood is stored in the tissues. The rays therefore act in the same way as insulin. The effect of the irradiation depends however on its wave-length and the amount of glycogen in the liver and muscles of irradiated animals.

depends on the combination of ultra-violet and visible rays. The highest content of carbohydrate in the tissue and the highest ratio of carbohydrate to lactic acid appear after the application of one part of ultra-violet and nine parts of visible light. In diabetic patients the blood sugar decreases in the same way as in normal individuals. The sugar and acetone bodies in the urine decrease and may disappear completely. Here, too the effect depends on the quality and quantity of the irradiation.

## Laryngology

### 318 Air Cells of the Petrous Bone

J. G. WILSON, J. P. GAARDSMORE and B. J. ANSON (*J. Laryng.*, November, 1937, p. 746) present an anatomical study of a normal right temporal bone which was decalcified and cut serially in the horizontal plane at a thickness of 25 microns. The sections were stained, and a reconstruction of the air cells was made by the Born wax plate method. There are two groups of air cells. A first group the epitympanic cells, are extensions of the mastoid air cells over the labyrinth. A second and more important group arise from the tympanic cavity independently of the mastoid cells. These are called tubal cells because they are closely related to the tympanic end of the Eustachian tube. From that point the tubal air cells form an almost complete ring around the carotid canal, they partly surround the cochlea, and one group reaches the very tip of the petrous bone. Photographs of the wax models bring out the difficulty of surgical approach to the tubal cells as compared with the ease of opening the epitympanic cells by the mastoid route. When suppuration persists in the tubal cells the localization of the disease focus is extremely difficult, and radiographs are not very helpful, according to the authors. The general history of the case and the location of the pain are more important. The pain of petrositis is orbital and temporal—that is, in the area supplied by the ophthalmic division of the trigeminal nerve. The recurrent meningeal branch of the ophthalmic nerve supplies the dura covering the petrous pyramid, and the pain is probably reflex from this branch.

### 319 Treatment of Ménière's Disease

H. OLIVECRONA (*Schweiz. med. Wschr.*, February 5, 1938, p. 125) restricts the term Ménière's disease to a chronic condition of intermittent paroxysms of vertigo with vomiting, nystagmus, and deafness and tinnitus in the affected ear, without demonstrable aural anatomical changes, he is inclined, however, to include a few rare cases in which deafness is absent but noises are heard in the ear. As "symptomatic Ménière's disease" he groups cases associated with morbid conditions, affecting structures from the vestibule to the vestibular nuclei, which might cause the symptoms, bulbar tumours are most commonly concerned than acoustic tumours. The differentiation from true Ménière's disease is easy, save when the symptoms are due to aneurysm of the vertebral artery or one of its branches. Pseudo-Ménière's disease is distinguished as the occurrence of attacks indistinguishable from true Ménière's disease in persons in whom tinnitus and lateral deafness are absent, here the prognosis and response to symptomatic medication are generally good. In true Ménière's disease Olivecrona is not convinced of the value of any of the numerous drug and dietetic treatments. He favours trial of (1) the dehydrating treatment (pilocarpine and diuretics, followed by a salt poor diet with restricted intake of fluid) based by Meyer and Dederich on their attribution of the disease to fluid retention, or (2) Furstenberg's sodium depletion by restriction of salt intake and the exhibition of ammonium chloride. In Olivecrona's hands, as in Dandy's section of the vestibular nerve, with preservation of the cochlear nerve.

given good results. He prefers avertin or cyan to a local anaesthetic and he divides the middle third of the nerve. In his first five cases the vestibular nerve was completely severed for fear of injuring the facial. Four patients were cured and one improved. In sixteen later cases the whole of the acoustic nerve was divided in nine and the vestibular but not the cochlear nerve in seven (all of whom preserved their hearing). The sixteen were cured; there was no mortality but two had transitory and one permanent facial palsy. Collected statistics give only a small operative mortality. Dandy has seen no recurrence of attacks after section of the acoustic or vestibular nerve in 160 cases, ten with bilateral disease.

### 320 Oesophageal Perforations

P. GUSS (*Ann Otolaryng*, November 1937, p. 999) reports four cases of perforation of the cervical portion of the oesophagus and states that large perforations occur more rarely at the present day than formerly. On the other hand small perforations are commoner because oesophagoscopy is more often carried out. Pain in the neck region and rises of temperature are late signs and indicate an early mediastinitis. Subcutaneous emphysema is an early and valuable clinical sign. At first the air can be displaced by palpation of the neck tissues and made to reappear by asking the patient to swallow. A radiograph at this stage shows a large air bubble in front of the cervical vertebrae. The author advises immediate operation in all the cases using the technique described by Marschik. This consists in laying open the prevertebral space along the whole length of the neck and packing it lightly with gauze, the sterno-mastoid and carotid sheath being displaced backwards. The gauze packing is left for forty-eight to seventy-two hours. The operation exposes that tissue space in the neck which is directly continuous with the mediastinum below and is designed to prevent the onset of mediastinitis. Once mediastinitis has set in the patient practically always dies. In all four of his cases the perforation was due to an impacted foreign body, dentures in three cases and a piece of bone in the fourth. In each case an unsuccessful attempt had been made to remove the foreign body through an oesophagoscope. Immediately afterwards the foreign body was extracted through an external incision followed by the operation described above. One of the four patients died from mediastinitis, presumably because nearly three days had elapsed between the attempted removal by oesophagoscopy and the external operation.

### 321 Laryngeal Abscess

A. MONTEIRO (*Brasil med*, January 8 1938, p. 23) who records three personal cases in patients aged 5, 40 and 65 respectively, all of whom recovered states that laryngeal abscesses are uncommon. They are seen principally in males and may be internal or external the symptoms and treatment varying accordingly. The clinical course depends on the histological localization of the inflammatory process. Its duration ranges from a maximum of ten to fifteen days to a minimum of two or three days. The prognosis should always be guarded as a laryngeal abscess may give rise to pulmonary abscess, pyopneumothorax, or polyarthritis.

### 322 The Labyrinth in Otosclerosis

From a study of the literature and his own investigations in the course of six necropsies F. R. NAGER (*Schweiz med Wschr*, January 22 1938, p. 83) gives the following account of the labyrinthine findings in severe diffuse otosclerosis. In addition to atrophy of the stria vascularis slight alterations of the cochlear spindle atrophy (in some cases) of ganglion cells and nerve fibres the most striking alterations are seen in the basal twist of the scala tympani in which there is an extensive new formation of lamellar bone filling the scala tympani almost up to the spiral

ligament and membrana basilaris. This is only noted in regions in which the otosclerotic transformation has reached the endosteum and penetration of the otosclerosis into the newly formed bone may be traced accordingly. The labyrinthine bony changes are not—as was formerly thought—solely the consequence of irritation by the surrounding morbid process or of venous stasis. The scala vestibuli has never been found the site of similar changes. Cortis organ may be normal, endolymph and perilymph may show some alterations, the membranous labyrinth and Reissner's membrane are unaffected. Otosclerotic penetration of the semicircular canals has not been observed but loci of endosteal thickening containing osteoid tissue may occasionally be found in their immediate neighbourhood.

### 323 Osteomyelitis of the Frontal Bone

P. D. PASTORE and H. L. WILLIAMS (*Proc Mayo Clinic*, January 5 1938, p. 7) report a case of osteomyelitis of the frontal bone secondary to acute frontal sinusitis. The patient, a girl aged 18, had been suffering for five weeks from symptoms of left frontal sinusitis which had been associated with headache and vomiting. Radiological examination revealed osteomyelitis of the frontal bone of spreading type with involvement of both frontal sinuses. An incision was made over the vertex from ear to ear and the entire frontal portion of the scalp was pushed down over the eyes. The bone was dissected from the dura leaving a bony ridge above the brow. Over the left frontal lobe of the brain there was a large epidural abscess with widespread granulation tissue. There was also some purulent discharge through the dura. The opening in the dura was enlarged with the cautery but more pus could not be found. The posterior walls of both frontal sinuses were diseased and both the frontal and ethmoid sinuses were filled with pus and infected granulation tissue all of which was removed. A large opening into the nose was made through the floor of both frontal and ethmoid sinuses and the openings were connected through the septum. Soft rubber tube drains were placed on each side from the incision in the scalp down through the nose and out through the nostrils. Rosenow's concentrated anti-streptococcal serum was diluted and poured freely into the wound. A vaccine made from the organism found in the diseased bone was later used daily for lavage of the wound. A ray examination six weeks after operation revealed no evidence of osteomyelitis. It is emphasized that removal of bone should extend well beyond the apparent limits of the disease and that complete elimination of the primary disease in the sinuses is essential. Cultures made from material from the periphery of the diseased area revealed the presence of an anaerobic streptococcus.

## Obstetrics and Gynaecology

### 324 Hyperemesis and Vitamin C

L. G. DAHLHEIM (*An Bras de Gyn*, January 1938, p. 18) describes a case of hyperemesis which was cured by the administration of vitamin C. The patient was a married woman of 29 who one month after the onset of amenorrhoea began to suffer from morning vomiting which became steadily worse until she was finally unable to swallow anything but tea and soft biscuits. She was losing weight becoming weaker every day and complaining of giddiness, tinnitus and tachycardia. On examination nothing worthy of note was discovered apart from some enlargement of the thyroid and tachycardia. For ten days a series of different treatments were carried out, including intravenous glucose and serum, Ringer's solution, insulin, bromides and atropine but without the least improvement. The patient then had some pyrexia and



oliguria, the urine was found to contain albumin, a few red cells, and bilirubin. At this stage the patient was given a first injection of vitamin C intravenously, the vomiting ceased the same day and did not recur for eight days, during which she continued to receive injections. She began to feel hungry, was able to get up, and felt and looked much better, the pyrexia and oliguria disappeared. The injections were discontinued for two days, but the patient became worse, so they were resumed, at the end of a fortnight the patient had gained 3 kilos. She was then given vitamin C orally, and from that time the pregnancy pursued a normal course. The author discusses the mechanism of the action of vitamin C and suggests that it exerts an action antagonistic to the thyroid but stimulating to the adrenals.

### 325 Blood Vessels in the Senile Uterus

V. PUGLIATTI (*Ann Ostet Gynec*, December 31, 1937, p 1429) has examined histologically forty-three uteri removed from nulliparae and multiparae, these included thirteen women still within the reproductive phase of life and thirty post-menopausal cases with ages varying from 47 to 86 years. He found that although previous pregnancies usually leave behind as an indelible sign an increase in the elastic tissue surrounding the vessels, especially the smaller vessels of the internal layer, this is not an infallible criterion, since it may also be found after other conditions, such as chronic inflammatory processes, even, though more rarely, in nulliparae. Moreover the type of menstruation, the general constitution, and other factors have some influence on the development of this elastic tissue. The author goes on to illustrate the common degenerative or hyperplastic processes which affect the intima and media of the larger vessels. He believes that arteriosclerosis is the underlying cause, but that in this case also local predisposing factors have to be taken into account.

### 326 Ophthalmic Indications for Abortion

A. FAVORY (*Progr med*, Paris, January 29, 1938, p 153) is of the opinion that pregnancy should always be terminated in the presence of retinitis of renal origin, not only the possibility of blindness but also the condition of the kidneys are the deciding factors. In retrobulbar neuritis, syphilis and nasopharyngeal conditions having been eliminated, induction should be considered. Myopia is often aggravated by pregnancy, and in these cases retinal haemorrhages and detachment sometimes occur. Pregnancy should be forbidden where there is already detachment in one eye. All forms of choroiditis, uveitis, and keratoconus are made worse, in the first of these abortion should be considered. In hereditary types of eye disease which may involve blindness the necessity for intervention is not yet generally admitted. Here the eugenic and legal aspects of the case must influence the decision.

### 327 Sterility due to Chronic Genital Infections

C. BECLERE and É. FRANÇOIS (*Bull Soc Obstet Gynec Paris* November 1937, p 709) have investigated the part played by chronic genital infections in the aetiology of persistent sterility. Of ninety-nine cases studied by them 71 per cent were women who had never been pregnant—that is their sterility was primary in type. Of these, one-quarter had congenital lesions and two-thirds had chronic genital infections. Of these infections half were gonococcal in origin and half were due to secondary infection following gonorrhoea. In the 29 per cent of women who had secondary sterility 90 per cent had chronic infections. In more than half of these women infection followed abortion or parturition the infections following abortion being twice as frequent as those after childbirth. In three-quarters of these cases of post-abortion or post-natal

infection the infecting organism was the streptococcus the gonococcus being responsible in only 25 per cent. In less than one-half of the cases of secondary sterility the infection followed some length of time after pregnancy. In these cases the infection was presumably sexual in origin, and evidence of gonococcal infection was found in three quarters of the cases. Routine examination by salpingography showed that in half of the cases of sterility there was a complete obstruction of both tubes, three quarters of these cases were of chronic infection, usually gonococcal. In one-fourth of all the cases the permeability of the tubes was diminished, here again chronic infection was the common cause, but the gonococcus was not so important. In the remaining fourth the permeability of the tubes was maintained, but often it existed only during examination as the result of increased pressure. Generally, in primary sterility, the infection is of sexual origin, in secondary sterility the infection is due to abortion or is of sexual origin. Infection after full-time parturition is less commonly the cause of persistent sterility.

## Pathology

### 328 Encephalitis Epidemica in Japan

R. IANADA (*Presse med* December 29, 1937, p 1889) gives an account of recent researches into the nature of the virus of encephalitis in Japan. Numerous experiments have defined the conditions necessary to a successful inoculation of the virus in various animals, the localization and duration of the infection, the resistance of the virus, and its immunological characteristics. It has been established that the Japanese strain of the virus differs from the American (St. Louis) strain. Monkeys and mice were inoculated with brain material or blood containing the virus of encephalitis, some survived and some died. Those which survived were given a second injection and most of them showed resistance to reinfection, though control animals injected with the same material succumbed. Japanese investigators have immunized mice, rabbits and goats with American virus and Japanese virus and have found that it is possible to immunize against the homologous virus and not against the other. These experiments seem to prove that the two strains of virus are, from an immunological point of view, different strains.

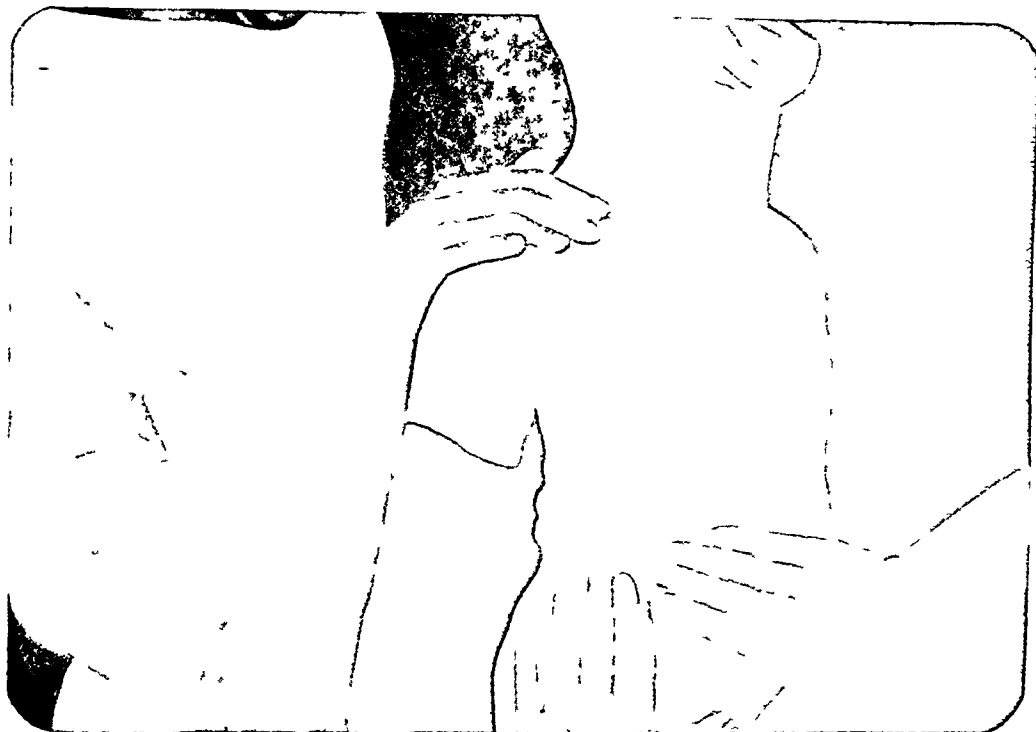
### 329 Salmonella Infection of Wild Rats

A. M. KHALIL (*J Hyg, Camb*, January, 1938, p 71) examined 750 wild rats trapped in Liverpool during 1936 for evidence of salmonella infection. About 70 per cent of the animals were of the large brown variety, probably *Rattus norvegicus* and 30 per cent of the small black variety, probably *Rattus rattus*. Portions of liver, spleen and gut were inoculated into tetrathionate broth incubated at 37°C for eighteen hours, and then plated on brilliant green-eosin agar. The strains isolated were identified by agglutination. Strains of salmonella were isolated from fifty-five rats (73.3 per cent). Since strains were sometimes isolated from more than one organ, eighty strains in all were collected. Of these, forty-five belonged to the enteritidis forty to the typhi-murum three to newport and one to the thompson type. A remarkable observation was made on the seasonal distribution of infection. Equal numbers of rats (250) were examined in each of the three month periods January to March, April to June and July to September 1936. In the first period forty-four infected animals were found, in the second period ten, and in the third period only one. The explanation is at hand for such an uneven distribution. As the author remarks it does not accord with the seasonal distribution of outbreaks of food poisoning in man.

A 25

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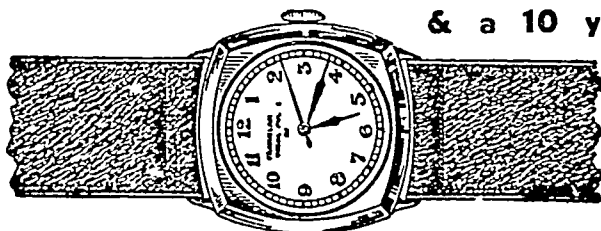
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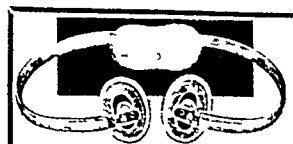


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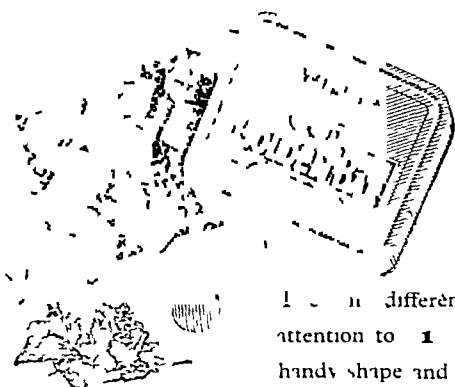
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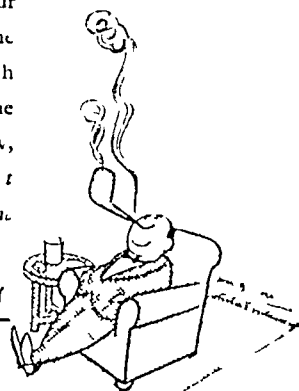
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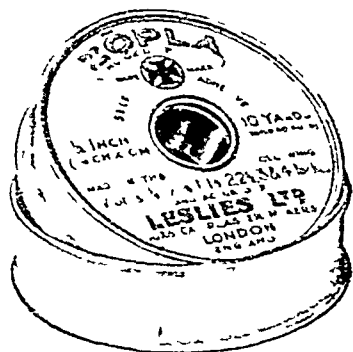
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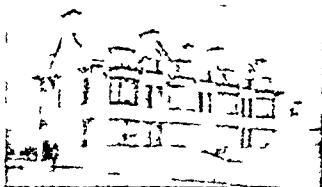
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## FENSTANTON, CHRISTCHURCH ROAD, Streatham Hill, S W 2

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Certified Voluntary and Temporary Patients received. Large Manx with 12 acres of grounds. (See Medical Directory p. 2312) Apply Resident Physician Telephone Tulse Hill 7181

## STRETTON HOUSE.

Church Stretton, Shropshire

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental and Nervous Illness including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates. Voluntary Patients under the provisions of the Mental Treatment Act 1930. Bracing hill country. See Medical Directory p. 2328—Apply to the Medical Superintendent Phone 10 P.O. Church Stretton

## HILL END HOSPITAL AND CLINIC FOR THE PREVENTION AND TREATMENT OF MENTAL AND NERVOUS DISORDERS (20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS are received for treatment on flexible lines as Voluntary Temporary or Certified Patients at the Hill End House. Convalescent or mild cases can be treated in a delightful country mansion with extensive grounds known as

## HIGHFIELD HALL,

situate about a mile away from the Hill End House. TWO TO THREE GUINEAS PER WEEK. For further particulars apply to the Medical Superintendent W J F KIMBER LRCP DPM

ST ALBANS, HERTS

## BARNWOOD HOUSE GLOUCESTER

Within two miles of the G.W. Railway and L.M.S. Railway Stations at Gloucester the House is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills and stands in the grounds of over 300 acres. Voluntary Patients of both sexes are also received for treatment. Special accommodation for Lady Voluntary Patients is provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the Main Hospital. For particulars as to terms apply to G.W. FLEMING MRCS LRCP DPM Medical Superintendent Telephone No. 6 07 Bathnol

## CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone: PINNER 231

A Private Hospital for the Treatment and Care of Mental and Nervous Illness in both sexes.

A modern country house 12 miles from Marble Arch in beautiful secluded grounds.

Fees from 10 guineas per week upwards. Cases under Certificate. Voluntary Temporary patients received for treatment. Douglas Macdougall MD DPM

## BAILBROOK HOUSE, BATH.

For sufferers from Nervous and Mental disorders with or without certificates. The house is situated in a beautiful grounds of 20 acres with a view of the City and the Avon Valley. See Medical Directory p. 2322. A CLINICAL MANAGER. For terms apply to the Medical Superintendent. Bath D.P.M. Resident Physician. Telephone Bath 1111





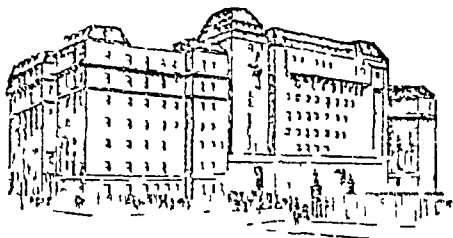
# A patient at THE CLINIC said this:

Here is a statement which is of equal interest to the Medical Profession and to the Public. It was made very recently by a patient at The Clinic to someone unconnected with The Clinic in any way whatever, and it was purely by chance that the statement became known to the Trustees of The Clinic. The name and address of the patient are available to bona fide enquirers.

The Patient was a lady convalescing at The Clinic after an operation. She is keenly interested in medical progress. To one of her visitors she said: "There are eight floors, one of which is devoted entirely to maternity work, eight operating theatres which afford the surgeon every facility for the finest work, and a fully trained staff of some hundred nurses. The presence of two resident medical men in the building gives one the satisfying knowledge of being constantly as it were under the surgeon's eye. Another very important point which I think should be considered by the heads of every nursing home, is the care given to the feeding of the patients. Two special dietitians and six chefs provide a choice of menu for the convalescent which would rival a West End de luxe restaurant. THE CLINIC HAS AT LAST BROUGHT SOMETHING OF SCIENCE INTO THE NURSING HOME. I HOPE ITS EXAMPLE WILL BE FOLLOWED ALL OVER THE COUNTRY!"

Under its constitution the Company is bound to devote all surplus Revenue to the furtherance of its objects. Over £12,000 was so utilised in 1936-1937. Enquiries and visits from the medical profession are welcome and the Secretary will be glad to furnish further details.

There are eight operating theatres in the Clinic. The room rates which range from 10 guineas to 18 guineas (apart from a few suites at 25 guineas to 42 guineas).



## The CLINIC

20, DEVONSHIRE PLACE, LONDON, W 1

Telephone: H ELbeck 4444 (20 lines)

## TOR-NA-DEE SANATORIUM MURTLÉ DEESIDE ABERDEENSHIRE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS

Managing Director DAVID LAWSON, MD, FRSE

Southern aspect Low rainfall Pure bracing air Sheltered grounds Beautiful surroundings All modern equipment for diagnosis and treatment, including operating theatre No extra charge for X Rays, Artificial Pneumothorax, Ultra-Violet Light, or other special treatment

Day and Night Nursing Staff All bedrooms have central heating electric light hot and cold running water, and wireless (headphones) Comfortable and airy public rooms

Medical Superintendent J M JOHNSTON MB MRCS DPH For terms and prospectus apply to the Secretary, Telephone: CULTS 107

## PENDYFFRYN HALL SANATORIUM PENMAENMAWR, NORTH WALES.

All Modern Methods of Treatment Available

Ideally situated for the treatment of Tuberculosis Sheltered from E and NE winds Climate mild and bracing Low rainfall high average of 1000 ft. The Sanatorium is situated in its own park. There are miles of graduated walks through pine grove and heather rising to 1600 ft. and extensive sea and mountain views Central heating electric light X-ray installation Wireless in all rooms Full day and night nursing staff supply from a tuberculin tested herd Easily accessible from London (4 1/2 hours) MANCHESTER LIVERPOOL BIRMINGHAM and the North. Resident Physicians DENNISON PICKERING MD J N P MOORE MD For particulars apply to the Secretary Pendyffryn Hall Penmaenmawr North Wales

## THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect SSW sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by Artificial Pneumothorax (X-ray controlled) Tuberculin and Ultra-violet Rays are available when necessary without extra charge X-ray plant Fully equipped Dental Department Electric light Radioteletype basins and Wireless in all rooms Up-to-date main drainage

Full day and night Nursing Staff Terms - 40/- to 75/- a week inclusive of food and medicine. GEOFFREY A. HOFFMAN B.A. MB F.R.C.S. (Ed.) MARGARET A. HARRISON M.D. B.Sc. (Ed.) F.R.C.S. (Ed.) DAVY M.B. B.Sc. (Ed.) L.D.S. (Ed.) CASSIDY DE W. GIBB F.R.C.S. (Ed.) Consultant Dental Surgeon CLORCE L.D.S. (Ed.) R. J. A. M.D. Secretary The Cotswold Sanatorium Cheltenham Gloucestershire Tel. 51 and 52 Withouley Gloucestershire

# Bad Kissingen

**TREATMENT BY MINERAL WATERS AND BATHS** Natural carbonic acid brine, bubbling spring, mud and vapour baths for Stomach, Intestinal, Heart, Vascular, Rheumatic, Liver, Gall and Circulatory troubles

*Established since 1871*

**Rakoczy Spring Waters for Home Treatment for the Stomach, Intestines and Circulation**

Obtainable direct from Rakoczy Spring Waters, Bad Kissingen, Germany. Agents for the British Isles supplied

50% reduction on the railway fare

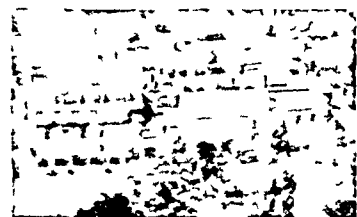
Cheap travelling marks

Information through The German Railways Information Bureau, 19, Regent Street, London, S.W.1

## CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5

**FOR THE TREATMENT OF MENTAL DISORDERS**

Also completely detached villas for mild cases with private attended voluntary patients received. Twenty acres of ground. Hard and Grass Tennis Courts, Putting Green, Bowls, Croquet, Squash Racket, Recreation Hall, with Badminton Court and all indoor and outdoor games including Wireless and other comforts. Occupational Therapy, Calligraphy and Drawing Classes. A Ray and Astino Therapy. Profound Immersion Bath. Operating Theatre, Pathological Laboratory, Dental Surgeon and Ophthalmic Dept. Chapel. Senior Physician Dr. HUBERT JAMES SPOONER, assisted by three Medical Officers, also resident and visiting Consultant. The Convalescent Branch is HOVE VILLA BRIGHTON, and is 200 feet above sea level.



### THE STANBOROUGH'S HYDRO

Detached villa, 100 ft. above sea level, 100 ft. above sea level, 100 ft. above sea level. Reception, 100 ft. above sea level. Reception, 100 ft. above sea level. Reception, 100 ft. above sea level.

The water used in the Department is the water of the local water supply. It is a natural mineral water. It is a natural mineral water. It is a natural mineral water.

See also and Maternity Station — Two Road at Brighton

M.D. J. E. CARNCROSS L.R.C.P.S.

Private and full information on application to the Manager

**The Stanboroughs Hydro**  
Stanborough, Earl Watford, Herts.  
Telephone: GURTON (WATF.) 13

### ASHWOOD HOUSE KINGSWINFORD STAFFORDSHIRE

An old-established PRIVATE HOME for the care and treatment of Ladies and Gentlemen mentally and physically. Probationary cases and non-certified patients are received as well as those requiring treatment. The home is beautifully situated in its own grounds of 40 acres. Full particulars as to reception terms etc. may be obtained from the Resident Medical Officer.



Full details of the treatment and the hydro are given in the brochure. Terms 13/- to 18/- per day inclusive board. Illustrated Brochure M.L.J. on request. R. H. P. H. G. C. R. HARDISON, M.B. B.Ch. B.A.O. (R.U.I.), R. N. LELLAND, M.D. C.M. Phone No. 17. Great Britain's Greatest Hydro.

**SHAFTESBURY HOUSE, FORMERLY BY THE SEA**  
Sedimentary and Nervous and Mental breakdown. A full and complete treatment. A full and complete treatment. A full and complete treatment.

### GUY'S HOSPITAL MEDICAL SCHOOL

**DIPLOMA IN ANAESTHETICS**  
A COURSE OF INSTRUCTION for the DIPLOMA in Anaesthetics of the Council of the Royal Society of Anaesthetists. The course will commence on Monday, April 18th, 1938. The course will give a period of three weeks and will include lectures in Physiology, Anatomy, Pharmacology, Clinical Investigation and Anaesthetics. The course will be open to men and women anaesthetists. The fee for the course will be £15.1.6. Further information may be obtained from the Dean, Guy's Hospital Medical School, London S.E.1.

### ROYAL EYE HOSPITAL

**Medical School ST. GEORGES CIRCUS S.E.1**  
**D.O.M.S. COURSE**  
An introduction to SIX WEEKS' COURSE for Postgraduate students of the D.O.M.S. Examination will commence on May 1st. Fees: Part I, £5; Part II, £10.10s. A pass certificate will be received by April 1st. For further particulars apply to the Dean of the Hospital.

**MASTERY OF MIDWIFERY MCOG DCOG**  
Short Intensive Practical and Oral Revised Courses in preparation for the D.O.M.S. Apply SECRETARY Medical Correspondence Course, 19 Watbeck Street, W.1.

**ADVICE ON THE CHOICE OF SUITABLE SCHOOLS AND TUTORS**  
for BOYS and GIRLS with prospectuses of recommended establishments will be given free of charge to parents, students or pupils. Detailed references of fees and type of school required.

**J. & J. PATON**  
143 Cannon Street, London E.C.4  
Publishers of Paton's List of Schools and Tutors. Post free 5/6

**NORTH-EAST LONDON POST-GRADUATE COLLEGE**  
PRINCE OF WALES'S GENERAL HOSPITAL, N.15  
The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. BROWNING, M.B. B.Ch. M.D. Dean.

**STAMMERING SPEECH DEFECTS**  
BEHNE METHOD. Established since 1904. A non-recent method of treatment. A non-recent method of treatment. A non-recent method of treatment.



**CHECK ONE**

☐ **SEND COUPON BELOW**

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Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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**DIPLOMA OF FELLOW**

Notice is hereby given that the next Final Ordinary Examination for the DIPLOMA OF FELLOW will commence on Thursday May 1st (Monday) May 30th respectively.

Candidates who have failed the necessary examinations and who desire to proceed themselves for the Examination must be noticed in writing to the Director of Examinations Examination Hall 1, Queen Square London W.C.1 at least twenty-one days before the date of the Examination may be obtained. The same time such certificates may be required by the Registrar.

**HORACE H. REW**  
Director of Examinations

**EXPERIENCED COACHING IN PHYSIOLOGY** Pathol & Med. by M.D.  
 1st (Hons) M.R.C.P. Lond. B.Sc. Phys. Oxf.  
 Lond. All exam. Classes held—Address No.  
 20 B.M.A. House, Tavistock Square, W.C.1

The Color ...  
ASSISTANT MEDICAL OFFICER OF  
**HEALTH**  
... per annum ...  
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the province of the Local Government  
and other Officers Superintending ...  
of Health ...  
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more than three or four testimonies,  
received by me informed at ...  
Saturday April 19 3  
Assistant Medical Officer of Health  
Cantonment ...  
**JOSIAH GREEN,**  
Colonel House, Bristol T.C.S.D.  
April 18 1933

**ADMINISTRATIVE COUNTY OF ESSEX****OLDCHURCH COUNTY HOSPITAL  
ROMFORD****APPOINTMENT OF OBSTETRIC SURGEON**

The County Council of the Administrative County of Essex invite applications for the above appointment from registered Medical Practitioners not over 45 years of age with special experience in the practice of obstetrics and gynaecology and holding the qualification of F.R.C.S. or M.C.O.G. to act under the direction of the Medical Superintendent of the Hospital.

The above Hospital has accommodation for 860 patients with maternity and gynaecological units comprising 10 beds in each unit and is equipped with all modern departments and has a visiting staff of consultants.

The salary will be at the rate of £600 per annum and will rise subject to satisfactory service by annual increments of £25 to £750 per annum together with full residential emoluments valued at £160 per annum. Residential quarters are not available at the Hospital for married men but applications from such persons who are prepared to provide their own accommodation in the immediate vicinity of the Hospital will not be debarred thereby. In the event of a non-resident appointment being made until residential quarters are available the value of the emoluments amounting to £160 per annum will be attached to the salary.

The person appointed will be required to devote his whole time to the service of the Council and to perform such duties and to furnish such advice and assist in carrying out his office as may be required.

The appointment will be held by the successful candidate during the pleasure of the Council and will be subject to such alterations of duties as the Council from time to time think fit to order and will be determinable by the officer by three months' notice in writing.

The person appointed will be required to pass a medical examination and to contribute 5 per cent of his salary and emoluments to the fund established by the County Council under the Local Government and Other Officers Superannuation Act 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations a copy of which will be forwarded on application.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials which will not be returned should be addressed to me and delivered at the County Hall Chelmsford not later than 10.15 am on Monday April 25th 1938.

E. S. HOLCROFT

Clerk of the County Council

County Hall Chelmsford

April 15th 1938

**BOROUGH OF HENDON****ASSISTANT MEDICAL OFFICER OF HEALTH  
AND ASSISTANT SCHOOL MEDICAL  
OFFICER (MALE)**

The Hendon Borough Council invite applications for the above post.

Applicants must be fully qualified Medical Practitioners and hold a Diploma in Public Health or an equivalent qualification.

The duties will be mainly in connection with the Council's Maternity and Child Welfare and School Medical Services but include other duties under the direction of the Medical Officer of Health.

The salary is £600 per annum rising by annual increments of £50 to a maximum of £650 with a car allowance of £50 per annum if the successful candidate provides his own car for use in connection with his duties.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination.

Applications in forms to be obtained from the undersigned together with copies of not more than three recent testimonials to be sent to the undersigned not later than the first post on Monday May 1st 1938.

Conveying directly or indirectly will be deemed a disqualification.

Dated this 15th day of April 1938

Leonard Worden

County Hall

Hendon NW4

Town Clerk

**KENT COUNTY COUNCIL****RESIDENT ASSISTANT MEDICAL OFFICER**

Applications are invited for the post of Resident Assistant Medical Officer at the County Hospital, Canterbury (100 beds).

The salary for the appointment is £250 a year with full residential emoluments which are valued at £100 a year.

The person appointed will be required to devote his whole time to the service of the Council and to perform such duties and to furnish such advice and assist in carrying out his office as may be required.

W. L. ELSTON

Clerk of the County Council

Canterbury

April 15th 1938

**BOLTON EDUCATION COMMITTEE****APPOINTMENT OF ASSISTANT (WOMAN)  
MEDICAL OFFICER OF HEALTH AND  
ASSISTANT SCHOOL MEDICAL OFFICER**

The Education Committee invite applications for the appointment of a Woman Assistant Medical Officer of Health and Assistant School Medical Officer.

The person appointed will be required to assist the School Medical Officer in carrying out the work of medical examination of school children under the Education Act 1921 and also when not required in school work to assist the Medical Officer of Health in Child Welfare and other Public Health work. She must be prepared to devote the whole of her time to the duties of the office and not engage in private practice.

Preference will be given to applicants who (a) have had some definite experience in School Hygiene and

(b) have enjoyed special opportunities for the study of children.

The possession of a Diploma in Public Health is essential.

The appointment is designated under the Local Government and Other Officers Superannuation Act 1922 and is subject to the provisions of that Act.

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum.

Applications endorsed Assistant School Medical Officer stating age qualifications and previous experience and accompanied by copies of not more than three recent testimonials must be forwarded to reach the undersigned not later than Saturday April 23rd 1938.

Conveying either directly or indirectly will be a disqualification.

Education Offices JOHN A. COX

Nelson Square Bolton Director of Education

**COUNTY BOROUGH OF BLACKBURN****PUBLIC ASSISTANCE DEPARTMENT**

Applications are invited from medical practitioners (male) for the appointment of a RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER at Queen's Park Hospital and Institution.

The Staff consists of a Resident Medical Officer, a Resident Assistant Medical Officer, a Consulting Surgeon, a Laboratory Assistant and an x-ray attendant.

There is a separate Infirmary, a separate Mental Block and a separate Hospital for Children and there is opportunity for experience in all departments including Medical Surgical and Midwifery cases. An x-ray apparatus is installed.

The person appointed will be required to devote his whole time to the duties and also to act as may be directed by the Resident Medical Officer.

The appointment will be limited to a term not exceeding one year.

Salary at the rate of £200 per annum together with board apartments and attendance.

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials must be sent so as to reach the Public Assistance Officer Public Assistance Offices, Cardwell Place, Blackburn not later than 10 a.m. on April 21st 1938.

Town Hall CHAS. S. ROBINSON

Blackburn Town Clerk

April 2nd 1938

**COUNTY BOROUGH OF OXFORD****ASSISTANT MEDICAL OFFICER OF HEALTH  
AND SCHOOL MEDICAL OFFICER (MALE)**

Applications are invited for the appointment of Assistant Medical Officer of Health and Assistant School Medical Officer.

The maximum salary will be £700 per annum. The minimum salary will not be less than £500 per annum and will be fixed according to the qualification and experience of the successful applicant and will rise by increments of £25 to £700 per annum.

A motor car allowance will be paid in accordance with the Scale adopted by the City Council.

Candidates must have had at least three years professional experience and special experience in ante-natal and Maternity and Child Welfare work and in the work of the School Medical Service.

The person appointed will be required to devote his full time to the duties and not to engage in private practice.

The duties to be performed will be under the direction of the Medical Officer of Health.

The post will be designated under the Local Government and Other Officers Superannuation Act 1922 and the provisions of that Act will be applicable.

Applications should be sent to the undersigned not later than Wednesday April 20th 1938.

Medical Officer of Health G. H. HOLT

City Hall, Oxford

April 15th 1938

Town Clerk

**COUNTY COUNCIL OF MIDDLESEX****RESIDENT CASUALTY MEDICAL OFFICER**

Applications are invited for the above appointment at WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH. Candidates must be registered Medical Practitioners who have held a post of both house physician and house surgeon in a general hospital and have had considerable round experience.

Salary £350 per annum with board and laundry valued at £100 per annum.

The officer appointed will be required to call on casualties and admissions to the Hospital and to carry out such duties as may be required to him.

The appointment which does not at present carry any superannuation rights will be subject to medical examination for a period of three months in the first instance may be extended for an additional six months and is terminable by one month's notice on either side.

The officer appointed will work under the direction of the Medical Superintendent and will devote his whole time to official duties.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than April 30th. Application forms are not provided. Envelopes must be endorsed Casualty Medical Officer, West Middlesex County Hospital, Relationship to Council member or officer of the Council must be closed in the application.

Conveying directly or indirectly will be a disqualification.

C. W. RADCLIFFE 7

Clerk of the County Council

Middlesex Guildhall

Westminster SW1

April 7th 1938

**COUNTY BOROUGH OF WOLVERHAMPTON****NEW CROSS HOSPITAL (350 Beds)****ASSISTANT MEDICAL OFFICER (RESIDENT)**

Applications are invited from single gentlemen duly qualified for appointment as Assistant Medical Officer at the above Hospital which contains Medical Surgical Maternity Children and Isolation Departments and is fully equipped.

Experience in anaesthetics and a knowledge of Clinical Pathology and previous Hospital experience will be deemed additional assets.

Salary will be at the rate of £200 per annum with apartments board attendance etc.

The appointment will be limited to a term not exceeding one year.

Further information as to the duties of the post may be obtained from the Medical Officer of the Hospital.

Applications stating age qualifications and nationality together with copies of recent testimonials should be addressed to—

A. G. ALDRIDGE

Public Assistant to the Council

Stafford Street Wolverhampton

April 15th 1938

Town Clerk

April 15th 1938

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# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1938

Candidates below the age of 25 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board.

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty.

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000.

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax).

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances.

Opportunities are available for officers on the permanent list for post graduate study, to specialise, to take higher examinations and to obtain further qualifications.

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers.

Copies of the regulations for entry and conditions of Service, including rates of pay, allowances and retired pay may be obtained from the Medical Director General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than 31st May, 1938.

## ROYAL NAVAL DENTAL SERVICE

Applications are invited for the post of Dental Officer in the Royal Navy. Candidates must be registered under the Medical Acts and be of 25 years of age or under. They must hold a degree or diploma from a University or College of Surgeons and be recommended by the Dental Act of Medical Act and be required to attend at the Admiralty for interview and physical examination. Copies of the regulations for entry and conditions of Service, including rates of pay and allowances and forms of application may be obtained from the Medical Director General of the Navy, Admiralty, SW 1, and from the Deans of Dental Schools.

## LIVERPOOL COUNTY BOROUGH

### LOCAL EDUCATION AUTHORITY

#### SENIOR ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for a Senior Assistant School Medical Officer in the Department of the Medical Officer of Health, Education Authority at a salary of £ 0 per annum.

Candidates must be registered medical practitioners and it will be considered an advantage if candidates have had experience of school medical work and also some administrative experience. The officer appointed will be required to reside within the city and devote his entire service to the Local Education Authority under the direction of the Medical Officer to the Local Education Authority and will not be allowed to undertake any private practice.

The appointment will be subject to the Local Government and Officers Superannuation Act 1928 and the Standing Orders of the City Council.

Form of application and list of duties may be obtained by forwarding a stamped addressed post envelope to the undersigned and the form of application together with copies of three recent testimonials should be received not later than April 30th and endorsed Senior Assistant School Medical Officer.

The canvassing of members of the Education Committee or the City Council is strictly prohibited and will be considered a disqualification.

Municipal Buildings, W. H. BAINES, Esq.  
Liverpool 2, Town Clerk and Clerk to the  
April 15th 1938 Local Education Authority

## BOARD OF CONTROL ENGLAND AND WALES

The Board of Control (Mental and Moral Diseases) have a vacancy for a Medical Officer as COMMISSIONER on the following staff.

Candidates should be experienced in the care and treatment of persons suffering from mental disease or moral defect.

The salary commences at £20 per annum and rises by 10 annual increments of £10 to £110 and then to £100 per annum. In the case of a candidate with special experience of the administration of mental institutions the corresponding salary may be advanced to a point not exceeding £15 above the maximum of the scale.

The appointment will be subject to the Local Civil Service Commission as to pension holidays, etc. and also in the case of women marriage, etc. and to certain conditions previously established in the Mental Hospital or Mental Deficiency Institution in which he is appointed with Civil Service for superannuation purposes.

Candidates are required to devote their whole time to the Public Service.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Form of application with further particulars of the appointment may be obtained from the Secretary, Board of Control, Metropole Buildings, Northumberland Avenue, London W.C.2.

No application can be considered unless received on the preferred form not later than May 15th 1938.

## CITY OF BRADFORD

### ASSISTANT CITY PATHOLOGIST REQUIRED

Salary £500 per annum rising to £700 per annum by annual increments of £25.

The salary is subject to a deduction of 5 per cent under the terms of the Local Government and Officers Superannuation Act 1928, and the successful candidate will be required to pass a satisfactory medical examination.

Application form may be obtained from the Medical Officer of Health, Town Hall, Bradford, and should be returned to the undersigned not later than April 2nd 1938.

Town Hall, Bradford. N. E. FLEMING  
April 4th 1938

## NORFOLK COUNTY COUNCIL

### APPOINTMENT OF TEMPORARY MEDICAL OFFICER.

A vacancy exists for a temporary medical practitioner with special experience of mental deficiency in children.

The salary will be £100 per annum with travel expenses in excess of £10 with the Council's seat and the amount is expected to last for a period of six months.

The officer will be required to attend the County Medical Officer. The duties will be the examination of all child and adult cases in the county and the completion of the Board of Education Report Form for those who are mentally defective.

The appointment will be subject to one month's notice by either side.

Applications must be made on the prescribed form which can be obtained from the County Medical Officer, Public Health Department, 19 Thorpe Road, Norwich, to whom they must be returned accompanied by copies of not more than three testimonials not later than April 15th 1938.

H. C. DAVIES  
Clerk of the County Council  
County Offices, Thorpe Road, Norwich

## HULL CORPORATION HEALTH DEPARTMENT

### ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified medical men, under 40 years of age and not less than three years standing in their profession, for the above post.

Preference given to candidates possessing the Diploma in Public Health or equivalent qualification.

Salary £600 per annum rising by annual increments of £25 to £700 per annum.

Experience in fraction work essential.

Applications on form to be obtained from the undersigned are returnable not later than noon on Saturday April 3rd 1938.

NICOLAS GEBBIE, M.D.  
Medical Officer of Health.

Health Department,  
Guildhall, Hull,  
April, 1938.

## BOROUGH OF WEMBLEY APPOINTMENTS

### ASSISTANT MEDICAL OFFICER OF HEALTH

The Borough Council invite applications for the post of whole time Assistant Medical Officer of Health (an additional appointment).

The duties will be mainly in the Maternity and Child Welfare services of the Council while the officer will be required to undertake such other duties as the Medical Officer of Health with the consent of the Council may assign from time to time.

Candidates must subsequent to qualification have had at least three years experience in the practice of their profession and special experience of practical midwifery and ante natal work. They should have had hospital experience in Maternity and Child Welfare work. Preference will be given to applicants holding a diploma in midwifery or child health subjects. The Diploma in Public Health will be considered an additional recommendation.

The salary will be £500 per annum exclusive of travelling and other expenses rising by annual increments of £25 to a maximum of £700 per annum. The appointment will be subject to the successful candidate passing a medical examination the provisions of the Local Government and Other Officers Superannuation Act 1922 and to the Staff Regulations of the Borough Council and will be terminable by one calendar month's notice on either side.

Applications on a form to be obtained from the Medical Officer of Health Public Health Department Forty Avenue Wembley must reach me not later than noon on Wednesday April 27th 1934.

Canvassing in any form will disqualify candidates.

### PART TIME ASSISTANT MEDICAL OFFICER

The Borough Council invite applications from duly qualified medical practitioners for a part time position as Medical Officer in the Maternity and Child Welfare services of the Council.

Experience in ante natal and maternity and child welfare work is essential. Remuneration will be at the rate of 1½ guineas per session (2 hours). The number of weekly sessions may be variable but it is anticipated it will be five weekly.

Further information concerning the appointment may be obtained from the Medical Officer of Health Public Health Department Forty Avenue Wembley while applications on a form to be obtained from the Medical Officer of Health must reach me by noon on Wednesday April 27th 1934.

Council Offices KENNETH FANSLEY  
Wembley Middlesex Town Clerk  
April 14th 1934

## COUNTY BOROUGH OF SOUTHAMPTON APPOINTMENTS

### ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation of Southampton invite applications from duly qualified medical ladies or gentlemen for the post of Assistant Medical Officer of Health. Salary £500 rising by increments of £25 to £700 per annum.

The successful applicant will be required to carry out work in connexion with the School Medical Services Maternity and Child Welfare and any other duties in connexion with the Public Health Services as may be required under the direction of the Medical Officer of Health which may include work under the Port Sanitary Regulations. Preference will be given to applicants holding the Diploma in Public Health or equivalent qualification.

The appointment will be subject to the Local Government and Other Officers Superannuation Act and the successful applicant will be required to pass a medical examination. Canvassing will be a disqualification.

Forms of application may be obtained from the Medical Officer of Health Civic Centre Southampton. Applications on the prescribed form endorsed Assistant Medical Officer of Health together with copies of not more than three recent testimonials must be delivered at the Town Clerk's Office Civic Centre Southampton on or before April 27th 1934.

R. RONALD H. MCGESON  
Town Clerk

## LONDON COUNTY COUNCIL APPOINTMENTS

Applications invited for appointment as Assistant Dental Surgeon in the Public Health Department. Duties will be in connection with the dental treatment of poor children and other dental services of the Council. Salary £250 per annum. Candidate must be a holder of a dental diploma of a University or other institution.

Applications must be on form obtainable from the Medical Officer of Health (Public Health Department) 40 Avenue Wembley Middlesex. Applications must reach me not later than noon on Wednesday April 27th 1934.

## BRITISH POSTGRADUATE MEDICAL SCHOOL

A PART-TIME DEMONSTRATOR IN CLINICAL MEDICINE is required as early as possible. The selected candidate will be required to attend on two mornings and one afternoon each week and to carry out such duties as may be allotted to him by the Professor of Medicine. Applicants must hold the degree of M.D. or be Members of the Royal College of Physicians. The appointment will be for one year in the first instance but may be renewed for further periods. An honorarium of £100 per annum will be paid.

Further particulars can be obtained from the Dean British Postgraduate Medical School Duane Road Shepherd's Bush London W12 to whom applications accompanied by copies of three testimonials should be addressed to arrive not later than the first post on Monday April 25th.

## BRITISH POSTGRADUATE MEDICAL SCHOOL

Applications are invited for the post of FIRST ASSISTANT (non resident) in the Department of Medicine at the above named School to commence duty early in May. Candidates should hold the degree of M.D. or be Members of the Royal College of Physicians. The post will be whole time. Initial salary £300 to £350 according to experience and qualifications.

Further particulars can be obtained from the Dean British Postgraduate Medical School Duane Road Shepherd's Bush London W12 to whom applications accompanied by two testimonials and giving the names of two referees should be addressed to arrive not later than the first post on Monday April 25th.

## CITY OF BIRMINGHAM

### MATERNITY AND CHILD WELFARE DEPARTMENT

The Public Health Committee invite applications from qualified medical women to act as medical officer in the above Department.

The duties include attendance at maternity and child welfare centres and practical obstetrics.

Applicants should have had a six months resident appointment in a children's hospital and must have had not less than one year's obstetrical experience in a maternity hospital. The Diploma in Public Health will be considered an additional qualification.

The salary will be £600 rising by £25 annually to £700 per annum.

The successful applicant if not already holding the Master of Midwifery Diploma (S.A.) will be required to obtain this within a year and to reside in close proximity to one of the City maternity homes.

The appointment will be subject to the Birmingham Corporation Superannuation Scheme and to the candidate passing a medical examination and will be subject to three months' notice on either side. Applications endorsed Medical Officer for Maternity and Child Welfare and accompanied by copies of three recent testimonials to be made on a form obtainable from the Medical Officer of Health Council House Birmingham 3 and returned to him on or before April 30th 1934.

## CITY OF BIRMINGHAM

### MATERNITY AND CHILD WELFARE DEPARTMENT

#### CANWELL HALL BABIES HOSPITAL (54 Beds)

A WOMAN RESIDENT MEDICAL OFFICER is required for a period of six months. Duties to commence on June 3rd.

Applicants should have had previous experience as a resident house physician preferably in a Children's Hospital.

Salary £250 per annum with board and laundry. Application endorsed Resident Medical Officer and accompanied by copies of three recent testimonials to be made on a form obtainable from the Medical Officer of Health Council House Birmingham 3 and returned to him on or before April 20th 1934.

## MANCHESTER ROYAL INFIRMARY (Clinical Laboratory)

The Board of Management invite applications from Bacteriologists of experience for the post of DIRECTOR of the CLINICAL LABORATORY. Salary £500 per annum with superannuation and a share of the fees from private work carried out in the Laboratory. The Director appointed may expect University Status and will have facilities for working in the Department of Bacteriology in the Manchester University.

Candidates must be fully qualified and registered. They must state age and send eight copies of their application and testimonials to the undersigned by 4.30 p.m. on Monday May 7th 1934.

Further particulars of the appointment may be obtained from the undersigned.

By Order  
GEO. A. SUTHERLAND, Secy. & Treas.

## CITY OF SHEFFIELD CITY GENERAL HOSPITAL

### ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified medical men for the appointment of ASSISTANT MEDICAL OFFICER (Grade 1) in the City General Hospital.

Candidates should have special experience in surgery and be capable of undertaking all surgical emergencies.

Salary £350 rising by £25 to £450 per annum with the usual residential allowances. The Medical Officer will be required to live outside the City for the time being and during that time a salary allowance of £124 per annum will be paid.

This appointment is designated under the Local Government and Other Officers Superannuation Act 1922.

Applications stating age, qualifications and experience together with copies of three recent testimonials should be sent to THE MEDICAL SUPERINTENDENT City General Hospital Sheffield 5 on or before April 27th 1934.

## CORPORATION OF LONDON

### MEDICAL OFFICER OF HEALTH PORT OF LONDON

The Corporation of London is prepared to receive applications for the office of Medical Officer of Health for the Port of London.

The commencing salary of the office will be £1500 per annum rising at the pleasure of the Court of Common Council to £2000 per annum.

Full particulars of the duties of the office and forms of application may be obtained from the Town Clerk Guildhall London E.C.

Applications on the prescribed form together with copies of three testimonials must reach the Town Clerk's Office not later than noon on Monday May 2nd 1934.  
Guildhall E.C.2  
April 5th 1934 ROACH

## THE HOSPITAL OF ST CROSS RUDD (120 Beds)

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (R.M.O.).

Salary to commence at the rate of £1500 per annum for the first three months £1400 per annum for the second three months and at the rate of £1300 per annum for subsequent months. Full board washing etc. provided.

Six months' appointment and the option of extension of service for further extension of six months.

Candidates must be prepared to commence work immediately.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.s. Applications stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W. COCKBURN  
Superintendent and Secy. & Treas.

## NORTH SUFFOLKSHIRE ROYAL INFIRMARY

Stoke on Trent (390 Beds)

### RESIDENT ANAESTHETIST

The Committee invite applications for the post of Resident Anaesthetist at the rate of £140 per annum with board residence and laundry.

This appointment which is renewable by the Royal College of Surgeons for the District of North Staffordshire will be made for six months renewable.

Previous hospital Anaesthetic experience essential. Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately.

By Order  
W. STEVENSON  
Secretary and House Officer

March 28th 1934

## GREAT YARMOUTH GENERAL HOSPITAL (72 Beds)

Applications are invited for the post of SURGEON (one of two appointments) to commence May 1st.

Applicant must be male and a member of the Royal College of Surgeons for the District of Great Yarmouth.

Salary at the rate of £1400 per annum with board residence and laundry. Applications stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

FREDK. I. GUTHRIE

## LIVERPOOL AND DISTRICT HOSPITALS

DISEASES OF THE HEART

34, Old St. St. L.

HOUSE PHYSICIAN to the Liverpool and District Hospitals. Salary at the rate of £1400 per annum with board residence and laundry. Applications stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

## APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C. 1 (in the case of Scottish appointments, with the Scottish Secretary, 7, Drumheugh Gardens, Edinburgh)

### (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(c. 12)</b>	<b>CONTRACT PRACTICE—(c. 12)</b>
ABERTYSSWG MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Medical Officer)	OAKDALE MON (Medical Officer for Medical Aid Society)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Officer)	<b>PUBLIC HEALTH</b>
LLWYNSYF, CLYDACH VALLEY HENTON GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY (GLAMORGAN) (Workmen's Medical Officer) (Medical Officer)	SALOP MENTAL HOSPITAL SHREWSBURY (Medical Officer)

### (b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C. 1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Franchise Societies)	The Medical Society New South Wales Box 113, Macquarie Street, Sydney N.S.W.	<b>VICTORIA</b> (All Franchise Societies)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall, Albert Street, Melbourne	<b>WESTERN AUSTRALIA</b> (All Franchise Societies)	The Hon. Sec. Western Australian Branch British Medical Association Medical Society, 111, St. George's Terrace, Perth Western Australia
<b>QUEENSLAND</b> (All Franchise Societies)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. House, Wickham Terrace, Brisbane				

April 13, 1938

By Order of the Council

G. C. ANDERSON, Secretary

#### CHRISTIE HOSPITAL AND HOLT RADIUM INSTITUTE Manchester

Applications are invited for the post of ASSISTANT MEDICAL OFFICER to the Radium Institute. The appointment is for an indefinite period of up to 5 years, with a salary of £1,000 per annum and board and laundry. Applicants must possess a B.Sc. or equivalent in Science and a B.A. or equivalent in Medicine and have had special clinical and radiological experience. Actual experience in Radium Therapy is not essential. The appointment is a whole-time one, in the first instance for one year at £600 per annum, to £1,000 for the second year.

Detailed applications and testimonials should be submitted to the undersigned not later than April 25th.

PERCY N. GLASS  
Superintendent

#### BURSLAM HAYWOOD AND FUNSTALL WAR MEMORIAL HOSPITAL High Lane, Tunstall, Stoke-on-Trent. (66 Beds. Approved Training School for Nurses)

Applications are invited for the post of RESIDENT HOUSE SURGEON. Salary £15 per annum with board residence and laundry. The appointment is for six months in the first instance. Resignation may be applied for at any time. Applications, with copies of three recent testimonials, to be sent to the undersigned immediately.

C. E. LOWDES  
Secretary

#### COSSHAM MEMORIAL HOSPITAL Kingswood, Bristol.

A vacancy will occur at the end of March for a JUNIOR RESIDENT MEDICAL OFFICER. Salary £100 per annum with board and laundry to remain for six months in the first instance. Applicants (male) should be of British nationality, fully qualified and registered. Applications, with copies of recent testimonials, to be sent to the Secretary.

#### DERBYSHIRE ROYAL INFIRMARY, DERBY (General Hospital)

Applications are invited for the post of HOUSE SURGEON for Ear, Throat and Nose Department who must be a man of British nationality and be qualified. Candidates must be qualified and registered in the Medical Act. Salary will be £10 per annum with board and laundry. Applications, with copies of testimonials, to be sent to the undersigned.

ARTHUR TAYLOR  
Senior Resident and Secretary

#### LOWESTOFT AND NORTH SUFFOLK HOSPITAL

JUNIOR HOUSE SURGEON (Male) required. Salary at the rate of £10 per annum with board residence and laundry. Medical and Surgical qualifications required. Eligible for senior post at £10 per annum after a period of satisfactory service. Applications, with copies of three recent testimonials, to be sent to the Honorary Medical Superintendent.

#### STIRLING DISTRICT MENTAL HOSPITAL LARBERT

JUNIOR ASSISTANT MEDICAL OFFICER required. Salary commencing at £100 per annum with board residence and laundry. Appointment subject to provision of Aylms O'Connell Superintendence A.T. Apply stating age and experience with testimonials to the Medical Superintendent.

#### ECCLES AND PATRICROFT HOSPITAL, near Manchester

SENIOR RESIDENT HOUSE SURGEON required shortly. Good surgical work available. Commencing salary at rate of £15. Usual emoluments. Appointment for 6 months. May be extended. Apply with references to the Secretary.

#### ROCHDALE INFIRMARY AND DISPENSARY (112 Beds. Three Residents)

The Board of Management is now applying for the post of SECOND HOUSE SURGEON. The salary offered to the successful candidate is at the rate of £10 per annum with board residence and laundry. Applications, with copies of testimonials, to be sent to the Secretary, 111, St. George's Terrace, Perth Western Australia.

W. WYNNE,  
Secretary

#### INFIRMARY OFFICE, RICHMOND LANE NORFOLK AND NORWICH HOSPITAL (117 Beds)

Applications are invited for the post of CASUALTY OFFICER. Salary £10 per annum with board residence and laundry. Candidates (male) must be unmarried and must possess registered qualifications. Applications, stating age, nationality, etc., together with copies of testimonials, should be sent to the undersigned not later than Tuesday April 19th, 1938.

FRANK INCH  
Hon. Governor and Secretary

#### PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited for the post of HOUSE SURGEON to the Eye, Ear, Nose and Throat, Wards and Clinics. Six months' appointment. Salary at the rate of £10 per annum with board residence and laundry. Total Resident Staff of the General Hospital, eight. Applicants, stating age, qualifications and experience, with copies of recent testimonials, to be forwarded to the undersigned. April 14th, 1938.

JOHN GIBSON  
Superintendent and Secretary

(Appointments continued on p. 22)



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Good salaries offered. State full particulars—  
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Usual bond—Apply with references age and ex-  
perience (if any) to—Address No 5116 B.M.A.  
House Tavistock Square W.C.1

**WANTED IMMEDIATELY WOMAN ASSIST-**  
ANT in South London. Small mixed prac-  
tice. Furnished flat above surgery. State age and  
full particulars—Address No 5125 B.M.A. House  
Tavistock Square W.C.1

**WANTED OUTDOOR ASSISTANT MIXED**  
general practice S.W. country town. Salary  
£400. Own car desirable. Send details age and  
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Tavistock Square W.C.1

**WANTED OUTDOOR ASSISTANT IN**  
Yorkshire industrial practice. English or  
Scottish. Salary £460 per annum plus car allow-  
ance—Address No 5133 B.M.A. House Tavi-  
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**WANTED—INDOOR ASSISTANT NEAR**  
Newcastle-on Tyne. Sound knowledge of  
midwifery essential. Scotch or English. £340 all  
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**WANTED OUTDOOR MALE ASSISTANT**  
(with view to PARTNERSHIP) for private  
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Give full particulars and photo. Salary £450 plus  
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**WANTED YOUNG MALE ASSISTANT**  
indoor Glamorgan. Three in practice  
plus dispensers. Local Hospital. Own car  
desirable. £300 plus board lodging car expenses.  
Scotch qualification preferred—Address No 5001  
B.M.A. House Tavistock Square W.C.1

**WANTED ENGLISH OR SCOTTISH MALE**  
ASSISTANT in country town in Midland.  
Salary £400 to £450 outdoor according to ex-  
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**WANTED ASSISTANT WITH A VIEW TO**  
partnership in Ophthalmic and Ear Nose  
and Throat Practice in Africa. Applicant must be  
gentlemanly of good appearance, manner and a  
good mixer. Give full particulars of qualifications,  
experience and age (which should be under 35).  
No premium for share—Address No 4.05 B.M.A.  
House Tavistock Square W.C.1

**WANTED ASSISTANT MALE FOR LONDON**  
E3 district to commence May 4th.  
Salary £300 p.a. all found—Address No 5009  
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Irish M.B. married. At present in R.M.O.  
post. Four months G.P. experience. Free  
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sary—Address No 5109 B.M.A. House Tavistock  
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**WANTED PART TIME ASSISTANT**  
Industrial and panel practice near Strand.  
Week ends essential indoor other periods by  
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Tavistock Square W.C.1

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Evening surgery only 6-5 p.m. Central  
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### APPOINTMENTS—Contd

**THE GUEST HOSPITAL DUDLEY**  
(General Hospital 139 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons

Applications are invited from registered Medical Practitioners for the post of **RESIDENT SURGICAL OFFICER (male)** Duties to commence May 22nd 1938 Salary at the rate of £250-£300 per annum according to experience with furnished apartments board and laundry Candidates must have had experience in emergency will be given to those of F.R.C.S. or M.S. age qualifications and experience accompanied by copies of testimonials to be sent to the undersigned

**H. RAYMOND HURST**  
April 11th 1938 House Governor and Secretary

**HOSPITAL CONVALESCENT HOME**  
Parkwood Swinley Kent

(For the reception of patients (women and children) in an early stage of convalescence from the London Hospitals 120 beds)

The Trustees of the Home invite applications for the post of **LADY RESIDENT MEDICAL OFFICER** which will become vacant on May 20th 1938

The appointment is for a period of six months Salary £200 per annum with quarters and full board Candidates should have had recent hospital experience

Applications stating age qualifications and full details of experience should be accompanied by copies of three recent testimonials and addressed to C. M. POWER Esq. Secretary Hospital Convalescent Home c/o Westminster Hospital London S.W.1 on or before Saturday April 10th, 1938

**ROYAL HAMPSHIRE COUNTY HOSPITAL**  
Winchester

(187 Beds—Five Resident Officers)  
Hospital recognized by the Royal College of Surgeons England

### HOUSE SURGEON

Applications are invited from fully qualified men for the above post to take up duties on May 1st Six months appointment Salary £100 per annum with board residence and laundry

Candidates who must be of British nationality to make application to the undersigned enclosing copies of three testimonials

**HERBERT MASLEN**  
April 11th 1938 Secretary

**ROYAL INFIRMARY BLACKBURN**  
(244 Beds—Five Residents)

**RESIDENT HOUSE PHYSICIAN (male)** required at a salary of £175 per annum with board residence laundry etc

In addition to Medical Wards to be attached to the Eye Ear Nose and Throat Department

Applications with copies of testimonials stating age nationality experience etc to be sent to the undersigned as early as possible

**Royal Infirmary T. DEWHURST**  
Blackburn General Supt and Secretary

**NATIONAL TEMPERANCE HOSPITAL**  
Hampstead Road NW 1

A qualified **CLINICAL ASSISTANT** is required in the Ear Nose and Throat Department (Friday afternoons) Applications must be received not later than April 22nd addressed to the Secretary

## COVERS FOR BINDING

Vols 1 and 11 of the **BRITISH MEDICAL JOURNAL** for 1937 and previous years can be had, price 2s 6d, by parcel post 2s 10d each

Orders with appropriate remuneration should be addressed to

**THE SECRETARY**  
**BRITISH MEDICAL JOURNAL**  
BMA HOUSE TAVISTOCK SQ  
LONDON WC1

**THE LONDON LOCK HOSPITAL**  
283 Harrow Road W 9

Applications are invited for a **RESIDENT MEDICAL OFFICER (male)** to **ALL DEPARTMENTS** Candidates must be doubly qualified and duly registered The appointment is for six months commencing June 1st salary at the rate of £1 1/2 p.a. with furnished rooms full board and laundry Preference will be given to candidates having previous obstetric experience Applications enclosing copies (only) of three recent testimonials must be in the hands of the Secretary by first post on Friday April 29th and from whom any further particulars can be obtained

**THE GUEST HOSPITAL DUDLEY**  
(General Hospital 139 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons

**HOUSE SURGEON (male)** required immediately Salary at the rate of £100-£130 according to experience with furnished apartments board and laundry Candidates must be fully qualified and registered

Applications stating age qualifications and experience accompanied by copies of testimonials to be sent to the undersigned

**H. RAYMOND HURST**  
April 11th 1938 House Governor and Secretary

**THE WEST NORFOLK AND KINGS LYNN GENERAL HOSPITAL**  
King's Lynn

### THIRD RESIDENT MEDICAL OFFICER

The Governing Board invite applications for the above post Duties will include work in Casualty Department and in surgical wards under the Resident Surgical Officer also to deputise for House Physician Salary £120 per annum The appointment is for six months in the first instance

Applications stating age nationality qualifications should be accompanied by testimonials and reach the undersigned not later than April 10th

**JOSEPH E. SEARJEANT F.R.C.S.**  
House Governor and Secretary

**VICTORIA HOSPITAL BLACKPOOL**  
(182 Beds)

### HOUSE SURGEON (male) REQUIRED TO SURGICAL UNIT No 1

There are four Resident Medical Officers Appointment is for six months salary at the rate of £175 per annum with board residence and laundry

Applications with copies of three recent testimonials should be sent to the General Superintendent

**WEST HERTS HOSPITAL, HENEL**  
(114 Beds) 24 miles from London

### JUNIOR RESIDENT MEDICAL OFFICER

required to commence duties about May 1st Male unmarried preferred Salary £100 with room board and laundry

Applications stating essential particulars and enclosing copies of three recent testimonials to be sent at once to

**ROBT L. BUTTERFIELD**  
Clerk to the Hospital

**VICTORIA HOSPITAL ACCRINGTON**

The Governing Body of this Hospital invite applications for the post of **HOUSE SURGEON** Candidates must be duly qualified and registered

Number of beds 50 Salary £175 per annum with board and lodging

Conditions of appointment and particulars of duties may be obtained from the undersigned to whom applications with copies only of testimonials should be sent immediately

**Victoria Hospital J. KENYON**  
Accrington Secretary

**BEDFORD COUNTY HOSPITAL**

Wanted Second **HOUSE SURGEON** AND **CASUALTY OFFICER** to take over their duties on May 18th for a term of not less than six months They must be fully qualified male unmarried

Salary in each case £150 per annum with board lodging and laundry

Applications stating age nationality and qualifications to be sent to the Secretary Hon Mr Staff Committee with three recent testimonials

**KING GEORGE HOSPITAL**  
Ilford (near London) (87 Beds)

**ASSISTANT CASUALTY OFFICER** AND **HOUSE SURGEON** to Special Departments (2) required for six months from May 1st 1938 Salary at the rate of £100 p.a.

Terms of application may be obtained from the undersigned to whom they should be sent not later than April 15th 1938

**G. AUSTIN HEILWORTH**  
Secretary and Superintendent



# CARDIFF ROYAL INFIRMARY

## RESIDENT ANAESTHETIST (Male or Female)

It is proposed to appoint a Resident Anaesthetist at the above Hospital the candidate to submit application on the prescribed form stating age sex nationality qualifications and anaesthetic experience.

A list of rules and application form will be sent on application to the undersigned and the completed form should be returned not later than May 2 1938.

The appointment will be for six months subject to renewal and the salary will be at the rate of £100 per annum for the first six months and £150 for the second six months if reappointed.

R ARMSTRONG

Medical Superintendent

# HUDDERSFIELD ROYAL INFIRMARY

## (321 Beds)

MALE HOUSE SURGEON required to commence duty on May 1st 1938.

Salary £150 per annum with board residence and laundry.

Appointment for six months subject to renewal at the discretion of the Board of Management. The Hospital is officially recognized for the surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications with copies of three recent testimonials to be addressed to the undersigned immediately.

H J JOHNSON

Gen Supt and Secretary

# HUDDERSFIELD ROYAL INFIRMARY

## (321 Beds)

MALE HOUSE SURGEON required to be attached to the Abnormal Maternity Department. Duties which include the administration of anaesthetics to commence on May 1st 1938. Salary will be at the rate of £150 per annum with board residence and laundry.

Appointment for six months subject to renewal for a similar period.

Applications with copies of three recent testimonials to be addressed to the undersigned immediately.

H J JOHNSON

Gen Supt and Secretary

# HUDDERSFIELD ROYAL INFIRMARY

## (321 Beds)

MALE HOUSE SURGEON required to be attached to Eye Ear Nose and Throat Departments. Duties which include the administration of anaesthetics to commence on May 1st 1938. Salary will be at the rate of £150 per annum with board residence and laundry.

Appointment for six months subject to renewal for a similar period.

Applications with copies of three recent testimonials to be addressed to the undersigned immediately.

H J JOHNSON

Gen Supt and Secretary

# GENERAL INFIRMARY SALISBURY

(Voluntary Hospital 200 beds now in course of extension to 210 beds.)

HOUSE PHYSICIAN (male) required to commence duty May 15th 1938.

The appointment is for six months with the right of applying for reappointment for a further period of six months. Candidates must be unmarried fully qualified and registered. Salary £125 per annum with board residence.

Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained.

# MANFIELD ORTHOPAEDIC HOSPITAL

## Northampton (159 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). Salary £200 p.a. with board residence etc. Preference will be given to candidates who have previously held Medical and Surgical appointments in a General Hospital.

Applications stating age qualifications etc and copies of testimonials should be sent not later than April 27th to

H G LEWIS

Secretary Superintendent

# PRINCESS ELIZABETH ORTHOPAEDIC HOSPITAL EXETER

Applications are invited for the post of RESIDENT HOUSE SURGEON. Salary £150 per annum with board residence and laundry.

The appointment is for six months commencing May with the option of extension for a period not exceeding a further six months.

Application stating age and experience with copies of three recent testimonials to be sent to

P MELHUSH Secretary

# THE ROYAL CRIPPLES HOSPITAL

## Birmingham

(306 Beds for acute cases (including a proportion of patients suffering from tubercular bone disease) and large Out Patient Department.)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male) vacant immediately. Salary £200 per annum plus car allowance. The appointment which is for a period of six months is renewable on the discretion of the Medical Board and is terminable by one month's notice on either side.

Candidates must be unmarried and preference will be given to those with previous experience in General and Orthopaedic Hospitals.

Applications with copies of three recent testimonials to be sent to the General Secretary Royal Cripples Hospital 80 Broad Street Birmingham 15.

# ROYAL VICTORIA INFIRMARY

## Newcastle upon Tyne (785 Beds)

Applications are invited for the post of Whole-time REGISTRAR to the Orthopaedic Department (open appointment). Candidates must be registered in Medicine and Surgery. The appointment will be for one year commencing May 9th 1939 and may be further renewed on conditions. The rate of remuneration is £150 per annum.

Regulations governing the appointment must be obtained from the undersigned and applications with copies of not more than three recent testimonials should be received by first post on Thursday April 28th 1938.

S DUNSTAN

April 8th 1938 House Governor and Secretary

# THE GENERAL INFIRMARY AT LEEDS

## (673 Beds)

RESIDENT SURGICAL OFFICER required. Salary £149 per annum with board residence laundry etc. Candidates must be qualified Medical Practitioners and registered and have held a previous Resident Hospital post.

The appointment is for twelve months with eligibility for re-election.

Applications together with copies of three recent testimonials should be sent to reach the undersigned as soon as possible.

S CLAYTON FRYERS

House Governor and Secretary

# STOCKTON AND THORNABY HOSPITAL

## Stockton on Tees (140 Beds 3 Residents)

HOUSE PHYSICIAN (male) alternating with Casualty Officer required for a period of at least six months to commence on or about April 16th 1938. Salary £150 per annum with board residence and laundry. Candidates must be duly qualified and unmarried. Applications stating age nationality and experience together with copies of three testimonials to be sent to the undersigned.

J WILKINSON

Secretary

# STROUD GENERAL HOSPITAL

## Stroud Glos

RESIDENT MEDICAL OFFICER required. Candidates must be fully qualified and registered. Six months appointment duties to commence as soon as possible. Salary £160 per annum with board and laundry. Applications stating age nationality etc together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

C FORD SPENCER

Secretary

# THE CHLSTER ROYAL INFIRMARY

## (225 Beds)

Applications are invited for the post of HOUSE PHYSICIAN (male) to take up duty on May 1st. Salary £150 per annum with board lodging and laundry. The appointment is approved for the purposes of the M.D. Examinations of the University of London. Application list closes April 22nd. Application forms may be obtained from — W H GRACE M.D. MRCP Hon Secretary Medical Committee.

# THE HARTLEPOOLS HOSPITAL

## (95 Beds)

Applications are invited for the position of HOUSE SURGEON. Salary £150 p.a. together with board residence and laundry. Appointment for six months subject to renewal.

Duties to commence April 30th.

NORMAN O DEANS Secretary

# ROTHERHAM HOSPITAL

Wanted HOUSE PHYSICIAN (male) qualified. Salary £150 with board residence and laundry. 130 beds. Excellent experience to be gained.

Applications with copies of recent testimonials to be sent to the Secretary G W ROBERTS 3 Moorgate Street Rotherham.

# YORK COUNTY HOSPITAL

## (204 Beds)

## APPOINTMENT OF HONORARY OPHTHALMIC SURGEON

Applications are invited for the post of Honorary Ophthalmic Surgeon which falls vacant on July 1st 1938. Candidates should send a copy of their application (stating age) and testimonials together with diplomas to the undersigned not later than June 1st 1938.

Candidates may send such printed or written testimonials to the members of the Elective Committee as they may think desirable but canvassing personally or otherwise will be considered a disqualification.

J R MACKRILL Secretary

# THE GENERAL INFIRMARY AT LEEDS

## (673 Beds)

Wanted immediately RESIDENT OPHTHALMIC OFFICER. Salary £149 p.a. with board residence and laundry. The appointment is for twelve months subject to renewal.

Candidates must be legally qualified and registered and have held a Resident Surgical post and had special experience in Ophthalmic work.

Applications with copies of testimonials should be received by the undersigned as soon as possible.

S CLAYTON FRYERS

House Governor and Secretary

# ROYAL EAST SUSSEX HOSPITAL

## Hastings

Applications are invited for the post of JUNIOR HOUSE SURGEON (female) vacant May 1st next. The appointment is for the period of six months. Salary at the rate of £150 per annum with board and residence. Candidates must be duly registered medical practitioners.

Applications with copies of recent testimonials to be addressed to the Secretary.

WILFRID G KEMSELEY Secretary

# BATLEY AND DISTRICT HOSPITAL

## (General Hospital—64 Beds)

Required a duly qualified RESIDENT HOUSE SURGEON (male). Salary £175 with board residence and laundry. Applications with copies of testimonials should be sent at once to—

A W WESTERN

Batley Works

Secretary

THE DOCTOR IN PRACTICE OR ABOUT TO ENTER THEREIN SHOULD BE ADEQUATELY PROTECTED BY INSURANCE IN RESPECT OF

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1 DEATH VACANCY — DORSET COAST — PRACTICE, about £1,450 p a, in small fashionable seaside resort. Panel 350. House (6 bedrooms), garage and garden. Rent £100 p a.

2 ESSEX—THIRD PARTNER required in good middle class Practice about £7,000 p a, in pleasant outlying district. Panel 700. House (6 bedrooms), garage and garden. Price £1,000. Excellent opportunity for one desiring surgery. Share worth £1,500 p a (guaranteed for two years) at two years purchase.

3 SURREY—PRACTICE, about £600 p a, in growing country district on outskirts of market town. Panel 776. House (7 bedrooms), large garage and garden. Price £2,000. Good educational facilities. Scope. Premium two years purchase.

4 EASTERN COUNTIES — PARTNERSHIP in lucrative Practice, £5,200 p a, in market town. Panel over 4,000. Suitable house obtainable. Premium one fifth share two and a quarter years purchase.

5 S COAST—PRACTICE in health resort. Receipts 1937, about £1,600. Panel 900. House (5 bed and dressing rooms), large garage and garden. Price £2,250. Good scope. Premium £3,750.

6 DEATH VACANCY—Prosperous Midland City—Old established PRACTICE, about £1,450. Panel about 600. Nice detached modern house in best residential part.

7 DEATH VACANCY—ANGLESEY COAST—PRACTICE about £900 p a (appointments and panel £435). House (6 bedrooms), with nice garden. Rent £60 p a.

8 W OF ENGLAND—PRACTICE, nearly £1,200 p a, in small favourite watering place. Panel 715. Detached house (5/6 bedrooms), garage and good garden. Rent £85 p a. Scope. Premium two years purchase or nearest offer.

9 LONDON, E 5—Middle-class PRACTICE about £2,700 p a. Panel 1,200. Price of surgery premises £1,200. Private residence available if needed. Good scope for panel. Premium two years purchase.

10 UNIVERSITY TOWN — PRACTICE about £1,800. Panel over 2,500. House (about 7 bedrooms), for sale also surgery premises for sale. Scope. Premium one and three quarter years purchase.

11 COUNTY TOWN, about 50 miles from London—PARTNER required (under 30 years of age with F.R.C.S. Eng or Edin.) to do Ear, Nose and Throat work in addition to general practice and some general surgery. Share worth £1,000 p a at two years purchase. Possibility of hospital appointment later.

12 KENT—SEASIDE TOWN—PARTNERSHIP in mixed Practice, £3,650 p a. Panel over 2,000. Excellent modern house for sale or rent. One third or one half share at two years purchase. Must be young, experienced and well qualified.

13 LONDON SE 20—PRACTICE, about £1,730 p a in suburban district (appointments returning about £400 p a). Panel 966. Modernized house (13 rooms) garage and garden. Price £1,200. Premium £3,500.

14 NEW ZEALAND—S ISLAND—PRACTICE in prosperous coast town. Receipts average £1,450 p a (appointments about £450). Choice of house. Surgery rent 30s per week. Premium £1,250.

15 MIDDLESEX—PARTNERSHIP in steadily increasing middle class Practice about £4,000 p a in resi-

dential district. Panel 1,500/1,600. House available. Premium two ninths share (about £1,000 p a) two years purchase.

16 MIDLANDS—PRACTICE in growing residential district, near good town. Receipts last year, £770. Panel about 100. Attractive modern easily run house (4 bedrooms). Price £3,500. Scope. Premium one and a half years purchase.

17 SW OF ENGLAND—FOURTH PARTNER required in mixed country town Practice, nearly £6,800 p a. Panel 4,600. Share worth about £1,100 p a at two years purchase. Partner must be young and have made special study of medicine. Preliminary Assistantship.

18 LONDON, W 9—PRACTICE doing between £900/£950 p a in residential part. Panel 50/60. Rent of maisonette (4 bedrooms, etc.) £200 p a. Scope. Premium £1,250.

19 ESSEX COAST—PARTNERSHIP in well established Practice, over £1,600 p a, in growing district. Panel about 1,000. Detached house (3 bedrooms), with garage and garden. Price £1,450. Yachting sea fishing, etc. Decided scope. Premium one half share, £1,600.

20 W CROYDON—Cash and Panel PRACTICE. Receipts last year, £680. Panel 400 and club. Rent of house £104 p a. Premium £850 or very near offer.

21 LONDON, W—Middle-class PRACTICE, £600 p a, in nice suburb. Panel 267. House (5 bedrooms). Price £1,300. Good scope. Premium one and a half years purchase.

22 DEATH VACANCY—S WALES—Country PRACTICE averaging about £760 p a. Panel 360. House (5 bedrooms, etc.), large garage and garden for sale or rent.

23 SURREY—PRACTICE in new developing district doing at rate of nearly £700 p a, appointment worth £50, and increasing panel 163. Well situated house (3 bedrooms and professional accommodation). Price about £1,650. Ample scope. Premium £400.

24 LONDON, NW 8—Branch PRACTICE. Receipts about £220. Premises in residential flats. Rent £150 p a. Scope. Premium £300.

25 S WALES—SEASIDE RESORT—PRACTICE averaging £800 p a. Panel 234. Visits 5/ to 10/6. Corner house for sale or rent. Premium two years' purchase.

26 NEW ZEALAND—AUCKLAND PROVINCE—PRACTICE of £750 p a in dairy farming district. Seven roomed house with grounds of two acres. Premium, house and practice £1,100.

27 HOME COUNTY—PARTNERSHIP in sound Practice, about £8,300 in progressive town. Panel 4,450. House (6 bedrooms), for sale. Premium one fourth share two years purchase. Smaller share considered. Purchaser should be able to do major surgery.

28 SURREY—Increasing middle and working class PRACTICE doing about £1,500 in thickly populated suburban district. Panel about 800. Small house with garage. Price £800 or rent £78 p a. Scope. Premium £2,500 to include fittings furniture drugs etc.

29 WORCESTERSHIRE—Country PRACTICE, £800 p a in very beautiful district. Exceptionally attractive house (5/6 bedrooms) in about two acres grounds, for sale. Premium £1,500.

30 SCOTLAND — FIFESHIRE — PRACTICE, nearly £800 p a in small town. Panel about 800. House (6 bedrooms) garage and good sized garden. Shooting fishing, etc., available. Premium house and practice £2,500.



# British Medical Bureau

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Tele Address  
Trifon, Westcent—London

11 AVISTOCK HOUSE SOUTH

11 AVISTOCK SQUARE, W C 1

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41 SOUTH AFRICA—Old established PRACTICE  
Receipts averaging £3000 p.a. 10 Copeland House to rent  
Cottage Hospital. Scope for surgery. £1000 p.a.  
in house. 1000 p.a. for 10 years. 1000 p.a. for 10 years.

42 MIDLANDS—PARTNERSHIP in Practice  
about £200 p.a. in small town. Two-thirds share at two  
years purchase after 10 years.

43 W. OF ENGLAND—Old established middle  
class PRACTICE in good town. Receipts £1700 p.a.  
£1000 p.a. for 10 years. 1000 p.a. for 10 years. 1000 p.a.  
for 10 years. 1000 p.a. for 10 years. 1000 p.a. for 10 years.

44 PRIVATE MENTAL HOME for both sexes—  
Cash receipts averaging £1000 p.a. 1000 p.a. for 10 years.  
1000 p.a. for 10 years. 1000 p.a. for 10 years. 1000 p.a. for 10 years.

45 S. MIDLANDS—PARTNERSHIP in Practice  
about £200 p.a. in country town. £1000 p.a. for 10 years.  
1000 p.a. for 10 years. 1000 p.a. for 10 years. 1000 p.a. for 10 years.

46 SURREY—PRACTICE doing about £2000 in  
town. 1000 p.a. for 10 years. 1000 p.a. for 10 years. 1000 p.a. for 10 years.

47 LONDON SE—Suburban PRACTICE Receipts  
1937 £700. £1000 p.a. for 10 years. 1000 p.a. for 10 years.

48 LONDON SE—PRACTICE doing at rate of  
£700 p.a. in fairly populated district. £1000 p.a. for 10 years.

49 NE COAST—Old established and civil. Worked  
hard and better working. PRACTICE over £1500 p.a.  
in support town. No part. Private and public. Good  
scope. Premium £1000 to include furniture and fittings of  
consulting room etc.

50 LONDON W9—PRACTICE doing about  
£1000 p.a. in small town. £1000 p.a. for 10 years.

51 S. OF ENGLAND—First rate Residential Town  
—Good class and expensive PRACTICE about £1000 p.a.  
Consultants and 1000 p.a. for 10 years. 1000 p.a. for 10 years.

52 SURREY—PARTNERSHIP in rapidly growing  
middle-class Practice about £1700 in residential neighbourhood.  
Food. £1000 p.a. for 10 years. 1000 p.a. for 10 years.

53 DEVON AND CORNWALL BORDER—Very  
old-established unopposed and steadily increasing country  
PRACTICE £1325 p.a. Panel 415. 1000 p.a. for 10 years.

54 SE COAST—PARTNERSHIP in old established  
middle-class work. Practice in growing resort. Receipts  
1937 £470. £1000 p.a. for 10 years. 1000 p.a. for 10 years.

55 ESSEX COAST—PRACTICE about £625 p.a.  
£1000 p.a. for 10 years. 1000 p.a. for 10 years.

56 W. OF ENGLAND—PARTNERSHIP in non  
dispensing PRACTICE of £1000 in first rate residential town.  
£1000 p.a. for 10 years. 1000 p.a. for 10 years.

57 S. OF ENGLAND—Well established SANA  
TORIUM for the Open Air Treatment. Receipts p.a. year  
£2000. Premium £1000 to include furniture etc. Further  
details on application.

58 N. MIDLANDS—PARTNERSHIP in steadily  
increasing middle-class Practice averaging £500 p.a. in  
country town. Panel 400. House with 3 bedrooms etc.  
and good garden to rent. One-third or one-fourth share at  
two years purchase.

59 EASTERN COUNTIES—PARTNERSHIP in  
Practice over £1000 in very pleasant agricultural district.  
Mid rate panel. 1000 p.a. for 10 years. 1000 p.a. for 10 years.

60 N. WALES—PARTNERSHIP in Practice about  
£2000 p.a. in industrial district. Panel 190. House (5 bed  
rooms) and garden. We have not received any but an offer  
of £1000 per half share to include remainder of lease as £2000.

61 MIDLANDS—PRACTICE in good town easy  
access to London. Earnings average £2500. Panel 1000.  
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**LANCS TOWN**—Old established mixed Panel and Private PRACTICE Cash receipts last year £1 070 Panel 1 300 Good detached house 2 reception rooms 4 bedrooms Professional rooms garage and garden Rent £60 p a Premium—1½ years purchase—No 1099

**YORKSHIRE**—Old established PRACTICE in pleasant Country town Cash receipts last year £1 080 Panel 500 (producing £330 p a) Scope Excellent house 3 reception 6 bedrooms 3 Professional rooms garage and large garden Good sport and educational facilities Premium—Practice—£1 700—No 1102

**MANCHESTER**—Well established mixed-class PRACTICE Cash receipts £1 600 p a Panel 1 600 Good surgery premises to rent at £52 p a Purchaser can choose own residence Premium—1½ years purchase Vendor retiring—No 1079

**NORTH EAST COAST**—Old established mixed Panel and Private PRACTICE Cash receipts approximately £2 100 p a Panel 2 140 Appointment and Clubs £400 p a Good house 2 reception 3 bedrooms 3 Professional rooms garage and small garden Price £800 Premium—2 years purchase—No 1094

**ANGLESEY**—DEATH VACANCY—Old established unopposed mixed Panel and Private PRACTICE in beautiful Seaside Village Cash receipts last year £1 044 including Panel income of £335 Excellent house on lease, with ample accommodation garage and garden Rent £60 p a Premium—£1 000—No 1101

**YORKSHIRE (WR)**—Well established mixed class PRACTICE with no resident opposition in pleasant village near a town Cash receipts last year £1 225 Panel 1 100 Good house 2 reception 4 bedrooms Professional rooms electric light garage and garden Rent £52 p a Premium—1½ years purchase—No 1067

**DERBYSHIRE**—Old established mixed class PRACTICE near beautiful country and within easy reach of large town Average cash receipts £1 100 p a Panel 970 and transferable appointments £200 p a Scope Nice detached house 2 reception 6/7 bedrooms garage and large garden Freehold—Premium—1½ years purchase—No 991

**LIVERPOOL**—Steadily increasing mixed class PRACTICE in suburbs Cash receipts last year £758 Panel 630 Excellent detached house 2 reception 6 bedrooms garage and garden Premium—Practice—best offer—No 1036

**NR HUDDERSFIELD**—Well established mixed-class PRACTICE Average cash receipts £1 175 p a Panel 1 121 Good house 2 reception 4 bedrooms 3 Professional rooms garage and garden Rent £65 p a Premium—1½ years purchase or near offer—No 1085

**YORKSHIRE (WR)**—Very old established Mixed Panel and Private PRACTICE Cash receipts £1 200 p a Panel 900 Scope Good detached house 2 reception 4 bedrooms Professional rooms garage and garden Premium—1½ years purchase or near offer—No 1060

**LANCS TOWN**—PARTNERSHIP in old established mixed class PRACTICE in large town 6 miles from Manchester Average gross cash receipts nearly £4 000 p a Panel 3 600 Good house 2 reception 4 bedrooms garage and small garden To rent Premium—2/5th share (about £1,600 gross)—2 years purchase or near offer—No 1073

**MIDLAND HEALTH RESORT**—PARTNERSHIP (after preliminary Assistantship) in very old established mixed-class Practice Cash receipts last year £3 774 Panel 1 300 Fees 3/6 to 10/6 Incoming partner should be Protestant and may choose own residence Possibility of Hospital appointment Premium—7/24th share—2 years purchase Further share in three years—No 1069

**SCOTLAND—FIFESHIRE**—Old-established PRACTICE in small town. Cash receipts £800 p a Panel 800 Good house 2 reception 4 bedrooms, Professional rooms (separate entrance) electric light garage and good garden. Freehold All kinds of sport Premium—Practice and house—£2 500—No 1095

**SOUTH COAST**—Old established middle-class PRACTICE in first rate seaside resort Average cash receipts £1 200 p a Panel 640 Good house 2 reception 4 bedrooms maid's room 3 Professional rooms garage and garden. To rent—Premium—2 years purchase—No 1058

**WORCESTERSHIRE**—Very old-established district Cash receipts £800 p a Panel opponent 5 miles Attractive house 3 garage and large garden Good sport Premium—Practice—£1 400—No 1097

**DERBYSHIRE**—Increasing Private and Panel PRACTICE in well known Spa Cash receipts approximately £700 Panel 200 Good ground floor flat Rent £50 p a Premium—best offer—No 1057

**NORTH WALES SEASIDE RESORT**—PARTNERSHIP (after preliminary Assistantship) in good class Practice Cash receipts last year £4 000 Panel 1 050 and appointments £600 p a Incoming man should have good degrees and Hospital experience Probable appointment to local Hospital Salary during Assistantship £400 p a plus £40 car allowance and rooms overlooking sea Premium—1 share—2 years purchase Increase to 1 share later—No 1096

**EAST COAST**—PARTNERSHIP (after preliminary Assistantship) in middle and better working-class Practice in large seaport town Cash receipts £3 800 p a Panel 2 600 Choice of suitable house Premium—1/4 or 1/3rd share—2 years purchase—No 1076

**MANCHESTER**—Sound old-established mixed Panel and Private PRACTICE in industrial district Cash receipts last year £2 200 Panel 2 230 Good house reception room 4 bedrooms, 2 Professional rooms small garden Rent £40 p a Premium—best offer—No 1084

**AUSTRALIA**—Unopposed Country PRACTICE in North West Victoria Income £1 450 p a Suitable house to rent Premium—25% of gross cash takings for two years Furniture (household) £125 cash—No 1091

**MANCHESTER**—Well established middle-class PRACTICE in pleasant suburb Cash receipts last year £1 225 Panel 760 Scope Nice detached house 5 bedrooms 3 reception rooms garage and large garden Premium—best offer—No 968

**NEAR BUNTON**—Old established PRACTICE capable of great increase Cash receipts last year £740 (increasing) Panel 862 Excellent house, 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and good garden Premium—Practice and house £1 700—No 969

**SHROPSHIRE**—Old established Unopposed Country PRACTICE Cash receipts last year £688 Panel 450 Modern house 2 reception 5 bedrooms 3 Professional rooms garage and large garden Electric light Rent £80 p a Premium—best offer—No 1086

**NORTH EAST COAST**—Middle-class (non Panel) PRACTICE Cash receipts £1 100 p a Rent of surgery premises £26 p a Prem—£800—No 1080

**MIDLANDS—MEDICAL WOMAN'S PRACTICE** in large City Area cash receipts £645 p a Panel 350 Scope for increase Good house with garage and garden to rent Premium—best offer

**NR MANCHESTER**—Mixed class PRACTICE £500/£550 p a Panel about 400 Good house 3 Rent £55 p a Premium—best offer for quick sale—No 1103

**CENTRAL WALES**—Very old established unopposed Country PRACTICE in present han returns about £6 bedrooms 3 garden Price

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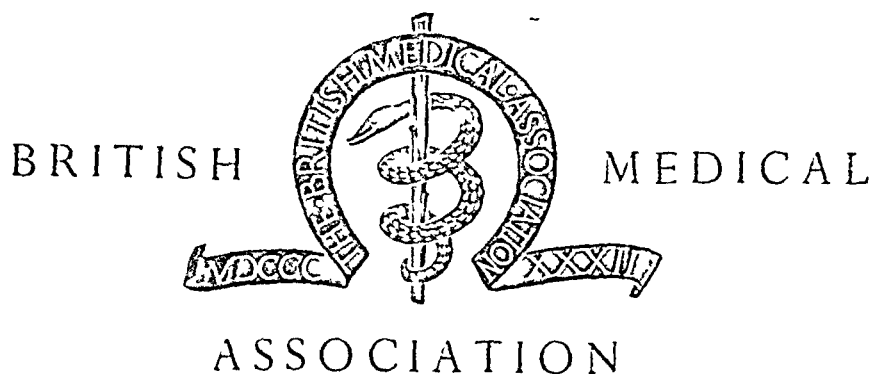
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JOURNAL OF THE



SATURDAY APRIL 23 1938

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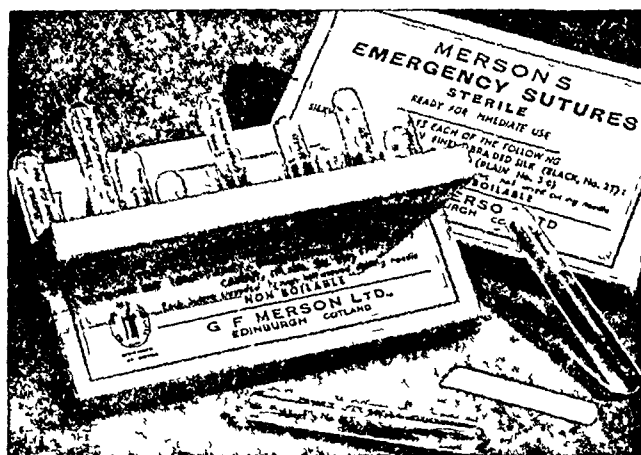
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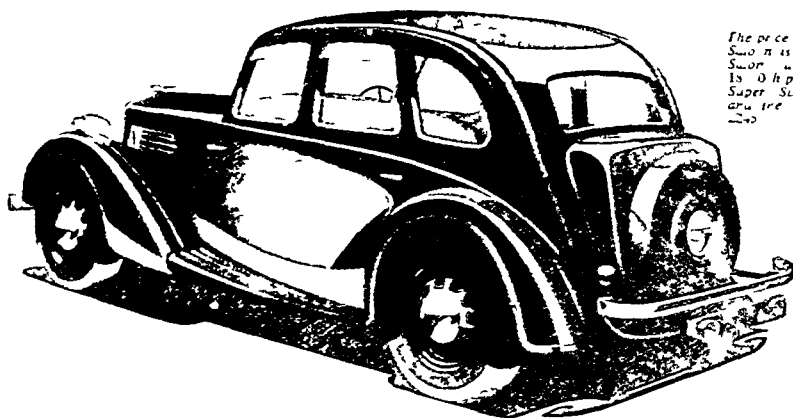
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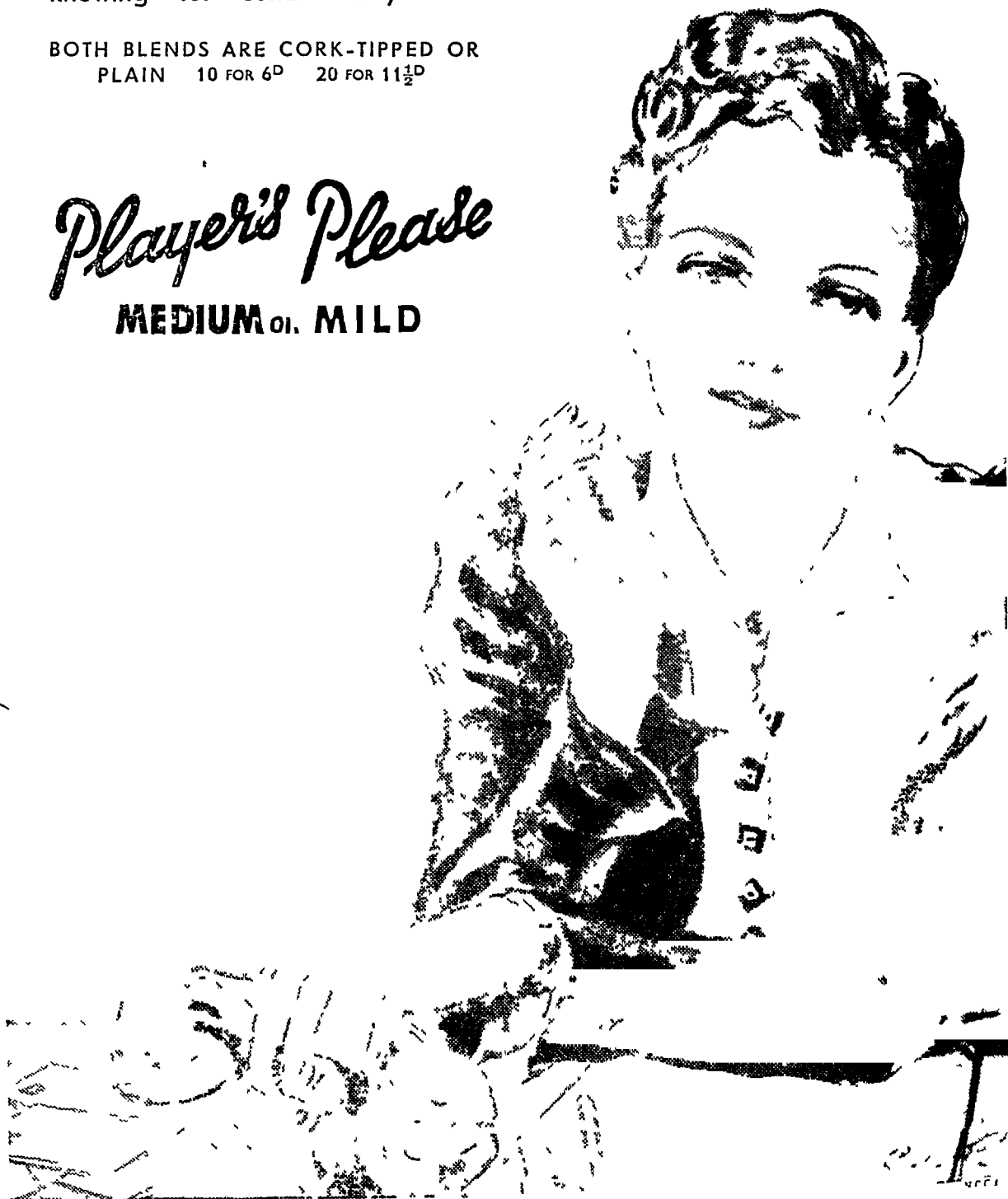
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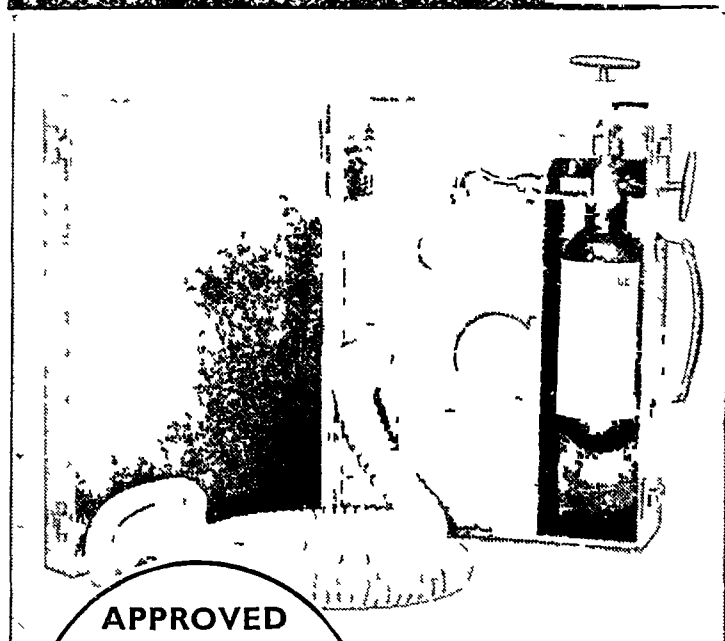
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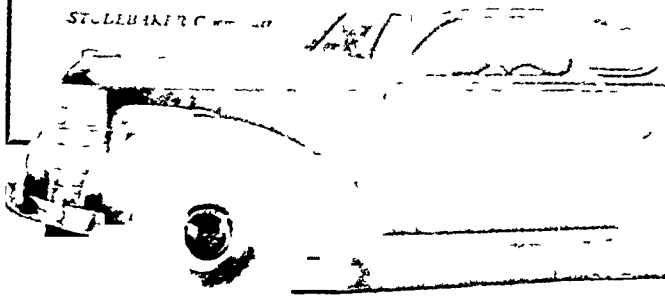
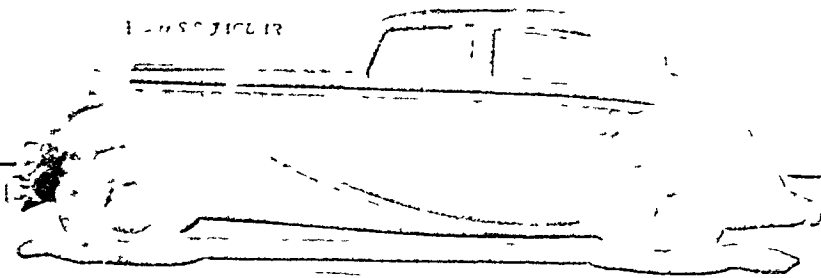
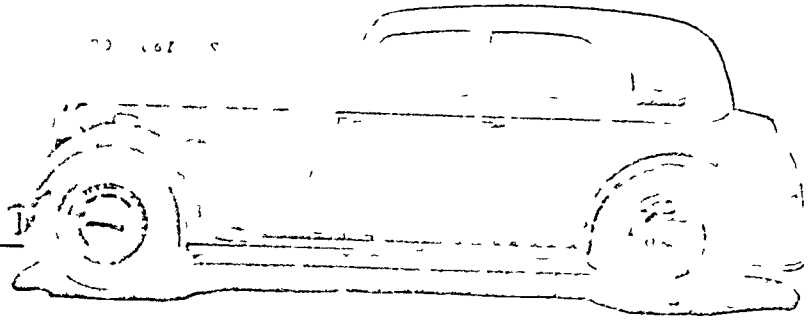
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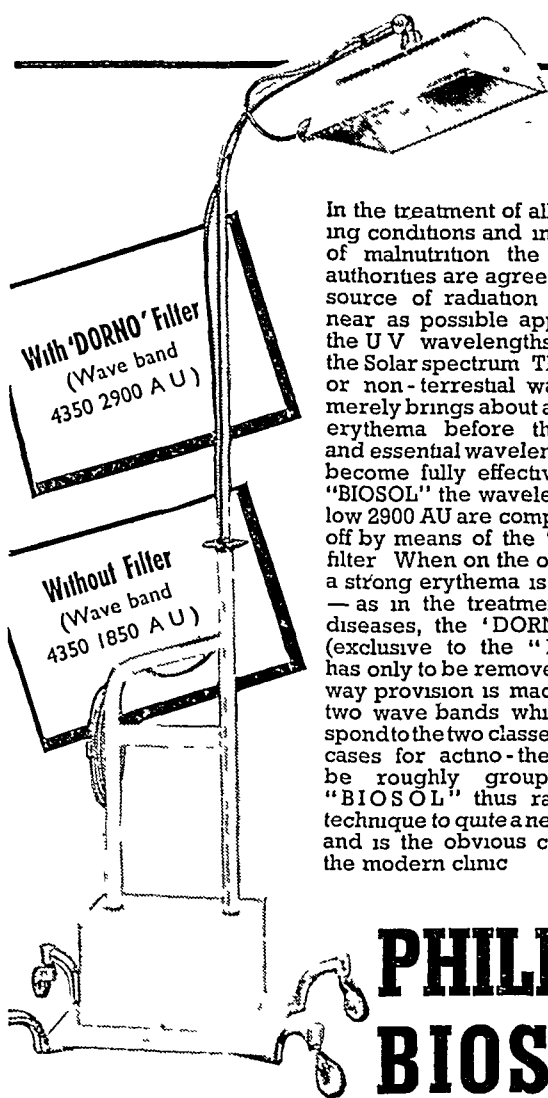
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throughout the country after  
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**C**LINICAL TESTS recently conducted all over the country have led physicians to take a keen interest in Kao—a blend of soluble carbohydrate used primarily as a milk modifier.

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	<u>100.0%</u>

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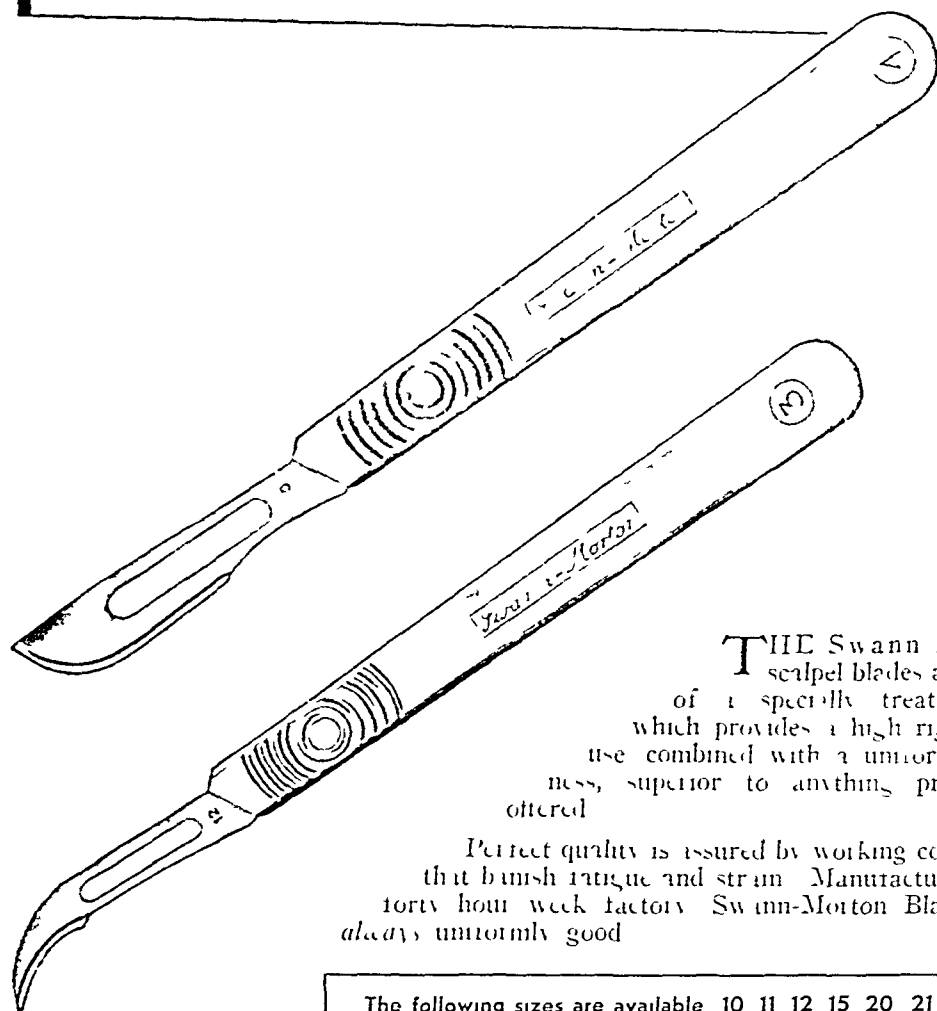
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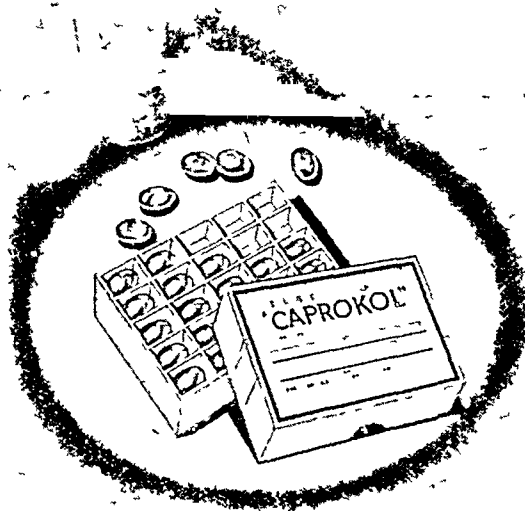
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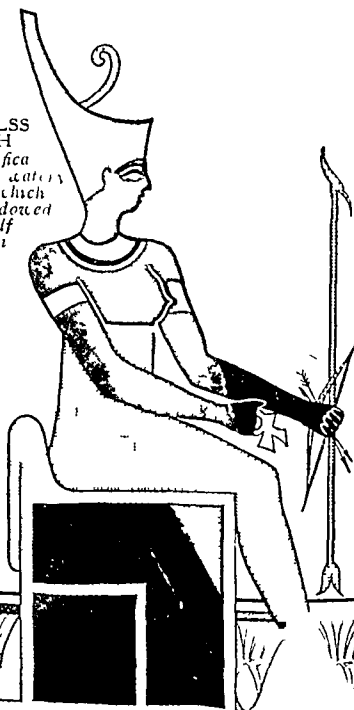
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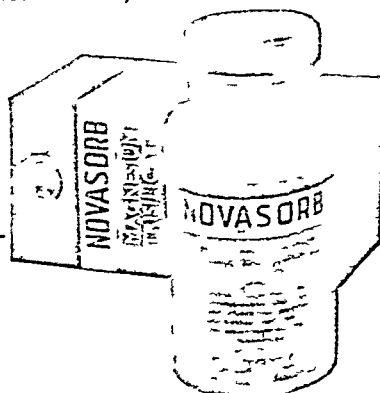
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3rd March, 1938

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It may be of interest to you to learn that KAYLENE-OL is an admirable prophylactic for the dysenteries and other intestinal infections common in hot countries. I invariably prescribe it to patients who are going for a holiday in the countries around the Mediterranean littoral, or pleasure-cruising

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**Method of Application**—Wherever possible the ointment should be gently rubbed into the skin until its colour disappears. Where rubbing is inadmissible it may be liberally applied under a light loose bandage. Tight and air excluding bandages should never be employed

Samples sent to Medical practitioners on request  
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The proper insalivation of food is held by many physiologists to be an important factor in digestion on account of the action of ptyalin in partially converting starch.

For this reason they consider that the normal diet should include a proportion of hard, dry foods, which demand thorough mastication and thus induce copious salivation.

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# Convalescence

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Antagonises the action of Adrenaline

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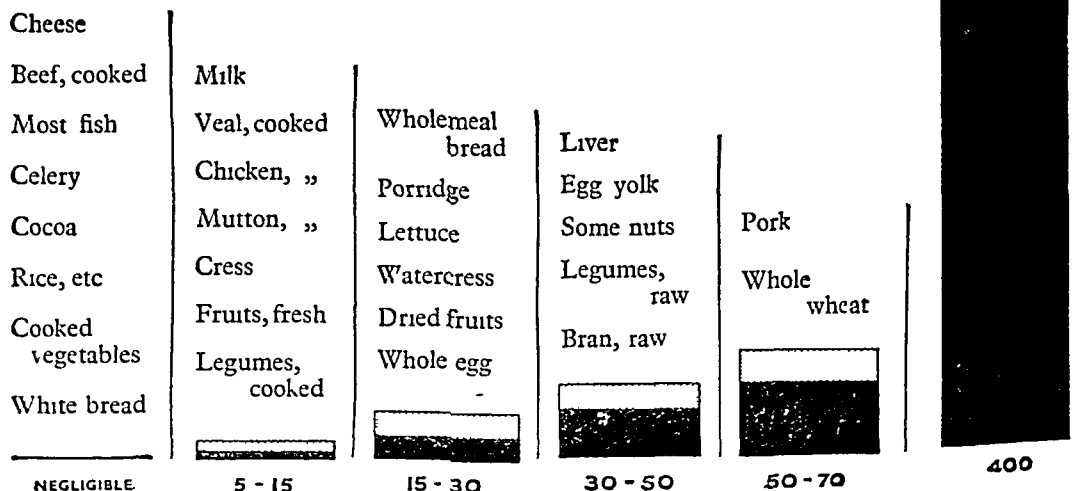
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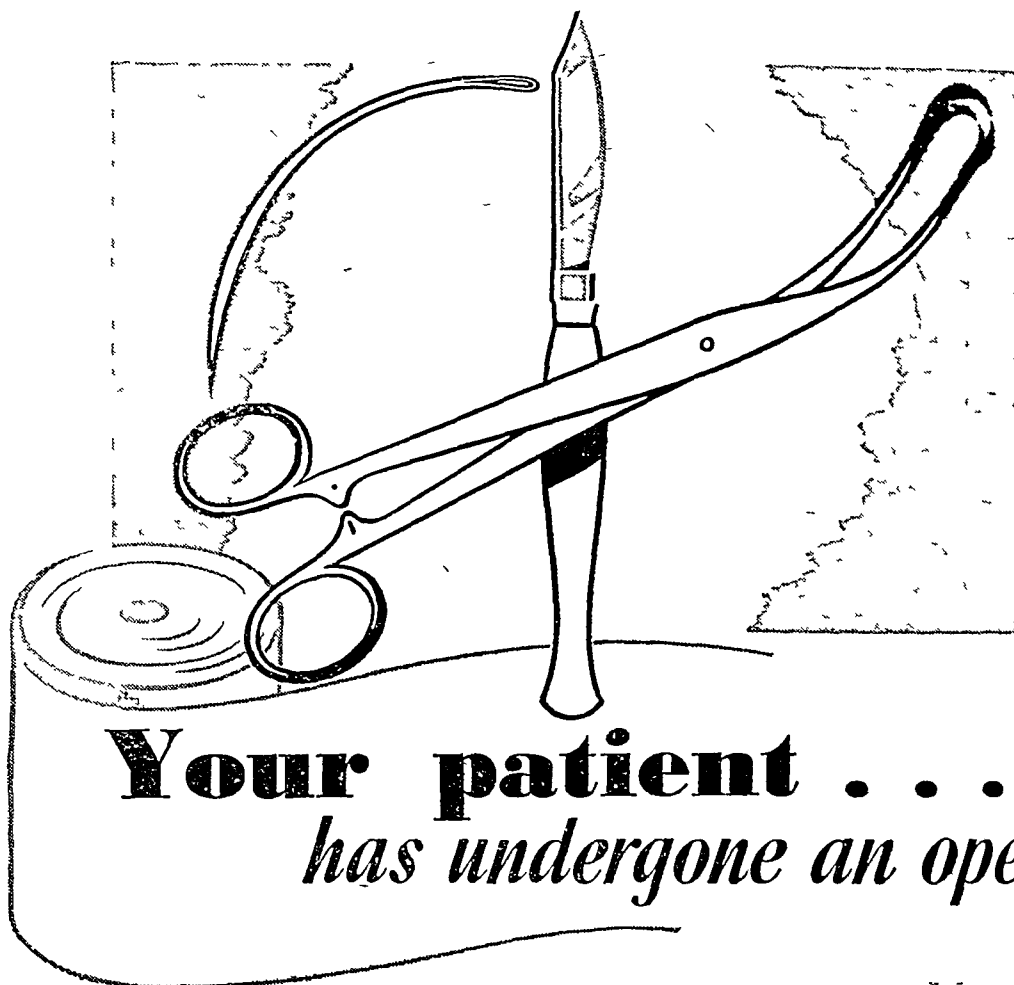
● Taka-Diastase is supplied as powder, tablets or liquid. Tablets are also available containing Taka-Diastase with pepsin, pancreatin or strychnine. It is also obtainable as an elixir with bismuth, mucosinica and hydrocyanic acid. Further particulars will be sent on request.

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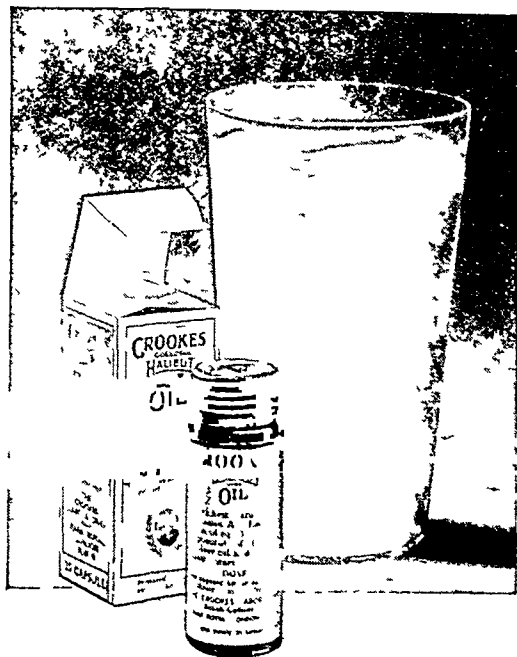
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Milk is one of the richest dietary sources of those important minerals Calcium and Phosphorus. The part played by these elements in promoting the sound growth of bones and teeth and in giving a healthy tone to muscles, nerves and capillaries, is well known. But it is also known that Calcium and Phosphorus cannot be fully absorbed where there is a deficiency of vitamin D in the diet. Milk, especially winter milk is, in common with most foods, a comparatively poor source of Vitamin D. To derive the full benefit from the glass of milk therefore a capsule of Crookes Halibut Oil—a reliable and carefully standardised preparation—should be taken also. This will ensure that the valuable mineral constituents of the milk—the constituents that give it a peculiar character as a health food shall be made available to the body.

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DOSE: Half to a Spoonful  
In 5 10 22 40 and 90 oz bottles



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## THE PLACE OF BRAN IN THE TREATMENT OF COMMON CONSTIPATION

WHEN dealing with a case of common constipation traceable to a deficiency of "bulk" in the diet, the first thought is naturally "How can the daily intake of bulk most conveniently be increased?"

Fruit and vegetables, of course, supply a partial answer to the problem — but it is not infrequently found that these foods alone are not a sufficient corrective unless eaten in unappetisingly large quantities

For this reason many nutritional authorities today advise giving prepared wheat bran in the pleasant form of Kellogg's All-Bran

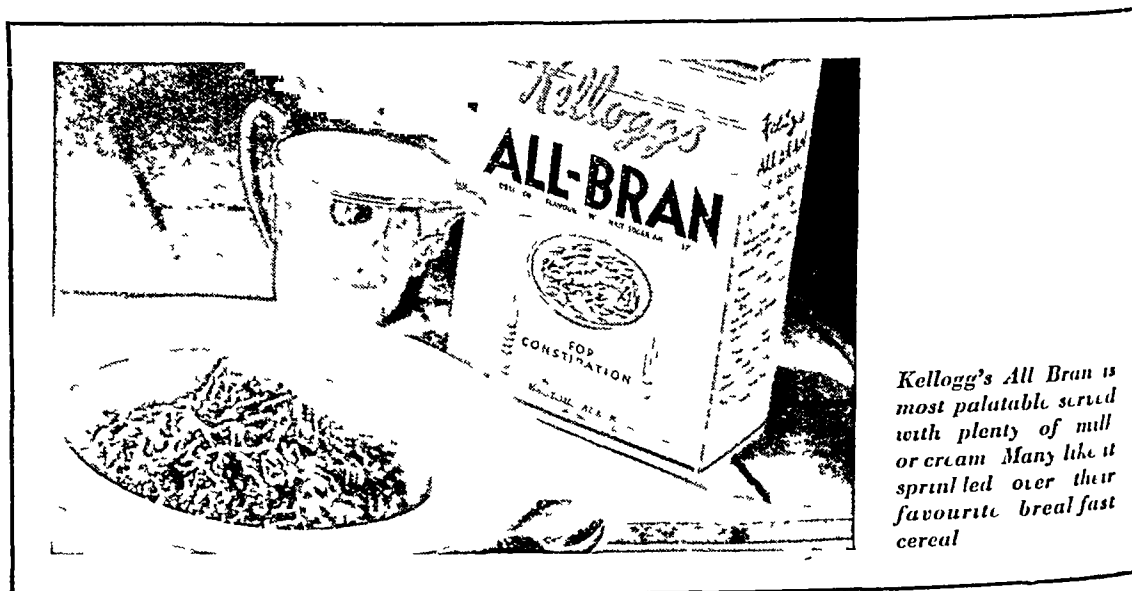
### *An attractively crisp breakfast cereal*

All-Bran is an attractively crisp cereal which most patients find a pleasant addition to their normal breakfast menu. The fibrous bulk in All-Bran is of the same type as that derived from vegetables and fruit, but has the advantage of being less easily broken down during digestion, and its action is therefore more effective and

thorough. All-Bran is, moreover, an excellent source of both Vitamin B and iron, which add greatly to its dietetic value.

All-Bran is intended to be eaten daily, like an ordinary breakfast cereal. The great value of All-Bran is that it absorbs water like a sponge. This water-softened mass gently but effectively aids elimination. Eaten regularly, it promotes a thorough evacuation of the bowel-contents in a natural manner that gives real relief and freedom from strain.

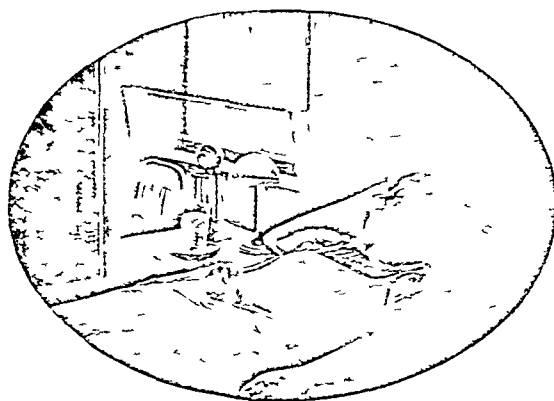
All-Bran may with advantage be prescribed in all cases where additional bulk in the diet is indicated. It may be eaten with milk or cream or cooked into scones, bread, etc. It may also be sprinkled over salads or other foods. To assure maximum effectiveness plenty of fluid should be taken, preferably between meals. All-Bran is obtainable from all reliable grocers. A packet will be sent free on request to any qualified practitioner. Inquiries should be addressed to Kellogg Company of Great Britain Ltd, Stretford, Manchester.



*Kellogg's All Bran is most palatable served with plenty of milk or cream. Many like it sprinkled over their favourite breakfast cereal.*

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*Pharmaceutical and Biological Products*



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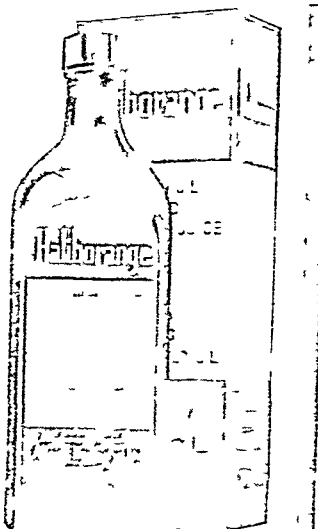
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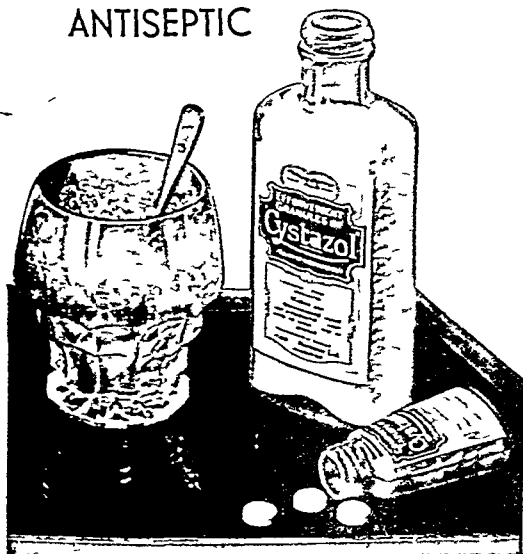
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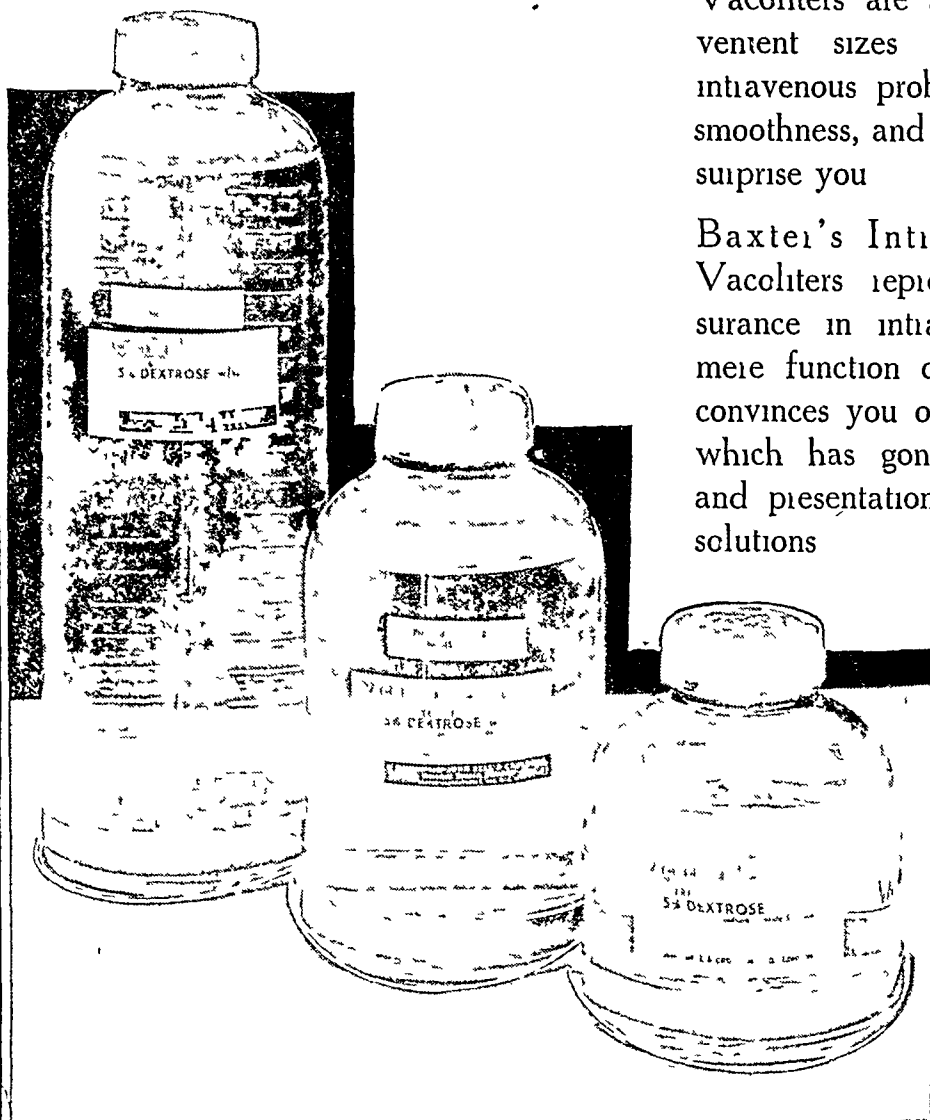
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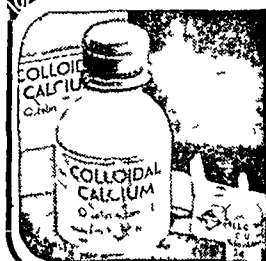
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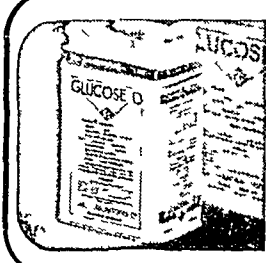
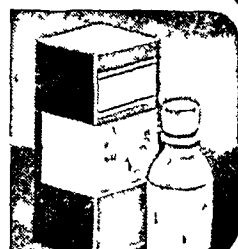
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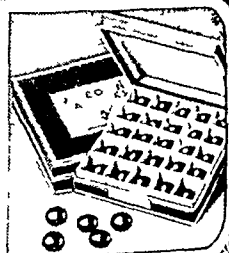


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## SOME PROBLEMS IN PSORIASIS\*

BY

JOHN T. INGRAM, M.D., F.R.C.P.

*Physician in Charge of the Skin Department The General Infirmary at Leeds*

We have perhaps been too ready to admit that psoriasis is an incurable disease of unknown aetiology and to console ourselves with the suggestion that it only affects the healthy. I doubt if any of these statements are true. Whether they are true or not it is a fact that psoriasis, one of the commonest of skin affections, imposes on the sufferer a burden which only too often he carries through life and which is readily understood and implied by the term European lepra, its name in olden times. The disorder merits our constant attention and untiring effort in its relief and it is obviously fatuous to dismiss it as incurable when we all know that if the patient can be transferred to a hot and sunny climate the psoriasis spontaneously disappears.

In considering some of the problems associated with this subject and in particular problems of treatment I must pass over the ordinary and accepted facts. I would however like first to deal with one or two points which seem to me to merit attention. We are all very familiar with the silvery scaling as a clinical feature of psoriasis and with the characteristic distribution on elbows, scalp, knees and extensor surfaces. It so happens however that many cases of psoriasis come to us for the first time having had some treatment with ointment which has removed most of the scaling and upon occasion psoriasis does affect other than the typical sites. Patients with a recent eruption on an atypical site may not mention or may not associate it with old-standing chronic lesions on typical areas which may thus be overlooked.

More important than the silvery scaling is in my opinion the colour of psoriasis which is an admixture of red and brown—something approaching salmon red—and the demarcation of the lesions themselves. No matter what variation the eruption of psoriasis may take these two features are fairly constant. There are only two or three other common scaling erythemata which appear as generalized eruptions—namely seborrhoeic dermatoses, pityriasis rosea, and squamous eczematous eruptions—and none of them presents those two characteristics. It is therefore quite easy to make a diagnosis of psoriasis in the vast majority of cases even in the absence of the typical scaling and the typical sites.

### Problems in Diagnosis

Though psoriasis is commonly symptomless the majority of patients if questioned will admit to a certain amount of itching particularly when they are warm or are in bed. In a proportion of cases probably something approaching

30 per cent itching may be very severe. This feature would seem to depend largely on the temperament and nerves which make up the subject rather than the psoriasis itself except in relation to psoriasis of the perineum and various mixed reactions to which I will refer later.

Attention must be drawn to the difficulties in diagnosing psoriasis when it involves certain particular sites. In the majority of cases psoriasis will exist elsewhere than upon the atypical sites and the diagnosis will be clear out in rare instances limited sites alone may be involved and may cause some difficulty. Sometimes a patient not associating an old chronic eruption on elbows and knees with a recent affection of the face or perineum may not mention the chronic trouble thus unintentionally misleading the doctor.

**Scalp**—Commonly psoriasis of the scalp is more readily diagnosed by palpation than by inspection. The eruption consisting of well demarcated thickly scaling lesions feels like a miniature mountain range and quite unlike any other scalp affection. Occasionally however psoriasis involves the whole scalp in which case there is a diffuse scaling erythema which may only with difficulty be differentiated from a simple scurf. Careful examination may disclose at the hair margins the colour and characteristic demarcation of the eruption but this may be absent. If psoriasis elsewhere there is no question but that such a condition would also be psoriasis but should the eruption be limited to the scalp then difficulties may arise. I think it is quite wise to assume that any chronic dry scaling scurfiness of the scalp which does not readily respond to ordinary anti-seborrhoeic measures such as salicylic and salicylic ointment or perchloride and resorcin lotion and spirit shampoos is likely to be psoriasis or at all events may respond to anti-psoriatic treatment.

**Face**—Contrary to most teaching and most textbooks it is my experience that psoriasis of the face is very common. Whatever the explanation of this may be and whether or not it is a peculiarity of the district, I never have the slightest difficulty in producing cases of facial psoriasis to demonstrate to students. It is wise to bear this in mind for it has not been uncommon in the past for practitioners to console their patients by saying that the affection never involves the face. Psoriasis of the face rarely suggests that diagnosis to the uninitiated. I commonly have the appearance of seborrhoeic dermatitis or of lupus erythematosus. Hardly ever does one see the typical heaped silvery scaling even in cases which have received no ointment therapy. The colour and the demarcation of the lesions are not always present but I have never to my knowledge seen psoriasis of the face without its occurrence elsewhere.

\* A lecture delivered to the Scunthorpe Division of the British Medical Association on November 3, 1937.

*Flexures*—Psoriasis affecting axillae, perineum, and under the breasts is not very uncommon, especially in seborrhoeic subjects. It is never covered with scales, but merely presents the salmon-red demarcated plaques which sometimes become slightly eczematous and moist or fissured. Psoriasis of these sites is usually very irritable, and particularly in the perineum, it may exist with little psoriasis elsewhere. The use of strong applications in these sites is limited, and this affords one of the occasions when I think it justifiable to employ x rays for psoriasis, the response as a rule being good. With psoriasis of the perineum it is most important to exclude any local irritant factors, particularly sugar in the urine, as a provocative cause of the eruption. In connexion with this one may mention psoriasis of the glans penis. Here the affection shows no scaling, and the red, well-demarcated thickened plaques can easily be confused with the so-called psoriasiform carcinoma, an intra-epidermal non-penetrating growth. It may be quite impossible to differentiate such a carcinoma from psoriasis clinically until there is evidence of psoriasis elsewhere. Even histological examination may present considerable difficulties to the expert.

*Palms*—Discrete nummular psoriasis of palms and soles very closely simulates a secondary syphilitic eruption of these sites. There is the same sense of infiltration, the same colour, and both may be associated with a widespread eruption and may have followed a throat infection. Examination of lesions elsewhere on the body, however, usually makes the diagnosis clear.

*Nails*—I think it is quite impossible to diagnose psoriasis of the nails unless there is evidence of psoriasis on other parts of the body. Any dystrophy or a ringworm or other infection of the nails may exactly simulate a psoriatic change. Pitting and distortion, thickening and opacities, and even heaping up of the nail-bed may occur in any of these states, but the pin-point pitting and the heaping up of the nail-bed causing eversion of the distal end of the nail are rather more characteristic of psoriasis than of other affections. Psoriasis almost invariably affects all nails of the hands and feet, as do most dystrophies, but infection, as in ringworm, more frequently involves a limited number of nails, no matter how long the infection may have existed. Unless the eruption exists elsewhere the most careful search for fungus should be made by nail-scraping and examination in liquor potassae. Since the disturbance which produces a psoriasis of the nails originates in the nail matrix it is obvious that local applications cannot be of much service. While internal remedies are of some limited value, x rays are undoubtedly of much use in treatment.

### Mixed Psoriatic Reactions

Though generally occurring as a simple and pure reaction, psoriasis may upon occasion cross with other reactions such as the toxic erythematous, seborrhoeic, lichenoid, and eczematoid. It is my experience that such mixed reactions nearly always form a type of psoriasis very difficult to treat and one that tends readily to relapse.

### TOXIC ERYTHEMATOUS PSORIASIS

This type of reaction is often widespread, it particularly affects the extremities, including the hands and feet, face and ears, and on casual examination suggests an ordinary toxic erythema of the multiforme type. Careful examination reveals that the eruption varies from a variety of lesion which appears to be pure and simple toxic erythema in everything except its persistence to lesions which, commonly occurring on the typical psoriatic sites, are true

psoriasis with the characteristic silvery scale and demarcation. These cases often follow some acute infective process, particularly an infection of the upper respiratory tract. Unlike an ordinary toxic reaction, they persist until taken seriously in hand, and even then are most difficult to treat. The lesions on the extremities often simulate those of an acute lupus erythematosus, and it is interesting that some of these appear to be helped by gold therapy. These cases should always be treated in bed, and should receive mild local applications. A search for any focus of infection which may have been responsible for the eruption should be made, and if possible it should be eradicated.

### SEBORRHOEIC PSORIASIS

This type of mixed reaction is more easily recognized, and has received more attention in the literature, particularly the French. It would seem that in these cases we are dealing with patients who have a tendency to react by psoriasis and in whom the provocative cause of the eruption has been a seborrhoeic outbreak. Though psoriasis commonly occurs on the usual sites it also in these cases involves the typical seborrhoeic sites, particularly the head, mid-chest and back, axillae, perineum and flexures, palms, and soles. Such cases are not particularly resistant to treatment, and should be attacked along the usual lines. Upon occasion, however, one meets with lesions of the so-called "seborrhoeid" type—usually few in number, well demarcated, and lichenified—which do not develop the characteristic scaling of psoriasis and which may be most resistant to treatment.

### LICHENOID PSORIASIS

This type is in my opinion a cross reaction between psoriasis and lichen planus. Section of a lesion histologically will show parts with the characteristics of psoriasis and other parts with the characteristics of lichen planus. The sites tend rather to be those of lichen planus—the inner thighs, the lower legs and forearms, both flexor and extensor—but this form of psoriasis is in my experience one of the most difficult with which to deal. It is, I believe, very uncommon, and in most cases may with confidence be diagnosed as one or other of the two affections at different times, but long observation convinces me that the reaction is really one of the mixed type. Treatment should, in my opinion, be essentially directed towards the psoriatic element, but I have sometimes found it quite impossible to clear these cases.

### ECZEMATOID PSORIASIS

It is natural that psoriasis, if it is irritable, should become eczematized by rubbing and scratching, and this does sometimes happen. The eczematization is usually of the chronic type—lichenification—and the superimposition of the lichenification on the psoriasis is fairly obvious. The combination does not, however, present any difficulties in treatment so long as some internal sedative tonic measures are adopted and local treatment at first is mild. I believe, however, that what we have in recent years been describing as "pustular psoriasis" is in fact a mixed psoriasis and acute eczematous reaction. This is a much more complicated and difficult problem, and calls for very careful approach and treatment.

In the acute cases the ordinary psoriatic eruption on trunk and limbs will on close examination disclose in places groups of minute pin-head sized lakes of sterile pus, but the feature is most in evidence on the hands and feet, where it is rather in the nature of a pustular pemphigus—some lesions being vesicular and some pustular, some pin-head-sized and others larger, but the walls

associated with and merging into a scaling erythema and the pompholyx lesions healing to leave brown macules which eventually clear without scarring.

In the chronic cases the eczematous element which is still occasionally vesicular but mostly pustular tends to consist of more uniformly pin head sized lakes to be confined to palms and soles and more particularly to involve thenar and hypothenar eminences. There is often some scaling erythema in these sites but quite half the cases show no typical psoriasis elsewhere and it is still a matter of dispute whether they are all examples of the same type of reaction and whether they are related to psoriasis or not. We may for the present call them persistent pustular pompholyx but I believe they are a mixed psoriasis and eczema reaction. The cause of such a reaction may upon occasion be too vigorous local treatment but more often it is the reaction to some internal disturbance. In a proportion of cases—perhaps 30 per cent—it appears to be the toxæmia from an acute or chronic infection usually of the upper respiratory tract particularly tonsillitis and gingivitis. The pustular psoriatic reactions from acute infection in my experience resolve readily with rest in bed attention to the acute infection and mild anti-psoriatic measures. The chronic reactions which often affect only palms and soles are not greatly or permanently influenced by local treatment—which again must be mild—but often clear with removal of a chronic infection if such can be found as in the tonsils. A number of these chronic cases however are I believe dependent upon constitutional disturbances other than toxic such as nervous and endocrine influences and may be quite incurable.

#### Ætiological Factors in Psoriasis

There is no evidence that psoriasis is an infection and very little I think to support the view recently expressed in Germany that it is due to a disturbance of fat metabolism. It is as true to say that we do not know the cause of psoriasis as it is to say that we do not know the cause of any other constitutional reaction—for example eczema or dyspepsia. We know in the first place that the tendency to psoriasis is often inherited; we also know that it disappears during severe illnesses from organic disease or with protein shock therapy. It is more important to remember that it tends to be provoked by minor maladies such as the acute specific fevers, tonsillitis, influenza or colds in the head. Pregnancy and nervous shock are other common causes of acute outbreaks of psoriasis while the more chronic states of physical and nervous debility as well as the vague influences of puberty and the menopause regularly determine the onset of exacerbations of this affection. It is very rarely that there is not some obvious precipitating cause for psoriasis but once provoked the reaction tends to persist like most skin reactions. When the patient is in the psoriatic state external injury will also bring out psoriasis at the site of injury.

All these features are characteristic of constitutional reactions in general and to them may be added the very definite susceptibility of psoriasis to suggestion and to climatic influences particularly to sunlight. I repeatedly observe the influence of suggestion in these cases and may cite as a good example a very extensive case approximating in part to the pustular type in a patient who had been affected for nine months. Ten days after I saw him I arranged to admit him to hospital as being valuable for teaching purposes and requested his doctor to make no alteration in treatment. On admission the patient was

practically clear and attributed his improvement to the ointment which he imagined I had prescribed. The importance of this aspect lies in the fact that one may obviously do harm by telling a patient with psoriasis that his condition is incurable and that treatment is useless. The susceptibility to climatic influences is more important for it is well known that in very warm and sunny climates psoriasis will disappear and will not reappear so long as the patient remains in that climate. It is obviously absurd therefore to suggest that treatment is useless.

#### Treatment of Psoriasis

Treatment of any constitutional disorder must take seriously into consideration the make up of the patient and his environment. The highest degree of physical and mental health is desirable and should be aimed at and excesses and variations from the normal should as far as possible be avoided. All this is very true of psoriasis but the need for the eradication of toxic foci is especially about the upper respiratory tract must be emphasized. These general aspects of treatment I will leave and will now deal with the particular.

In Leeds we have two routine lines of treatment sometimes instituted separately and sometimes in combination. The first is by tar baths and sunlight and this is the more cleanly and pleasant line of attack. A tar bath merely consists of the addition of 4 oz. to 8 oz. of liq. picis carb. to thirty gallons of water in which the patient soaks for ten minutes or a quarter of an hour. This is immediately followed by an exposure of the whole body to the ultra-violet lamp starting usually with a dosage of one minute at three feet distance to the front and the back. The dosage is very gradually increased usually by about a minute a week and rarely exceeds a maximum of four or five minutes. The addition of a little heat therapy as from a sollux lamp at the same time probably increases the efficiency of the treatment and certainly adds considerably to the comfort. With this treatment patients are advised to use a small amount of the following ointment at night time to remove scale.

R.	Acid salicylic	gr. v
	Hydragr. ammon	℥. i
	Liq. picis carb.	℥. i
	Paraff. moll.	ad. s. j.

It is in my opinion important that this treatment should be regular and be undertaken daily. In the majority of cases the psoriasis is cleared up in the matter of a few weeks sometimes in less than two weeks.

The second line of treatment is by cignolin (dioxanthranol, a synthetic chrysarobin substitute). Here all the psoriasis present, from head to feet, is thoroughly inunctioned twice daily with the following ointment.

R.	Cignolin	gr. j.
	Acid salicylic	gr. v
	Hydragr. ammon	℥. i
	Liq. picis carb.	℥. i
	Paraff. moll.	ad. s. j.

This ointment rapidly deteriorates and must be dispensed afresh every few days. My routine is to freshen it afresh every third day increasing the amount of the cignolin by 1 grain each time up to 4 grains or so depending on 6 grains depending on the reaction.

This treatment is most rapidly and thoroughly effective when the patient is kept at rest in bed or at least in a dressing gown existence so that he is constantly soaked in the ointment. Even baths may be avoided with advantage or be taken only at intervals of four or five days. The effect of treatment is to produce a reddening and

discoloration of the skin from the cignolin, the colour being a lilac tint, the garments in contact with the ointment are also lightly stained. If the patient cannot be confined to his room then the ointment therapy is applied thoroughly at night and he has a bath in the morning. Under ideal conditions this method will usually clear up an attack of psoriasis in two to three weeks. If this treatment is combined with light therapy the patient has a morning bath, followed by exposure to the ultra-violet lamp and by theunction.

So much for the particular treatment of the attack of psoriasis. More important than this, however, is the further treatment directed towards preventing relapses, for this is of greater benefit to the chronic sufferer than the temporary clearance of the eruption. In my experience it is of the utmost value for psoriatics to have a daily exposure to the ultra-violet lamp after the ordinary toilet bath throughout the year, or at least from September to May, and it is obviously most desirable that the patient should himself possess a lamp in his own home, so that the treatment may be added to his ordinary toilet routine without imposing any serious burden upon him. A small type of lamp is usually sufficient for this purpose, and though the cost is moderately high the expenditure is, it seems to me, a wise one in view of the fact that we are dealing with a malady which is likely to be an affliction for many years if not for life. The effect of this addition to the toilet routine is often to keep the patient completely clear of psoriasis. Even if this ideal is not attained the state of affairs is so vastly improved that life has an entirely different aspect for the chronic sufferer. It is undoubtedly the next best thing to being able to live in those climates where psoriasis does not exist.

If for reasons of expense or other circumstances this routine cannot be adopted an occasional clearance by a course of cignolin treatment, such as that indicated, is the most that can be done. In very obstinate cases it is sometimes helpful to give mild protein-shock therapy such as whole-blood injections, or intravenous injections of TAB, ten to twenty millions, on two or three occasions, at intervals of about five days. In some hands the use of intravenous gold injections is said to have been beneficial, but I have found it only occasionally of value. I very commonly, however, put patients with psoriasis on 1/8 grain of luminal, twice daily, after food, for long periods at a time, and believe that it does much to reduce the reactive tendency of the skin.

There are two further problems which these patients often put to the physician. They first ask, "Can you cure me, doctor?" to which I think the appropriate reply is, "No, but you can cure yourself by understanding the nature of the ill and the various remedies at your disposal." The next question is, "Should I marry?" and my own view is that psoriasis should not be regarded as a bar to matrimony, since it need not necessarily be passed on to the offspring, and, if passed on, can be adequately treated.

The Central Association for Mental Welfare has arranged a course for persons engaged in the training of mental defectives in occupation centres, institutions, or mental hospitals and for home teachers, to be held in London from July 4 to 23, also a course for officers of local authorities and local associations for mental welfare engaged in the ascertainment and supervision of defectives, during the same period. Full particulars of both courses may be obtained from the educational secretary, Central Association for Mental Welfare, 24, Buckingham Palace Road, London, SW1.

## THE STATE OF THE HEART IN GALL-BLADDER DISEASE

### A PERSONAL INVESTIGATION

BY

**SYDNEY M. LAIRD, B.Sc., M.D., F.R.C.P.S., D.P.H.**

*Assistant V.D. Officer, City of Liverpool formerly Assistant Resident Medical Officer, Mill Road Infirmary, Liverpool*

In considering this subject it is unfortunate that space does not permit of even a survey of the literature, but all the references are appended in the bibliography and the conclusions arrived at from their study are here presented.

1 Myocardial degeneration is not infrequently found in cases of cholecystitis and/or cholelithiasis.

2 The clinical manifestations of gall bladder disease may closely simulate disease of the heart particularly coronary artery disease, and the reverse is equally true.

3 The cardiac condition has been benefited by surgical treatment of the gall-bladder lesion in a proportion of the cases. In assessing these cases it is difficult to decide whether to attribute this amelioration of the cardiac manifestations to the removal of the noxious influence of a pathological gall-bladder or to the beneficial effect of the period of enforced rest in bed, a measure which must always favour a return to normal on the part of the myocardium.

4 Although a few examples of infective endocarditis occurring in cases of gall bladder infection have been reported, there has been no unequivocal proof that the endocarditis was secondary to the invasion of the gall bladder with pathogenic organisms and any murmurs developing during an attack of cholecystitis are to be regarded as belonging to the so-called 'functional' class, dependent upon dilatation of the chambers of the heart, and thus, indirectly, on the state of the myocardium.

5 Associated factors—for example, obesity, age, etc.—must be considered in assessing the possibility of any direct relation between gall-bladder lesions and heart disease.

6 The theory of submural streptococcal infection arising in the gall bladder substance and thence spreading to the myocardium via the lymphatic and blood channels, as suggested by Rosenow and supported by D. P. D. Wilkie and others, constitutes the most generally accepted explanation of the relation between lesions of the gall bladder and heart.

7 There is some evidence to suggest an increased incidence of lesions of the coronary arteries in the subjects of gall bladder disease.

8 The operative treatment of gall bladder lesion by cholecystectomy where possible, should not be delayed long and is not contraindicated by the presence of a cardiac lesion provided the state of the heart is compatible with the patient surviving the operation.

### The Present Investigation

This investigation is based on a personal study of six to five consecutive cases of gall-bladder disease admitted to the wards of Mill Road Infirmary, Liverpool. Although the study was essentially a clinical one, Graham's cholecystography, electrocardiograms, the urea clearance test, and the Wassermann test were routine measures. In assessment of the condition of the cardiovascular system was arrived at after consideration of the symptoms of cardiac insufficiency, clinical and electrocardiographic findings, and the patient's response to a standard exercise test. The diagnosis of gall bladder disease was based on the symptoms and clinical findings, together with evidence of gall-bladder dysfunction as detected by

cholangiography. In cases in which adequate absorption of orally administered dye from the stomach was in doubt cholangiography was repeated after the intravenous introduction of the radiologically opaque medium.

Operation was advised in the following types of case: (1) Cases with symptomatic clinical and radiological evidence of a pathological gall bladder in these cases slight or moderate myocardial damage was not considered a contraindication to operation. (2) Cases with symptomatic and clinical evidence of myocardial damage which on investigation revealed clinical and/or radiological evidence of a pathological gall bladder. Gross cardiac failure, extreme old age or severe respiratory disease constituted contraindications to operation in both groups of cases. Cholecystectomy under general anaesthesia was the operation of choice. The diagnosis of gall bladder disease was confirmed after operation by macroscopic and microscopic examination of the excised gall bladders. All cases treated by surgery were seen from time to time during convalescence and received full examination at the beginning of the fourth week after operation just before discharge. The patients were followed up the period elapsing between admission to hospital and the follow up examination varying in individual cases from two months to over a year.

#### Analysis of Cases

The series consisted of sixty five cases of disease of the gall bladder and biliary tract. The females numbered fifty eight and the males seven. Fifty of the patients had a clinical cardiac lesion while the remaining fifteen revealed no clinical evidence of a departure from normal in the state of the cardiovascular system. The incidence of cases per decade and the sex distribution are shown in Table I.

TABLE I—Showing the Relationship of Age, Sex and Cardiac Involvement in 65 Cases of Gall bladder Disease

Decade	Cardiac Lesion		No Cardiac Lesion	
	Female	Male	Female	Male
3rd	4	0	1	0
4th	5	1	5	0
5th	13	1	3	0
6th	11	3	3	0
7th	7	1	3	0
8th	3	1	0	0
Total	53	7	15	0

It is common knowledge that obesity is often present in cases of gall bladder disease and this factor was considered of importance as a possible explanation of any myocardial insufficiency in the cases of this series. Of

TABLE II—Showing the Incidence of Obesity and Cardiac Lesions in 65 Cases of Gall bladder Disease

Decade	Obesity and Cardiac Lesion	No Obesity but Cardiac Lesion	Obesity with n Cardiac Lesion	No Obesity or Cardiac Lesion
3rd	2	2	0	1
4th	2	4	0	3
5th	7	7	0	3
6th	5	9	2	1
7th	2	6	2	1
8th	2	2	0	0
Total	20	30	4	11

the sixty five patients twenty four were regarded as obese by estimating such factors as sex, age, height and weight. Table II shows that the incidence of cardiac lesions occurring in cases of gall bladder disease is greater than the incidence of obesity in the same series. This suggests that the obesity if a factor is not the whole explanation of the presence of cardiac lesions in these cases of gall bladder disease.

Fifty cases were followed up or were under observation until death occurred. Operation was performed in

TABLE III—Showing the Condition of the Heart after Operation in 27 Cases in which a Follow up Examination was obtained

Decade	Cardiac Cases with Obesity after Operation			Cardiac Cases without Obesity after Operation		
	Improved	Unchanged	Worse	Improved	Unchanged	Worse
3rd	0	0	1	1	2	0
4th	0	0	0	0	0	0
5th	3	0	3	0	0	1
6th	1	0	1	3	0	1
7th	0	0	0	1	0	2
8th	0	0	0	0	0	1
Total	4	0	5	11	2	5

TABLE IV—Showing the State of the Heart in the Quiescent Stage of Gall bladder Disease in 18 Unoperated Cases in which a Follow up Examination was obtained

Decade	Cardiac Cases with Obesity			Cardiac Cases without Obesity		
	Improved	Unchanged	Worse	Improved	Unchanged	Worse
3rd	0	0	0	0	0	0
4th	0	0	1	1	0	1
5th	0	0	0	0	1	1
6th	1	1	1	0	2	1
7th	0	1	0	0	3	0
8th	0	2	0	0	0	1
Total	1	4	2	1	6	4

forty and thirteen of these had cardiac manifestations. Cholecystectomy was carried out in thirty six cases. In twenty one one had exploration and drainage of the common bile duct and one a case of ulceration of the common bile duct had a cholecysto-duodenostomy performed. The latter two cases of disease of the common bile duct presented no manifestations of heart disease. Twenty eight of the thirty six cases treated by cholecystectomy were completely cured of the symptoms referable to the gall bladder, four cases were improved in this respect and four patients died. Table III and Table IV demonstrate the condition of the heart in twenty seven operated cases and in eighteen unoperated cases respectively of gall bladder disease with cardiac manifestations as determined at the follow up examination. In seven even mild cardiac decompensation was not considered to be a contraindication to operation in this series. The numerical difference between the cases showing improvement after operation and those showing improvement after the subsidence of the acute gall bladder infection but in which operation was not performed assumes significance as the unoperated cases did not necessarily present cardiac manifestations of such severity as to preclude any possibility of amelioration. The presence of obesity

in the operated cases appears to mitigate the chances of cardiac improvement. It is interesting to note that those patients with gall-bladder disease, without obesity, in which the cardiac condition deteriorated after operation were all over 40 years of age. These figures suggest that cholecystectomy provides a satisfactory means of obtaining amelioration of the cardiac manifestations occurring in cases of gall bladder disease and that the presence of such evidence of heart disease in some of these cases at least, does not constitute a contraindication to operation.

The duration of the symptoms of gall-bladder disease in relation to the incidence of associated cardiac lesions was considered worthy of investigation. This point is open to the obvious objection that disease of the gall-bladder may be latent in some cases, but it is difficult to suggest a more satisfactory basis for estimating the duration of the gall bladder lesion. Fifty-six cases of this series had had gall-bladder symptoms for more than six months, and of these cases forty-seven exhibited cardiac manifestations. There were nine cases in which the gall-bladder symptoms had developed within six months of admission to hospital, and of these only one-third had clinical evidence of heart disease—thus suggesting that the longer the disease of the gall-bladder is permitted to exist the greater is the possibility of cardiac manifestations appearing. It must be admitted, however, that this is equivocal evidence. The possibility of sepsis in foci other than the gall-bladder being an aetiological factor in the production of cardiac lesions was considered, and it was found that such foci were at least as frequent in the non-cardiac as in the cardiac group. Coronary thrombosis, diagnosed on clinical and electrocardiographic findings, occurred in eight cases, all of which showed some evidence of gall-bladder dysfunction. Three of these patients were male and five were female, while two cases occurred in the fourth decade, one in the fifth, three in the sixth, one in the seventh, and one in the eighth.

The forty-six cases of gall-bladder disease with cardiac lesions which were followed up were divided up into two groups: one in which the cardiac manifestations were absent on discharge from hospital or at the follow-up examination—that is, "temporary cardiac cases"—and another in which a heart lesion was still detectable on discharge from hospital or at the follow-up examination—that is, "permanent cardiac cases". Nine cases fell into the former group, all of which except one had been subjected to cholecystectomy, while the latter group consisted of thirty-seven cases, of which only eighteen had had surgical treatment. The incidence of obesity in these cases was two in the former group and fourteen in the latter. There were five cases in which the cardiac condition was improved on discharge from hospital but which showed further cardiac damage at the follow-up examination. All five cases have had cholecystectomy performed, three patients were obese and one was myxoedematous. The beneficial effect on the heart of the enforced rest in bed, before and after operation, was probably responsible for the temporary but unsustained amelioration of the cardiac manifestations in these five cases.

It was possible to compare the pre-operative, post-operative and follow-up electrocardiograms in forty cases of the series. This comparison revealed that the electrocardiogram was not in all cases an accurate indication of the state of the myocardium, and on occasion there was difficulty in correlating it with any change which the clinical cardiac manifestations might display. In cases in which coronary artery thrombosis had occurred, however, the electrocardiographic findings confirmed the clinical diagnosis and proved of definite value in prognosis.

The existence of gall-stones was proved at operation in twenty-nine of the forty cases in which operation was performed. Nineteen of these cases had cardiac manifestations, while the remaining ten had no clinical heart lesion. Cholecystitis without gall stones was found in ten of the forty operated cases, and eight of these had cardiac manifestations. These figures suggest that, within the limits of the present investigation, heart lesions occurred more frequently in cases of cholecystitis without gall stones than in cases of cholecystitis in which gall stones were a prominent feature. Jaundice was present in ten cases of this series, seven of them showing evidence of a cardiac lesion. In six of these latter cases the cardiac condition was permanent.

No personal investigation was carried out to determine the incidence of heart lesions in a group of cases in which gall bladder disease was thought to be absent, but the following figures are quoted from the paper by Schwartz and Herman:

*The Percentage of Heart Disease per Decade in 109 Patients Without Cholecystitis, Comparing it with 109 Patients With Cholecystitis*

Decade	Non Gall bladder Cases	Cholecystitis Cases
3rd	20	46.6
4th	8	41.6
5th	41.9	58.6
6th	54.1	79.1
7th	100	100
8th	80	100

The non-gall-bladder cases of Schwartz and Herman were chosen at random from medical cases in identical age groups which were treated in the wards of the hospital. We excluded no cases except those which were cardiac *per se*, as rheumatic fever, subacute and acute endocarditis, and so on."

For comparison the percentage of heart disease per decade in gall-bladder cases in the present series is added, as follows:

Decade	Percentage	Decade	Percentage
3rd	80	6th	82.3
4th	54.5	7th	72.7
5th	82.3	8th	100

It is doubtful whether these groups of cases are really comparable, also, the percentage of heart disease in the non-gall-bladder cases appears very high in the third decade if cases of rheumatic endocarditis were rigidly excluded. Even if the large percentage is accurate for cases without gall-bladder lesions, the proportion of heart lesions in gall-bladder cases is higher in the series of Schwartz and Herman, and even greater in the present series.

### Conclusions

From the preceding analysis of the cases of the present series the following conclusions seem possible:

1. Disease of the gall-bladder was commoner in females than in males in the proportion of 8 to 1.
2. The cases of gall-bladder disease occurred between the third and eighth decades inclusive, and were most frequent in the fifth and sixth decades.
3. The cases of gall-bladder disease often exhibited evidence of a cardiac lesion (77 per cent), and all the males and 74 per cent of the females were affected in this way.
4. Obesity occurred in 37 per cent of cases, and in the incidence of heart disease was greater than that of obesity in this series. It therefore appears that obesity is not the whole explanation of the occurrence of cardiac lesions in cases of gall bladder disease.

5 Foci of sepsis other than in the gall bladder were at least as frequent in the gall bladder cases with normal hearts as in those with evidence of cardiac damage

6 The cardiac lesion was temporary in some cases of gall bladder disease and permanent in others and some of the latter group displayed an unsustained amelioration of the heart condition after operation which was probably due to the beneficial effects of the enforced rest in bed

7 The incidence of heart lesions in cases of gall bladder disease was uninfluenced by the presence of jaundice

8 Coronary artery thrombosis occurred in 12 per cent of cases of gall bladder disease and on occasion may present difficulty in differential diagnosis

9 The electrocardiographic evidence was inconsistent in many cases of myocardial insufficiency when compared with the clinical condition of the patient but was of great value in cases in which coronary artery thrombosis had occurred

10 Cholecystectomy produced a cure of the gall bladder symptoms in 78 per cent. of cases in which this operation was performed and appeared to be a satisfactory measure for obtaining amelioration of the cardiac manifestations occurring in cases of gall bladder disease. The presence of similar heart conditions in cases of gall bladder disease does not constitute a contraindication to cholecystectomy. Fatal pulmonary embolism occurred as a post operative complication in 5 per cent of cases

11 There was some evidence to suggest that the longer disease of the gall bladder is permitted to exist the greater is the possibility of cardiac manifestations making their appearance. The early treatment of gall bladder disease by cholecystectomy thus appears to be indicated

12 From a study of this series of sixty-five cases of gall bladder disease the impression was gained that infection of the gall-bladder was a definite aetiological factor in the production of the myocardial lesions commonly found in these cases and that the presence of obesity though almost certainly a factor in some cases does not always explain the cardiac damage

I have to thank Dr L. Findlay, medical superintendent of Mull Road Infirmary, Liverpool for the many facilities which made this investigation possible and also for permission to publish the results obtained

## BIBLIOGRAPHY

- Akane W. I. Gredley H. and Farr C. E. (1927) *Amer J med Sci* 173 23  
 Babcock R. H. (1909) *J Amer med Ass* 52 1904  
 — (1919) *Ibid* 73 1929  
 Bard L. (1903) *Sem med B Am* 23 117  
 Barker P. S. Wilson F. N. and Collier F. A. (1924) *Amer J med Sci* 188 219  
 Blalock A. (1924) *J Amer med Ass* 83 3057  
 Brockbank E. M. (1893) *Elin med J* 4 31  
 Brown T. R. (1932) *Lancet* 1 267 New York  
 Burton J. A. G. (1924) *Glas med J* 121 13  
 Campbell S. B. Boyd (1926) *British Medical Journal* 1 731  
 De Mussy Quoted by Revillout (1878) *Gaz Hop* p 666  
 Epstein A. A. (1917) *J Amer med Ass* 69 44 Quoted by Beaumont and Dadds (1924) in *Recent Advances in Medicine* p 43  
 Fabre Quoted by Revillout (1878) *Gaz Hop* p 666  
 Finney J. M. T. and Mohr C. F. (1931) *Amer J Sur* 28 629  
 Fitzhugh T. and Wolferth C. C. (1933) *Ann Surg* 101 478  
 Flint H. L. (1920) *British Medical Journal* 2 319  
 Gangolphe L. (1875) *Th se Paris* No 251  
 Graham E. A. Cole W. H. Copher G. H. and Moore S. (1929) *Diseases of Gall Bladder and Bile Ducts* p 223 Philadelphia  
 Gibson A. G. (1936) *Med Ann* p 222  
 Gould L. K. (1925) *J Indiana med Ass* 28 222  
 Hall De H. (1902) *Trans med Soc Lond* 25 191  
 Hamman L. (1926) *Johns Hopk Hosp B'll* 38 275  
 Hay J. (1933) *Lancet* 2 787  
 Hillingworth C. F. W. (1927) *Brit J Surg* 15 221  
 — (1929) *Ibid* 17 205  
 Katz, E. (1934) *Med Rec* 139 130 170

- Leach C. B. (1929) *New Engl J Med* 200 1313  
 Levy J. (1892) *Drach med Wscr* 18 223  
 Lichty M. J. (1915) *Ohio State med J* 11 779  
 Macaluzie J. (1923) *Angina Pectoris* London  
 McNece J. W. (1924) *Quart J Med* 19 4  
 Martineau (1866) *Arch gen Med* 7 629  
 Mayo W. J. (1924) *Illios med J* 25 33  
 Miller C. H. (1912) *Lancet* 1 767  
 Mowman B. (1925) *British Medical Journal* 1 1  
 Netter and Martha (1886) *Arch Physiol norm path* 3 8  
 Oddo C. (1893) *Rev Medecine* 13 329  
 Olch I. Y. (1927) *Amer J med Sci* 173 63  
 Osler W. *Principles and Practice of Medicine* 10th ed. (M. C. C. New York)  
 Parkinson J. and Bedford D. E. (1925) *Lancet* 1 4  
 Quinke *Diseases of Liver and Bile Ducts* 10th ed. English trans. p 48  
 Ransohoff J. L. (1924) *Clinical Re* 26 22  
 Rendu M. H. (188) *De l'influence des Maladies du Cœur les Maladies du Foie et Respiratoire* Paris  
 Riesman D. (1907) *J Amer med Ass* 28 139  
 — (1911) *Amer J med Sci* 122 67  
 Robinson R. H. O. B. (1929) *Lancet* 2 40  
 Rolleston H. (1920) *British Medical Journal* 1 17  
 — and McNece J. W. (1929) *Diseases of Liver and Bile Ducts* 10th ed. London  
 Powers E. C. (1914) *J Amer med Ass* 63 131  
 — (1914) *Ibid* 65 1637  
 Schwartz M. and Herman A. (1911) *Ann Int Med* 1 1  
 Shaw R. Canuile (1924) *Quart J Med* 19 20  
 Straus D. C. and Hamburg W. V. (1924) *J Amer med Ass* 82 706  
 Vest W. E. (1924) *Southern J* 27 40  
 Weiner J. G. (1931) *Me* 17 223  
 Wilkie A. L. (1924) *Br J Sur* 15 40  
 Wilkie D. P. D. (1929) *British Medical Journal* 1 7  
 — (1929) *Ibid* 2 767  
 Williams F. A. and Brown G. E. (1924) *Amer J med Sci* 168 167  
 — and Fitzpatrick J. M. (1925) *J Interned Soc* 15 33  
 Young E. L. (1923) *New Engl J Med* 198 729

## FOUR CASES OF MENINGITIS TREATED WITH PRONTOSIL

BY

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The first two of these cases were treated by serum and prontosil the two others by prontosil only. In their clinical aspects all four were typical mild cases of cerebrospinal fever. In three of them Gram negative diplococci were found in the fluids but the weak point is that meningococci were not grown in any of the cases. Therefore the diagnosis is not proven. It was for this reason that I did not report them at the time. I had hoped for more undoubted cases so treated whether successfully or unsuccessfully would have been published before this. I am now recording these in the hope that they will serve as a late report from those who have more cases to treat.

The results in these cases were more rapid and complete than those I have usually obtained from serum. The treatment avoids the repeated puncture for administration of serum which is so trying a procedure to all concerned. The last case was punctured twice only—once for diagnosis and the other time to find if the fluid was normal. None of the patients was fully grown so the dosage was large but I felt that in this type of case an initial big dose was essential. All the cases were mild and would probably have ended in recovery without prontosil.

**Prontosil Reactions**—The late rise of temperature in Cases I and III may well have been instances of prontosil fever. The rash in Case IV was probably due to prontosil but in none of them was the patient ill. The blood well ate well slept well and said that they felt well.



## Case I

A boy aged 14 was admitted to hospital on February 19, 1937 having been ill for the past week with headache, general irritability and vomiting. There was definite head retraction and rigidity of neck and Kernig's sign was present. He was normally conscious. The cerebrospinal fluid was under pressure and was turbid.

*Pathological Report February 22*—Turbid xanthochromic fluid with a heavy deposit of pus. Chlorides 0.680 per cent, sugar absent, albumin 0.3 per cent. Films show large numbers of polymorphonuclears and a very occasional Gram-negative diplococcus, probably meningococcus.

The patient was treated by anti-meningococcal serum—intramuscular on February 19, intramuscular and intravenous on February 20, and by prontosil, two tablets (0.6 gramme) every four hours—that is 3.6 grammes (about 60 grains) each twenty-four hours—commencing February 21 and continued for one month.

He rapidly improved. Lumbar puncture on February 19, 20, 21, and 22, and again on March 17, showed that the fluid was clear, and the pathologist reported it to be normal. Before the end of the first week the headache and neck retraction had entirely disappeared. He looked well, and said that he felt well. He continued to have a slight pyrexia which in the third and fourth weeks sometimes reached 100° F, but remained in good health and without symptoms.

## Case II

A youth, aged 17, was admitted on April 26, 1937, with four days' history of headache and pain in the back and limbs, with vomiting for the last two days. He was quite conscious. Head retraction and neck rigidity were present. Kernig's sign was positive, and the cerebrospinal fluid was turbid and its pressure much increased.

*Pathological Report April 29*—Turbid xanthochromic fluid, with a large coagulum and heavy deposit of pus. Chlorides 0.720 per cent, sugar absent, albumin 0.2 per cent. Films show large numbers of polymorphonuclears and a very occasional Gram-negative diplococcus—probably meningococcus.

*Treatment*—He was given 10 c.c.m. of serum intramuscularly and 10 c.c.m. intrathecally on April 26, 10 c.c.m. intrathecally and 10 c.c.m. intravenously on April 27, prontosil on April 26—two tablets (each 0.3 gramme) four-hourly, increased to twenty tablets in the twenty-four hours on April 29, reduced again to twelve in twenty-four hours on May 2, and stopped on May 10. The patient made a rapid recovery.

## Case III

A youth aged 17, was admitted on May 7, 1937. Four days earlier his illness had begun with headache, vomiting, and stiffness in the neck. He was conscious. His head was retracted and his neck rigid. Kernig's sign was positive. The cerebrospinal fluid was under increased pressure and was turbid.

*Pathological Report May 8*—Fluid very turbid, xanthochromic with a heavy deposit of pus. Chlorides 0.690 per cent, sugar absent, albumin 0.2 per cent. Films show large numbers of polymorphonuclears and a very occasional Gram-negative diplococcus, probably meningococcus.

*Treatment*—This was by prontosil only—two tablets (each 0.3 gramme) every two hours (7.2 grammes in twenty-four hours) reduced on May 9 to every four hours, and stopped on May 17.

He very rapidly recovered, losing his headache, retraction and rigidity. During a second rise of temperature which occurred from May 14 to May 17, he said that he felt quite well. His cerebrospinal fluid was normal, and the blood culture negative. A blood count was not done.

## Case IV

A youth aged 16 was admitted on June 24, 1937, with five days' history of headache and shivering followed by drowsi-

ness, neck stiffness and vomiting. Head retraction and neck rigidity were present, and Kernig's sign was positive. Herpes labialis was also present. The patient was conscious. The cerebrospinal fluid was under pressure and turbid.

*Pathological Report June 26*—Very turbid xanthochromic fluid with a heavy deposit of pus. Chlorides 0.700 per cent, sugar absent, albumin 0.2 per cent. Films show large numbers of polymorphonuclears, no micro-organisms seen.

*Treatment*—Prontosil only—two tablets every two hours, reduced on June 26 to every four hours and stopped on July 3.

The patient very rapidly recovered, and the pathological examination on July 5 showed a normal cerebrospinal fluid. On July 7 he developed a generalized papulo-erythematous rash. This lasted only a few days, and he was discharged in good health on July 14.

[NOTE—The *Journal of the American Medical Association* of February 26, 1938 (p. 630), contains an article on "Sulfanilamide Therapy in Meningococcal Meningitis," in which Dr. Leon J. Willien reports an account of five cases, all cured by that substance. The author gives an initial subcutaneous injection of a large dose of the saturated (0.8 per cent) solution in amounts approximating 0.01 gramme per kilogramme of body weight—that is, 500 c.c.m. for a normal sized adult—followed by 15 grains (1 gramme) by mouth every four hours.]

## UNUSUAL COMPLICATIONS OF LABOUR

BY

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The two cases here described are grouped together for reasons other than their comparative rarity. At a first glance each appears to be a rare complication of labour, and there the similarity might appear to end. In one an annular portion of cervix was detached spontaneously during labour, while in the other an acquired vaginal septum obstructed birth. Their points of similarity probably lie in both aetiology and effect—a pre-existing inflammatory condition was certainly the cause in one, if not in both, and in each case there was a degree of obstruction to labour in the soft parts of the birth canal.

## Spontaneous Amputation of the Cervix during Labour

Spontaneous separation of part of the cervix in the course of labour would appear to be a rare accident. E. J. Decosta (1933) was only able to collect thirty-two cases from the literature between 1820 and 1933, and there was a long lapse of time between the reporting of the first two cases in America—that of Johnson was observed in 1851 and the second was recorded by Dorsett in 1927. Scott reported in 1821 the first case of annular separation of the cervix, which occurred in the case of a primipara, aged 36, after a long labour, the detached portion of cervix was expelled before the birth of the child. The next case was that of Carmichael, later reported by Power (1840). In this case there was some evidence of disproportion, for after the cervix had separated spontaneously embryotomy was necessary to deliver the child. If this peculiar accident of childbirth is to be viewed in its right importance it must be accepted that a large proportion of the very few recorded cases are proved examples of spontaneous separation. In fact unnecessary obstetric interference was probably the f-

mount factor and thus certain recorded cases do not properly belong to the spontaneous group. Some facts of interest are brought out in the following case history.

### Case I

A primigravida aged 26 was seen as an emergency case. Labour began on February 19 1930 and the patient was admitted to hospital at 3.40 p.m. apparently suffering from a severe degree of pain in the back. The general condition was good her temperature being 98° F her pulse rate 88 and her blood pressure 170/80 mm Hg. The uterus was larger than normal the foetus was in the first vertex position the head was engaging and the foetal heart was heard. The pelvic measurements were normal the cervix was one finger dilated and the membranes were intact. Combined abdominal and vaginal examination failed to show any disproportion. The membranes ruptured at 6 p.m. and examination revealed the cervix to be two fingers dilated.

On the following day (February 20) at 4 p.m. a further vaginal examination was made. The head had advanced and the absence of disproportion was confirmed. The cervix was three-fingers dilated and definitely not oedematous. On February 21 at 11 a.m. the head was found to have advanced little and a band of tissue was felt lying below and behind the foetal head. This was identified as an annular portion of cervix which was detached almost completely.

Subsequently at 5 p.m. on the same day the patient was delivered with forceps of a living male child. There was little difficulty in delivering the head but considerable difficulty with the shoulders which were unduly broad. There was considerable post partum haemorrhage due to the uterus being atonic and to torn vessels in the cervix. The annular portion of cervix was attached loosely to the uterus posteriorly over an area of between a quarter of an inch and half an inch. Slight traction completely detached the torn fragment. The cervix was sutured posteriorly and haemorrhage arrested to some extent. Laterally and anteriorly it was impossible to suture the cervix so the vagina and the remains of the cervix were plugged. At the time of delivery a swab was taken from the region of the cervix and subsequently showed a profuse growth of *Streptococcus pyogenes*. 30 c.c.m. of scarlet fever antitoxin were given immediately after delivery.

The patient was very shocked after delivery her pulse rate rising to 150 but after twenty-four hours it had fallen to 120 and the temperature was 99.6° F. From the second day onwards the puerperium was uneventful. The baby's weight at birth was 8 lb 9 oz the total duration of labour was sixty-two hours.

### SEPARATED PORTION OF CERVIX

It can be definitely stated that a cervix which was not oedematous at any time during labour and which felt normal became separated for about seven-eighths of its circumference in nineteen hours. The separated portion of cervix showed the external os to be dilated to a size of 2 inches by 1½ inches more cervical tissue was detached anteriorly and posteriorly than laterally. The detached portion was progressively thinner from the external os to the line of separation and there were scattered areas of haemorrhage into the substance of the cervix. Both surfaces were covered with irregular flakes of lymph and fragments of necrotic tissue.

Microscopically the epithelial covering of the cervix had for the most part disappeared. The blood vessels were dilated and engorged with blood and blood was also extravasated into the substance of the cervix which consisted mainly of fibrous tissue very little muscle and no elastic tissue was seen.

### SUBSEQUENT HISTORY

On vaginal examination of the patient three weeks after delivery the cervix had contracted down and felt normal. In fact it was difficult to believe that a portion had been detached. In August 1934 the patient was seen again. Since the labour in 1930 she had had no pregnancies, her periods were regular the loss remained unchanged and there was no pain. She had suffered intermittently from a slight vaginal

discharge but otherwise her health had been excellent. The child was progressing well and apparently had not suffered in any way.

### Comment

It would appear to be of prognostic importance not in this case as in all recorded cases the cervix tears at a point well below the utero-vaginal junction otherwise fatal complications would probably occur. In the case under discussion the separation of part of the cervix was discovered too late for any treatment. If a circular tear was diagnosed early it seems possible that a radial incision in the cervix opposite the tear might well prevent it extending further. Certain aetiological factors have been described in this rare condition and some can be accepted as possible in this case. Disproportion is an obvious predisposing cause first giving rise to oedema and later to necrosis and separation. In this instance however there was no disproportion and the cervix was not oedematous up to nineteen hours before delivery in the case of spontaneous separation in which there was no disproportion. The patient was a primipara and the membranes ruptured with the onset of labour. Twenty-nine hours after the onset of labour the cervix would only admit two fingers seven hours later no ring of cervix could be felt but behind the head an oedematous lip of cervix was palpated. Subsequently when it was decided to deliver the patient with forceps a ring of detached cervix slid out of the vagina. The patient died from a *B. coli* septicaemia. In this case the age of the patient and the early rupture of the membranes would appear to be the only definite factors.

Early rupture of the membranes must of course place an undue strain upon the cervix and in a high proportion of Decosta's (1935) series the membranes ruptured early or before labour started. In the case here recorded there was certainly a long labour and the membranes ruptured after fifteen hours when the os was two-fingers dilated. Normally during the first stage of labour cervical dilatation depends largely upon the upward traction of the longitudinal muscle fibres of the uterus and the downward pressure of the bag of water. With rupture of the hydrostatic bag there must be more pressure exerted through the foetus and subsequent advancement and dilatation are due to the direct pressure of the foetal head. In any event there must be undue pressure on the cervix and particularly in a case of disproportion. In disproportion the maximum pressure is naturally localized on that part of the cervix which is nipped between the foetal head and the pelvis. The absence of disproportion allows the foetal head to press evenly on the dilating cervix and thus one should not expect to find oedema present. This hypothesis undoubtedly explains the absence of oedema in the present case. Some degree of dilatation of the external os together with effacement of the internal os was also present and can be regarded as typical of this accident. The fact that dilatation is able to proceed to a certain degree rather tends to negative the possibility of any inherent rigidity being a factor.

Certain abnormalities of the form and fabric of the cervix may well be predisposing factors. The only abnormality in form to be considered is the length. Unfortunately no observer seems to have noticed this point before labour or to have had an opportunity of studying it in these cases. The matter remains one of conjecture the only evidence being the portion of tissue left behind. Three weeks after delivery my patient had a cervix of apparently normal proportions and yet the detached

annular ring represents a considerable amount of tissue. It may therefore be suggested that in this case the cervix was most probably abnormally long. In a case described by Fuh (1923) the findings were similar.

Could the cause of separation lie in the texture of the cervical tissue? This question is pertinent, but, unfortunately, the tissue separated is not ideal for exact microscopical examination. The normal cervix contains proportionately more connective tissue intermixed with smooth muscle and elastic fibres than does the body of the uterus. Other factors being equal, the ability of the cervix to dilate varies directly with the amount of muscle and elastic tissue as compared with fibrous tissue present. Couvelaire considered that the leucocytic infiltration frequently noted was indicative of pre-existing inflammation, which in turn gave place to fibrosis and rigidity. In the case described sections of the detached cervix appear to consist mainly of fibrous tissue infiltrated with blood, muscle fibres are scattered irregularly and in very small proportion, and elastic tissue is completely absent.

It is thus clear that in Case I the cause of rupture can be assigned to certain factors: (1) rupture of the membranes when the os was only partially dilated, thus bringing undue pressure upon the cervix, (2) an abnormally long cervix, and (3) a change in the fabric of the cervix, causing an increased proportion of fibrous tissue.

The incidence of cervicitis is so high and the accident of cervical detachment so rare that if previous inflammation be accepted as a definite aetiological factor there must be other contributory factors with which we are not yet sufficiently familiar.

This case also illustrates an interesting point in puerperal infection which has been recorded previously. A swab taken from the region of the cervix at the time of delivery produced on culture a pure growth of *Streptococcus pyogenes* which was proved to be virulent as regards experimental animals. The patient received 30 ccm of scarlet fever antitoxic serum and her temperature remained normal after the first day of the puerperium. Thus, she escaped puerperal sepsis in spite of the presence of a virulent strain of streptococci in the birth canal and severe damage to the soft parts. This must be attributed either to her own personal immunity or to the early use of serum. Whichever be accepted as the cause, the lessons to be learnt are identical in principle. The origin of *Streptococcus pyogenes* in the birth canal in this case is a matter of conjecture. This organism is not commonly present in the birth canal before labour. In 600 cases investigated I only found it present in three cases, and all possessed such a degree of immunity that no puerperal infection resulted.

#### Acquired Vaginal Septum Obstructing Labour

In the second case a vaginal septum sufficiently thick to obstruct delivery was acquired in a maximum period of two years. At the time of delivery the septum was imperforate, and after delivery by Caesarean section the pressure of the contracting uterus, stimulated by pituitrin, was insufficient to expel any lochia. That about forty weeks previously there must have been some orifice through which spermatozoa could penetrate is obvious. The method of dealing with this case may at first seem unusual, but the complications were also unusual and the end justified the means.

#### Case II

A patient aged 26 had a history of two previous pregnancies with normal labours at term. No positive history

of vaginal laceration could be elicited and there were no symptoms of such laceration having occurred, but no such had ever been made. The patient was seen in consultation with her own doctor on February 29, 1932. She had been in labour for eight hours with strong pains, on vaginal examination her own doctor had been unable to identify the cervix. The foetus was lying in the first vertex position and the head was well down in the pelvis. On vaginal examination the foetal head was easily felt through a septum but the external os could not be identified and even with a speculum no trace of the cervix could be found. A sound passed into the bladder reached almost to the blind apex of the vagina, and a finger was inserted into the rectum to a point only three quarters of an inch from the end of the sound. Owing to the close proximity of the rectum and bladder, however, it was thought dangerous to incise the vaginal septum lying below the foetal head.

A classical Caesarean section was performed and a live baby delivered. After removal of the placenta the lower uterine segment was carefully examined, visually and by palpation, but no part of the os could be identified. After suturing the uterus and abdominal wound, the patient was placed in the lithotomy position. No blood had passed into the vagina, and other search for the cervix was fruitless. Pituitrin, 5 units, was given four hourly; each injection produced pain referred to the uterus, but still no lochia escaped. As the pituitrin produced an unpleasant degree of pain and as there was also abdominal distension not relieved by enemata, eserine sulphate, grain 1/32, and strychnine sulphate, grain 1/32, were substituted. These also produced abdominal pain and were therefore discontinued. The height of the uterus remained unchanged until the eleventh day of the puerperium, during the twelfth and thirteenth days the level rose by one inch, and continued to rise till the fifteenth day. Following this the height gradually fell, till it reached a level halfway between the symphysis pubis and the umbilicus on the twentieth second day of the puerperium. During the whole puerperium there had not been any escape of lochia and the temperature and pulse remained normal.

#### EXCISION OF VAGINAL SEPTUM

On the thirtieth day after delivery the patient was examined under an anaesthetic in the lithotomy position. The vaginal vault was seen to be blue in colour and bulging. The cervix was incised and about 10 oz of chocolate coloured infected blood escaped, the uterus was then carefully washed out at a low pressure. The incised membrane was found to be very tough and about a quarter of an inch thick, a circular area of one and a quarter inches diameter was removed. Adherent to the upper surface of this membrane the external os was located and found to be two fingers dilated, the internal os still seemed to be fully taken up. Recovery from the operation was uneventful and the lochia ceased twelve days later. The patient was again examined after an interval of eight weeks. The uterus was then found to be fully involuted and the orifice in the vaginal septum had contracted down so as to admit only one finger. Under an anaesthetic more of the septum was removed and a vaginal dilator was left in position for a week, being removed and replaced daily. Microscopical examination showed the septum to consist of dense fibrous tissue covered on its upper and lower surfaces with stratified squamous epithelium.

#### Comment

This case certainly resembles those in which an inflammatory condition of the cervix or vagina has caused shrinking of the covering mucosa, subsequent adhesion of the raw surfaces, and finally organization of the inflammatory tissue. The end-result is an imperforate cervix or vagina. This condition is probably what is once known as the *conglutatio orificii* a term of Naegele. Very few of these cases have been recorded. Croft and Claye (1928) described that of a woman who had passed through four normal pregnancies, there had been

marked degree of prolapse and ulceration of the cervix. At the time of the fifth labour the only trace of the external os was a slight linear scar. A case more closely resembling the one described here was recorded by Kanter and Klawans (1930). They reported a case of vaginal atresia occurring rapidly after an operative delivery. In such cases the pelvic floor and bladder are greatly relaxed so that the anterior and posterior vaginal walls come to lie in close approximation. In their case a woman was delivered on June 15 1929. The delivery was with forceps and without any anaesthetic; no attempt to repair any tears was made. The temperature and pulse were normal in the puerperium but no lochia were passed after the third day. The patient was seen on September 30 of the same year. There was then found to be atresia of the vagina at the level of the entrance of the urethra into the bladder. In this case the degree of damage to the vagina was not known and strong antiseptics employed at the time of delivery may have played a part in giving rise to the condition. This case demonstrates well how quickly atresia of the vagina may occur and the strength of the septum so formed—sufficient in this instance to retain the lochia after the third day of the puerperium.

In Case II the exact aetiological factors concerned in producing the septum must remain to some extent obscure even though the field of possible causes is considerably restricted. The history of previous labours in itself at first seems to exclude any congenital abnormality as a possible contributory factor but this must be considered later. Some trauma to the vagina in the course of the previous labour might have been the starting point of such a septum. If there were trauma then one would expect it to have been fairly severe and to have produced symptoms not easily overlooked. Yet the previous labours and puerperia were normal and the only symptom was a slight and persistent vaginal discharge. If the septum began to develop soon after the second labour then one would have expected some obstruction to the flow of blood at the periods. Unfortunately the flow was always small and no change was noticed except a slight increase in pain during the periods. This pain may point to some obstruction arising in the vagina.

It is thus apparent that although trauma and infection either jointly or separately were the responsible factors yet there is no real proof of this. One is forced therefore to consider afresh a congenital theory. Perhaps there was a congenital narrowing or a partial septum present in the upper part of the vagina and a degree of trauma and infection unlikely to cause trouble in a normal vagina were the final factors in this case. This view is supported by the type of septum found which was well defined remarkably thick and resistant and did not seem to consist of recently organized granulation tissue. Further the vagina below the septum appeared quite normal and there was no evidence of long standing infection anywhere in the genital tract. The total disappearance of an orifice during pregnancy also offers a remarkable picture; it is of interest to consider how small or large it was at the time of conception. The increased vascularity of the vagina during pregnancy would no doubt accelerate the closing of the septum provided the edges were not epithelialized. This case also illustrates the fact that the retention of the lochia after labour need not cause any anxiety. At the time of the Caesarean section the degree of asphix was good, and in the absence of any infection the retention of a large volume of lochia for a considerable period had no effect on the temperature, the pulse rate or the general condition of the patient.

## BIBLIOGRAPHY

## Case I

- Burt White H and Armstrong R. R. (1923) *Proc. Roy. Soc. Med.* 21, 42.  
Cathala V. (1926) *Bull. Soc. Obst. Gyn. 15*, 111.  
DeCosmo E. J. (1935) *Am. J. Obst. Gyn.* 25, 7.  
Dorsett L. (1927) *Ibid.* 14, 247.  
Futh H. (1923) *Arch. Gyn.* 119, 102.  
Mathuru Albert and Schuiffert Goodrich C. (1928) *J. Obst. Gyn.* 26, 350.  
Petters on A. S. (1923) *Mschr. Geburt. 63*, 13.  
Phillips L. (1927) *Proc. Roy. Soc. Med.* 20, 169.  
Pover R. F. (1930) *Dublin J. Med. Sci.* 16, 37.  
Scott P. N. (1921) *Med.-Chir. Trans.* 11, 592.

## Case II

- Blair R. (1927) *British Medical Journal* 1, 1035.  
Crott E. O. and Clave A. M. (1933) *Lancet* 1, 21.  
Kanter A. E. and Klawans A. H. (1930) *Am. J. Gynec.* 20, 95.

## UNUSUAL PHYSICAL SIGNS IN LOBAR PNEUMONIA

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Lobar pneumonia may present in place of the classical physical signs abnormal findings so conclusive to the diagnosis even when the onset symptoms and temperature are conclusive. These perplexing features would seem to require explanation and this can be found only in physiological and pathological changes in the underlying lung since physical signs in themselves are inconclusive in groups are not conclusive proof of any particular disease. Thus the consolidation or pneumonia due to alveolar exudate is usually evidenced by dullness to percussion and by bronchial breathing and these are the accepted signs of the disease. When alveolar exudation is complicated by bronchial filling there is produced a different group of physical signs—those of a solid lung with a blocked bronchus. A complete absence of vocal sounds is discovered together with other signs suggestive of a moderate accumulation of fluid.

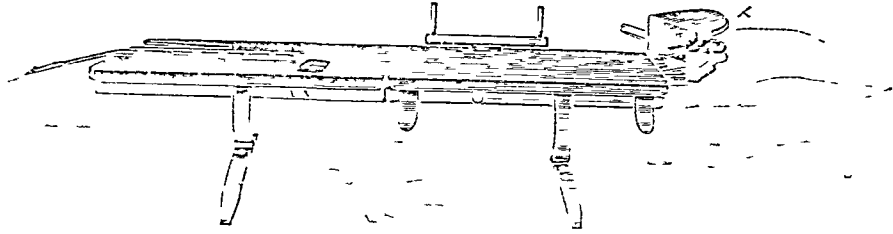
### Three Illustrative Cases

A patient recently observed by us at the Brompton Hospital developed on the second day a temperature of 101.4° Fahrenheit with absent breath sounds at the right base and dullness to percussion. Bronchial breathing at the left base, the apex, and not being displaced. Two days later an x-ray film showed consolidation at both bases more marked on the right, but with no clear evidence of fluid. After ten days the fever subsided but consolidation was not until the fourteenth day that bronchial breathing was first detected at the right base. Subsequent x-rays demonstrated gradual clearing of the consolidation. We believe that the physical signs first found at the right base were those of pneumonic consolidation together with blockage of the main bronchus by a sputum plug, expectoration of which a fortnight later allowed air entry and the production of bronchial breathing. This supposition was confirmed by bronchography on the tenth day when it was demonstrated that though the main bronchus of the right lower lobe was patent all the secondary and tertiary bronchi were blocked. Repetition of the bronchography prior to the patient's discharge showed the presence still of a little sputum in the practical purposes the bronchi of the lower lobe were normal.

Another pneumonic patient exhibited the classical appearance of right basal consolidation, but though the percussion note was dull no breath sounds could be heard over



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rest  
piece are  
adjusted to the  
my in the manner  
by Henning as follows  
) The upper thigh is held  
when the knee pillar in front  
and the back rest so that the  
patient cannot roll over the lower  
knee is flexed in front of the knee  
pillar and the foot is brought  
behind the foot pillar. Comfortably  
locked in this way the patient's  
left leg prevents him from slipping  
down the table when it is tilted  
and allows the abdomen to be free  
of all pressure. The head section  
of the table proper is then dropped  
and the head rest of the attach-  
ment is swung in to support the  
head and adjusted for height and  
in the horizontal plane in both  
axes. The shoulder stop carried  
on the head rest is adjusted to  
prevent the patient's lower shoulder  
from twisting forwards.

It is explained to the patient that  
he is being thus securely held in  
order that the table can be tipped  
during the examination without  
fear of his slipping and he is  
encouraged to relax his body  
against the supports. The instru-  
ment can then be passed without  
other assistance although a second  
person to hold the patient's head  
and a nurse to hold his hands will  
help if available to increase his  
confidence.

The details of the table top are  
shown in the photographs open  
on the table without attachments  
with attachments in position with  
the patient upon it and finally  
folded up ready to be carried  
away. It is made of two padded  
sections hinged together in the  
middle for ease of portability.  
The combined head rest and  
shoulder stop is carried in a slotted  
arm which allows adjustment for

FIG 1—Attachment in position on operating table read for patient. All supports are removed and the head rest (X) is swung clear to allow the patient to lie on his back to anaesthetization of the throat.

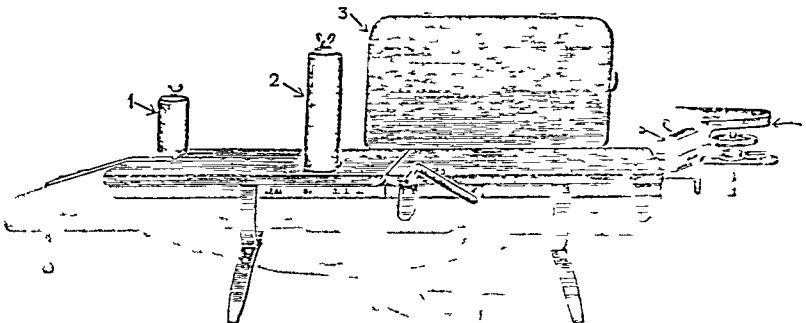


FIG 2—Gastroscope attachment complete. (1) Foot pillar (2) knee pillar (3) back rest with adjustable arm (4) head rest (5) shoulder stop

length, and swivels at the attached end so that it can be swung laterally as required. The height of the head cushion is controlled by the wheel beneath it. The foot and knee pillars slot into keyways which allow longitudinal and transverse adjustment respectively, being clamped in position by a butterfly screw on top of each. The back rest fits into a transverse carrier, which can be adjusted for position across the table by a screw action actuated by a handle.

The apparatus is made by the Genito-Urinary Company, and I would like to take this opportunity of thanking Mr R Schranz for his co operation and help in the experimental stages of construction. I also wish to express my appreciation of the support given by the British Medical Association in this work.

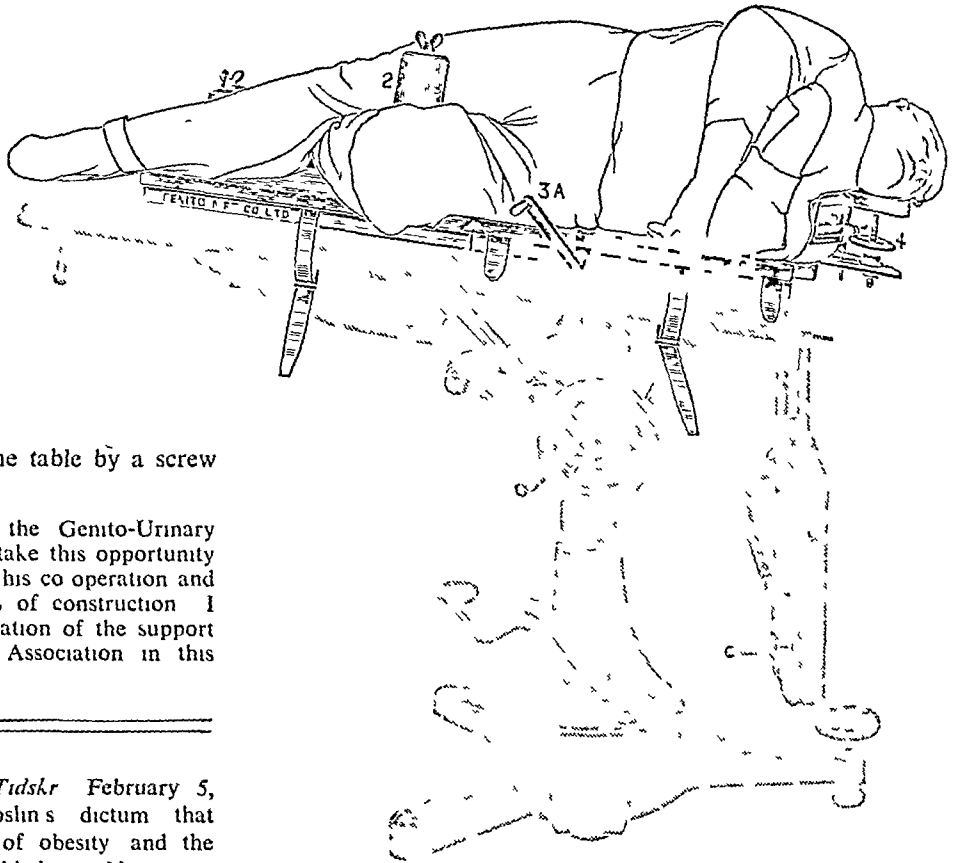


FIG 3—The patient in position. Note that the top section of the operating table has been dropped to allow the head rest to be swung into position.

G Hertzberg (*Nord med Tidskr* February 5, 1938 p 213) challenges Joslin's dictum that "diabetes is largely a penalty of obesity and the greater the obesity the more likely is Nature to enforce it." At the Rikshospital in Oslo the author has systematically weighed 400 consecutive cases of diabetes admitted to hospital in the period from the beginning of 1931 till the spring of 1935. The height of each patient was also measured, and standard weights of normal Norwegians of various heights and ages served as controls, any weight within 10 per cent of the normal whether above or below it was considered as normal. Nearly half of the juvenile diabetics were underweight, while about a third were overweight. About 20 per cent of the men were underweight while 33 per cent were overweight. Of the women about 16 per cent were underweight and 55.7 per cent were overweight. As in Joslin's experience, the proportion of underweight cases was higher in young than in old patients and this difference was greatest when the discrepancy in age was most marked. In every age group however the Norwegian diabetics were lighter than Joslin's American patients. Indeed, as one of Hertzberg's tables shows, there was no striking difference between the normal weight and that of his diabetics at the beginning of their disease. He concludes that his observations fail entirely to confirm Joslin's assumption that overfeeding plays a dominant part in the aetiology of diabetes. The Norwegian figures suggest that the severity of the disease was on the whole inversely proportional to the patient's weight before and at the time of the development of the diabetes for the insulin taking patients—that is the worst cases—were numerically best represented among the underweight group. Half of the overweight patients could dispense with insulin but this applied to only one-ninth of the underweight patients.

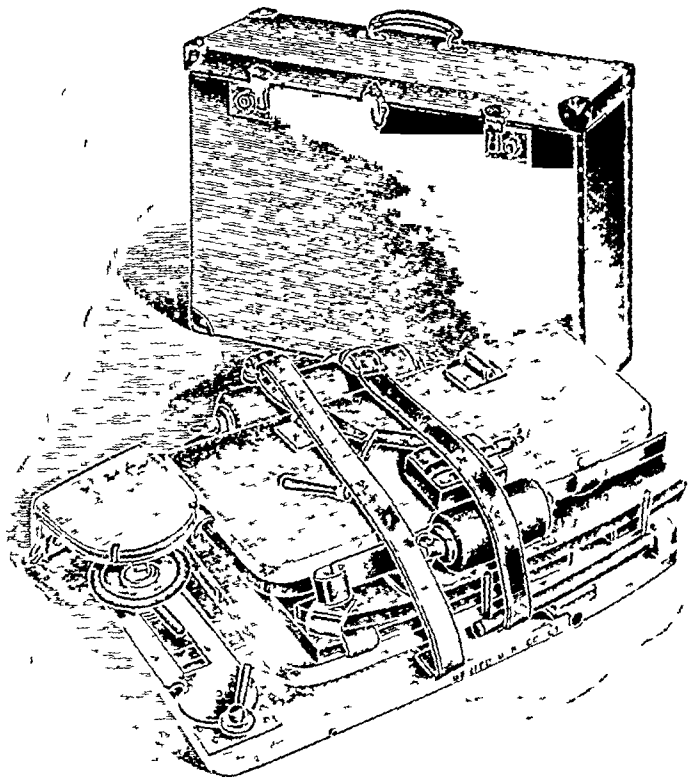


FIG 4—The folded apparatus and its portable case.

## Clinical Memoranda

### Fatal Haemorrhage into Rectus Abdominis Muscle during Pregnancy

A case of severe haemorrhage following rupture of a rectus muscle appears to be worth recording in view of the fact that it must be unusual.

#### CLINICAL HISTORY

A multipara aged 30 who had had five children all weighing 10 to 12 lb was expecting her sixth child on February 17. She had always been a healthy woman though very stout and during the pregnancy no albumin was present in the urine. Just after Christmas she had a cough and complained occasionally of a pain in the left upper part of the abdomen. The husband stated that it was a dry cough and that his wife had to hold her abdomen while coughing. At 11.30 p.m. on February 7 following a bout of coughing she had a sudden severe pain in the left side of the abdomen and felt that she was dying.

She was seen by a doctor at 9 a.m. on February 8 and was transferred to the Farnham County Hospital. On admission she was extremely pallid and collapsed; the pulse was scarcely perceptible and there was marked respiratory distress with slight cyanosis. Her condition suggested a severe haemorrhage. The abdomen was very large but not tense or rigid or so far as could be judged tender. The uterus was large and flaccid. The wall seemed to be thin and the outline was ill defined. Foetal parts could be plainly felt nearly up to the costal margin on the right side but not in the upper left quadrant where there was an ill defined resistance. There was nothing to suggest free fluid in the abdomen.

It was decided to give a blood transfusion and open the abdomen but although a donor was obtained and grouped within half an hour the patient died before this could be done.

#### PATHOLOGICAL FINDINGS

At the post mortem examination the left rectus sheath was found to be grossly distended with blood and resembled a large sausage-shaped balloon extending from the pubes to the lower ribs. Three pints of blood and blood clot were removed from the sheath and a long jagged tear was found in the posterior surface of the muscle belly at the junction of its lower and middle thirds. Small tears and evidence of old haemorrhages were found in the upper segments of the muscle. Owing to laceration the end of the ruptured vessel was not found but it seems probable that it was the deep epigastric artery as it is unlikely that such severe haemorrhage could have occurred from a vein.

The uterus which was normal except for rather an excess of liquor amni contained a normal male child weighing about 9½ lb. The liver and heart showed some evidence of fatty degeneration but the remaining organs appeared healthy.

#### COMMENTARY

The rectus muscle had obviously been weakened by the combination of several large pregnancies and a very fat pendulous abdomen and had given way under the strain of coughing. Several small haemorrhages had occurred in the month preceding death but the cough on February 7 had caused an extensive rupture of the muscle and had opened up a big vessel which had bled profusely. It was unfortunate that she did not reach hospital until it was too late for anything to be done.

In the *Bulletin of the Johns Hopkins Hospital* (1937 61: 293) T. S. Cullen and Max Brodel give a good account of lesions of the rectus abdominis muscle simulating an

acute intra abdominal condition. They state that haemorrhage into or beneath the rectus abdominis muscle is rare. It may take place in any part of the muscle but it is usually below the umbilicus. In some cases the muscle is torn in others branches of the deep epigastric artery or vein have ruptured in still others there has been no rupture of the muscle and also a tearing of one of the blood vessels.

The posterior sheath of the rectus is absent in its upper portion consequently where the bleeding is below the umbilicus the blood usually lies between the muscle and the peritoneum. This causes peritoneal irritation and produces symptoms simulating in nearly every particular those of an acute abdominal lesion. Occasionally the rupture of the rectus muscle has been caused by direct trauma but usually however the patient has for some time been suffering from some debilitating disease such as typhoid or influenza, and a slight exertion has been followed by sudden abdominal pain with the development of a haematoma. Cases are quoted where rupture of the rectus has been associated with gall bladder disease and febrile disease as well as pregnancy.

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### Chemotherapy of Virus Infections

In view of the results obtained by Rosenthal, Woolf and Bauer (1937) and by Dochez and Slanetz (1938) suggesting that drugs related to sulphanilamide had some curative effect on animals infected with influenza, choriomeningitis and distemper virus respectively, a series of experiments has been carried out to test the effect of these drugs on virus influenza in mice. Our experiments have been confined to para aminobenzenesulphonamide, 4,4-diaminodiphenylsulphone, 4-benzylideneamino-aminodiphenylsulphone, sodium sulphanilatesulphanilate and 4,4-diaminodiphenylsulphone glucoside.

Groups of mice weighing 10 to 12 grammes usually ten in a group were infected intranasally under ether anaesthesia with 0.05 c.c.m. of falling droplet containing  $10^{-4}$  or  $10^{-5}$  of sterile glucose containing virus (WS strain titre  $10^6$  m.d.c.m. per c.c.m.). Immediately after and on each subsequent day the virus was given by mouth a dose of drug which experiment had shown was well tolerated by uninfected animals. All controls were provided. After a week those animals which had not already died of influenza were killed and the degree of influenzal consolidation of their lungs noted.

#### Results

Four hundred mice were used. In no case was there any reduction in the mortality of treated animals infected with doses of virus fatal to the controls. Indeed animals treated with para aminobenzenesulphonamide and 4-benzylideneamino-aminodiphenylsulphone died sooner and showed a higher mortality and more extensive lung lesions at all infective dilutions of virus than did the corresponding controls. Between animals treated with 4,4-diaminodiphenylsulphone or sodium sulphanilate and the controls there was no significant difference. Although animals treated with 4,4-diaminodiphenylsulphone glucoside after infection with large doses of virus showed no advantage over the controls the difference appeared to be a small but consistent and significant difference in favour of the treated animals when the virus inoculum was reduced to  $10^4$  or  $10^5$  m.d.



It is possible that drugs of the sulphanilamide group may be used to treat the secondary infections in human influenza. These experiments suggest that care should be exercised in the choice of the drug used, and that of those tested by us 4'-diaminodiphenylsulphone glucoside is the drug most worthy of trial.

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#### REFERENCES

- Rosenthal S M, Wooley, J G, and Bauer, H (1937) *US Publ Hlth Rep* 52 1211  
 Dochez, A R, and Slanetz, C A (1938) *Science* 87, 142

## Digitalis Poisoning in a Child—Recovery

The case reported below is a further example of the risk of dangerous drugs being carelessly left where children can obtain them. The interest in this record lies in the history of the effects of a single dose of 1/50 grain of digitaline upon a child of 3 years, and the response to treatment with atropine and strychnine, it was noted that atropine was more effective than strychnine, and both than caffeine sodium benzoate, in raising the pulse rate from the state of digitalis bradycardia. There is also an indication of the time required for elimination of the drug.

A child, aged 3 years, was admitted to the Belfast Hospital for Sick Children on June 5, 1937, with a history that he had swallowed granules of digitalin (nativelle). The evidence pointed to his having consumed twelve tablets, each 1/600 grain (totalling 1/50 grain of digitalin), at 9.30 a.m. on the previous day. He refused his dinner at 1.30 p.m., and in about two hours began to vomit and have loose motions. He had been subject to attacks of "acidosis," and consequently the gastro-intestinal irritation was not associated with the consumption of the granules; the mother thought she had made him spit out all the granules when she first discovered that he had been in possession of the bottle. Nothing apart from the vomiting and diarrhoea was noticed until 7.30 a.m. on the day of admission, when his mother noted that the pulse was slow. He was seen by his doctor and admission to hospital advised.

On admission irregular systoles were noted, but there were no enlargement of the heart or murmurs. The average pulse rate was 84. There was some incontinence of urine. He was given 1/64 grain of strychnine hydrochloride and hourly records of the pulse rate were made. The record showed that by 6 p.m. the rate was 100, and this was maintained until midnight, then there occurred a gradual fall, until at 9 a.m. on June 6 the rate was 52. The strychnine was repeated, and the rate increased within an hour to 80, and at 11 p.m. atropine sulphate, 1/100 grain, was given. The result of the atropine was to raise the rate to 98 at 1 a.m. There was a steady fall from this level until at 7 a.m. it was 60, when the strychnine and atropine were repeated, the rate rising to 88 within an hour, falling to 70 at midday, and rising again to 90 at 3 p.m. This rate was maintained with some consistency until evening, when a fall to 54 began, starting at 8 p.m. At midnight 2 ccm of caffeine sodium benzoate were given, but by 2 a.m. the rate had not increased, and the strychnine-atropine was administered with the result of a rapid rise to 88 within two hours. The pulse rate did not give any cause for further alarm and in a few days registered 66 to 70 treatment being discontinued. Unfortunately an electrocardiogram was not taken on admission, but one taken on the third day did not show any abnormality of rhythm.

The after history is that the boy has remained without any ill effects. He had an attack of pneumonia in October, 1937, and of measles in January, 1938. He has been singularly free from attacks of "acidosis" since his experience.

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## Reviews

### CHRONIC RHEUMATIC DISEASES

*A Survey of Chronic Rheumatic Diseases* Contributed by contemporary authorities in commemoration of the Bicentenary of the Royal National Hospital for Rheumatic Diseases Bath 1738-1938. Compiled under the direction of the following Editorial Committee: R G Gordon (Chairman), G P R Aldred-Brown, J Barnes Burt, F J Poynton, R Waterhouse, G D Kersley (Pp 338, illustrated 18s net) London, New York, Toronto Humphrey Milford, Oxford University Press 1938

Rheumatism has bulked large in the news these last weeks as the International Congress on Rheumatism and Hydrology has followed the course of earlier invaders of this country from London up the Thames valley to Oxford, and thence to the warm springs of Bath. Whether by chance or design, their visit coincides with the bicentenary of the Royal Mineral Water Hospital at Bath, which is commemorated in a more formal and permanent manner by *A Survey of Chronic Rheumatic Diseases* contributed by contemporary authorities and edited by a committee of Bath physicians. Here are more than a score of essays on the history, aetiology, morbid anatomy and physiology, classification, and treatment of the rheumatic diseases. The general lines of classification and the clear cut distinction of rheumatoid arthritis, osteoarthritis, and gout are now universally accepted. Indeed, it is probable that separation has been almost too complete, neglecting the links that bind these diseases together and the occasions when one is succeeded by or associated with another. Dr Poynton concludes that the rheumatisms are more allied to one another than to any other disease, and are a family group among diseases due to a common weakness. "Is it not possible that we may be born with weak connective tissue in which the cells are of poor quality, and that these react feebly to the causes of rheumatism?"

The editorial committee has done its work well, and has produced more than a mere *Festschrift*, for the book gives a complete account of the rheumatic diseases. Professor Aschoff shows how little we know of pathology in general and of rheumatism in particular when we describe these diseases as allergic. Allergy plays no part either in osteoarthritis, which involves essentially mechanical or metabolic factors in the widest sense, or in rheumatoid diseases arising from specific or non-specific infections. Acute rheumatism, like tuberculosis and syphilis, may enter into an allergic phase, but the therapy of the physician must be directed against the infection. After a summary of the arguments for and against the infectious theory of rheumatoid arthritis, documented with 175 references, Dr Hench comes down so faint-heartedly on the side of microbial origin as almost to damn the infectious theory. It would appear from this survey that we can recognize the manifestations of the different rheumatic diseases with great accuracy and we can relieve their symptoms, but we know little of the aetiological factors and their relative importance, and we have scant power to influence the underlying disease process. The most enthusiastic supporters of gold treatment cannot deny that many cases of ankylosing spondylitis and of rheumatoid arthritis in the florid stage are resistant to treatment. It may be that we await some entirely fresh conception of the rheumatic diseases which will put infection in a secondary role, in the same way that conditioned deficiency has replaced haemolysis as the essential fault in pernicious anaemia. The remissions of rheumatoid arthritis with jaundice, and to a less extent with pregnancy, show that inflammatory changes in joints

can improve remarkably when the internal environment of the organism is altered. The acute attack of gout is associated with all the local signs of inflammation—heat, redness, oedema and polynuclear exudation—and with general disturbances such as increase in the erythrocyte sedimentation rate yet all these phenomena can be satisfactorily explained by the accumulation of uric acid in the blood and its deposition as sodium biurate in the tissues. In the pursuit of infection as the culprit in rheumatoid arthritis we may be following the wrong trail.

In what other ways can the aetiology of the rheumatic diseases be attacked? It is notorious that certain forms of rheumatism are associated with or affected by damp climates but there is need for many more data on their geographical distribution, their occupational incidence, and their relation to changes in weather. Our English climate changes too rapidly for us to correlate the incidence and severity of rheumatism with the hot and cold fronts of air masses which accompany the passage of cyclonic disturbances but within our Empire every range of climate is available for field observations. Dr Godfrey reports to the International League against Rheumatism that he has never seen a true case of rheumatoid arthritis from the northern half of Australia where tropical or sub-tropical climates obtain but he has seen many cases from the southern half especially the eastern fringe of the continent where the altitude, prevailing winds and rain fall create a much cooler climate. Again the comparative pathology of rheumatism has not yet had the study it deserves though it is known that diseases which closely resemble acute and chronic rheumatism in man occur in domestic animals. Nor have clinical and experimental observations on man yet been exhausted. The experiments of Lewis and Kellgren carried out with the simplest of technique are bringing precision to our ideas of fibrositis and muscular rheumatism and of the reference of pain from the tendons and muscles while Halliday has shown how often pain in the locomotor system is perpetuated by purely psychogenic factors.

So vast are the problems raised by rheumatism and so numerous are the sufferers that it has been questioned whether the voluntary hospitals can cope with them and there is undoubtedly need for the provision of local clinics and special institutions for treatment. Whatever developments occur along these lines it seems certain that the great spas will remain centres of specialized knowledge and equipment for the investigation and treatment of rheumatism. For 200 years the Royal Mineral Water Hospital at Bath has opened its doors to poor people who have suffered from rheumatism and latterly more than 95 per cent have come from a distance. It has now become necessary for the hospital to seek a new site and more ample accommodation for its work in treatment and research. Doubts may sometimes be felt about the wisdom of specialization or of *ad hoc* research but unless special centres exist for the study of rheumatism the danger is rather that the profession may tolerate it as one of the inevitable ills of humanity. This *Survey* is therefore a reminder and a stimulus—a reminder of the extent of the problem and our present knowledge and a stimulus to further work.

### MEDICAL PRACTICE IN THE RAW

*Behind the Night Bell* By F. G. Layton (Pp 289 8s 6d net) London: Faber and Faber 1938.

Now that various and not always creditable aspects of medical practice are constantly before the public eye it is a relief to read a book which deals with the life

of the slum doctor in a sane accurate and objective manner. Dr Frank Layton has worked as a general practitioner for more than forty years, mostly on the edge of the Black Country. As he says in his introduction it has not been easy. Doctoring poor people seemed at the start almost as hopeless as building a house without tools or building materials. He always found building materials however in men, women and children for he soon appreciated the real truth of doctoring the poor while his immediate job was to deal with their bodily ills, his ultimate job was to try to understand the people themselves. One of his chief objects in writing this volume of reminiscences and reflections was he says to point out how real a thing psychology—merely another word for understanding—has become in the life of a hard-worked general practitioner. The result he may seem somewhat inconsequent. That is no fault for so is life and the book would not be like it if it were tidy. He is not a crusader and has no moral Charles heads. He has some outspoken things to say about one or two aspects of the official mind but in its tendency to certify as mental disease things people who are really suffering from adolescent muddle. His chapter on neurosis and its purposefulness is very wise and quite in accordance with the results usually expressed in less simple language of psychological research. He is much to be trusted on the mental aspect of illness and trouble for he has learned his psychology where Jung tells the doctor to learn it—in contact with human beings in every situation. It is to be hoped that many people, both doctors and laymen, will read this book for it contains the intangible but true and eternal meaning of medical practice.

### TREATMENT OF TUBERCULOSIS

*Therapie der Tuberkulose* Edited by D. J. Berberich and Dr. P. Spiro. 2 Volumes (Pp 845 2s 6d unbound 2850 Fl bound) Leiden: A. W. Sythoff's Uitgevers Maatschappij N.V. 1937.

It is increasingly being realized that tuberculous disease even when apparently localized in one organ must be regarded as a systemic infection. Such a view assists in the diagnosis, prognosis and treatment of the disease. The frequent artificial distinction in textbooks between pulmonary and surgical tuberculosis is therefore to be deplored. Professor Berberich and Dr. Paul Spiro with the collaboration of workers in various countries have attempted to produce a treatise on the therapy of tuberculosis in which the unity of tuberculous disease is kept in the forefront. The title underestimates the scope of the book which summarizes the modern view on most aspects of clinical tuberculosis.

The first volume contains discussions of the problems that lie at the basis of the treatment of tuberculous disease anywhere in the body. Professor Fraenkel of Heidelberg writes an excellent historical sketch for many years he has witnessed and himself assisted in the work that have led from the first paper on tuberculin read by Koch to the most modern developments in the surgical treatment of phthisis. A fairly complete account of the bacteriology of the tubercle bacillus is given by Bauer of Istanbul. Walter Pagel of Papworth writes as he is becoming more and more known in this country writes three authoritative chapters on immunity, on pathological basis of healing processes and the anatomical and experimental findings after therapeutic procedures. An excellent chapter by Fraenkel discusses the role of radiotherapy in prognosis and treatment of tuberculosis. The sections on tuberculin in diagnosis and treatment of the

other hand, have less to commend them Wallgren follows with a brief discussion on protective vaccination, the use of dead bacilli being too summarily dismissed Epidemiological considerations receive scanty treatment by Hollo of Budapest The remainder of the volume consists of a good unbiased account of the chemotherapy of tuberculosis by Brieger, now attached to the Research Department of Papworth, and of an interesting discussion, by the same author, on occupational therapy and social rehabilitation, including a description of the modern physiological methods used to determine working capacity

The second volume comprises individual accounts by various authors of the treatment of tuberculosis in the different organs and systems The quality of the chapters varies greatly, as is inevitable in a many-author production The accounts of the treatment of tuberculosis of the upper respiratory tract by Berberich, of the surgical treatment of phthisis by Hollo, and of the treatment of tuberculous eye conditions are particularly good Short discussions are included on tuberculosis in old age, tuberculosis and marriage, tuberculosis and pregnancy, tuberculosis and diabetes, and on the psychological aspects of tuberculosis

This work is a useful addition to tuberculosis literature It is very readable But the almost total absence of illustrations reduces the value of the book except to those who are already familiar with the practical application of the subjects discussed in it

### FUNCTIONAL INVESTIGATIONS

*Les Explorations Fonctionnelles* By Noel Fiessinger (Pp 432, 65 figures 70 fr) Paris Masson et Cie 1937

Probably at least half the patients in the medical wards of any general hospital to-day have been admitted "for investigation," and in this book Dr Fiessinger has endeavoured to collect and discuss the methods available for this purpose It is unfortunate that clinical and laboratory investigations are so often regarded as anti-thetic when they should be complementary, for the special examinations permit one to see further and better than simple observation of the patient Dr Fiessinger recalls two clinical histories of Boerhaave—Jean, Baron de Warsenaer, who succumbed to a pneumothorax following perforation of an oesophageal ulcer, and the Marquis of Saint Auban, who died of a mediastinal tumour How could such cases be diagnosed before the introduction of special methods of investigation? The author discusses in simple language the methods and indications for examination of the various organs, giving the theoretical basis and interpretation of the various tests but not going into details of procedure

The book is addressed to the clinician, and not to the pathologist or technician Nearly half of it is devoted to the liver and the kidneys, and this seems out of all proportion to the reliability and clinical value of tests of these organs The blood-forming organs are well done, with good accounts of spleen and marrow puncture On the other hand, the section on the endocrines is poor, surprisingly so when one learns that Dr Fiessinger is the author of two books on endocrinology In the discussion of Addison's disease no reference is made to the value of radiology and of low salt diets in diagnosis There is a good account of the sex cycle and sterility in the female, but nothing about the male We also looked in vain for radiography of the heart, kymography, tomography, cephalography, and ventriculography The book is therefore lopsided and incomplete It is based on a series of lectures, and it gives the impression that the author

had begun with high enthusiasm, had then got lost in the thickets of hepatic and renal function, and finally had to finish his course in haste It cannot be recommended for general use, but will be of great interest to more advanced students in giving an indication of French methods There are no references to the literature, no bibliography, and no subject index

### THE POINTING TEST OF BARANY

*Der Zeigerversuch* Prüfung einiger Voraussetzungen für seine klinische Brauchbarkeit By Wilhelm Behrman Uppsala Almqvist and Wiksells Boktryckeri A B

This monograph presents the results of a detailed investigation into the pointing test of Barany A survey of the literature shows that different workers use different methods and have not been able to agree as to which is the best In this clinical investigation eleven different techniques have been tested, and of these the most reliable is shown to be that in which the extended arms held above the head are simultaneously brought forward to the horizontal against a mark with the eyes closed Any error is allowed to remain uncorrected on repeated pointing Using this technique on a large number of normal subjects, the variability both for spontaneous pointing and for pointing after stimulation has been worked out Detailed tables of the fields of variation for the different techniques are given, and should be of great help in determining whether a patient has pointed spontaneously within or without the limits of the field of variation For pointing after stimulation the field of variation increases considerably, and may sometimes be double that of spontaneous pointing

This is a valuable addition to the literature of the labyrinth, and may be read with advantage by all those interested in neuro-otology

### A TREASURY OF ROUTINE PROCEDURES

*Practical Procedures* Edited by Sir Humphry Rolleston, Bt G CVO KCB, MD, FRCP, and Alan A Moncrieff, MD, FRCP (Pp 293, 66 figures 10s 6d net) London Eyre and Spottiswoode, Limited 1938

We are most of us by now familiar with those attractive instruction books which the makers kindly send to us when we buy a new car We study them with just that degree of intelligence and interest which Nature has vouchsafed to us in the matter of motor cars Now has come a somewhat similar kind of book called *Practical Procedures*, edited by Sir Humphry Rolleston and Dr Alan Moncrieff, with a preface by Sir David Wilkie In the course of seventeen chapters we are told by a team of acknowledged experts just how to carry out any of the common routine practices which each of us in his daily round may find it necessary to perform As Sir David Wilkie points out, one of the advantages of holding hours appointments after qualification is that these methods are learnt then as a matter of course By no means all are so fortunate as to serve as hospital residents, to the and to the older men to whom some of the procedures described may appear slightly novel, this book should make a particular appeal A synopsis of the contents will indicate the scope of the book plaster of Paris technique, administration of fluids, indications and technique for blood transfusion, the value and interpretation of blood counts, diagnosis and treatment of poisoning, estimation of blood pressure, technique of aspirating pleural effusions, the use of two-way and three-way systems, catheters and the avoidance of sepsis, clinical examination of the urine, circumcision in children, injection technique

minor surgery of the skin local anaesthesia, soft tissue injuries lumbar punctures syringing the ear

There is a hostelry in the City of London with a world wide reputation for the unique excellence of its steak pudding with etceteras. The feeling of satisfaction and repletion with which the gourmet rises after sampling that pudding may be experienced in a more spiritual sense by the keen practitioner who takes the trouble to read this book. It need only take him a short time but in hour or two will seldom have been spent more profitably for *Practical Procedures* is a veritable Golden Treasury of most valuable information

## Notes on Books

*Normal and Diseased Regulation in the Human Organism* (Jena Gustav Fischer RM 12 paper RM 13.50 board) consists of twenty five lectures delivered before the International Postgraduate Course of the Berlin Academy for Postgraduate Instruction from October 26 to 31 1937

Among the numerous interesting problems discussed attention may be drawn to the following papers. The action of the internal secretions by H W Bansi of Charlottenburg diseases of the pancreas and hormonal metabolic disturbances by Professor Friedrich Lamber of Berlin regulation of the acid base equilibrium by K Gollwitzer Meier of Hamburg regulation of sleep by H Schriever of Berlin regulation of organic metabolism by Herman Bernhardt of Berlin regulation of growth and development by Professor Curtius of Berlin allergy and inflammation by Professor F Klinge of Munster regulation of the circulation by S Dietrich of Berlin reciprocal action between skin and internal organs by Professor H Gottron of Breslau the connexion between metabolism circulation and respiration by Professor Hermann Rein of Gottingen the relations between hormones vitamins and ferments by Professor Werner Kollath of Rostock and the endocrine system and the organ of hearing by Hermann Barth of Berlin

The little work entitled *Fever for Nurses* (Edinburgh E and S Livingstone 5s) by Dr GERALD E BREEN senior assistant medical officer at the North Eastern Fever Hospital (LCC) is based on lectures given by him to nurses in recent years. In addition to a concise and lucid account of the diseases usually admitted to fever hospitals chapters deal with venereal disease the eye ear nose and mouth operative procedures and manipulations the dosage of drugs in common use and a selection of questions set in State examinations for fever nurses during the last three years

Dr W F CHRISTIE whose recent exceptionally clear and concise book on obesity was reviewed in these columns has now produced a monograph *Ideal Weight* which is virtually a summary of physiology in its relation to body weight in such a way as to be easily understood by the lay person. Calories and similar terms are made clear to the non technical mind and the work contains a very useful analysis of some of the common foodstuffs and the food value of various dishes and drinks. Diets suggested for the maintenance of the optimum weight in patients who have already reduced by drastic means are explained in full and will be found to be of the greatest help. In short the book is a useful adjunct to his previous work on obesity. It is published by Heinemann at 5s

A series of papers by Dr J GRANDSON BYRNE on *The Physiology of the Middle Ear* is published in book form by H K Lewis and Co at 18s. The study has been designed to demonstrate whether the ossicles with the tensor tympani and stapedius muscles act together as an apparatus of accommodation analogous to the ciliary

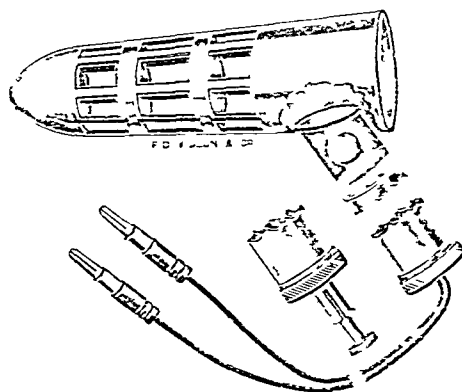
muscle of the eye. In studying the problem the question of reciprocal innervation has to be investigated. The method adopted is to examine the hypersensitiveness of the motor mechanism to adrenaline after section of the post ganglionic paths supplying the muscles. For example after interruption of the efferent path supplying the tensor tympani the retracting mechanisms in the tensor tympani are tested with adrenaline. The middle ear is left intact and kymographic tracings are taken directly from the membrana tympani of the living animal. The author considers that his experiments of which full protocols are given show an analogy between the mechanisms of the tensor tympani and the ocular muscles concerned in accommodation. The work is an elaborate study of the mechanism producing proptosis and retraction of the membrana tympani examined in great detail

## Preparations and Appliances

### PROCTOSCOPE FOR INJECTION OF HAEMORRHOIDS

Dr PHILIP H DALGLEISH (Hull) writes

Having been dissatisfied for some time with all the various types of proctoscope on the market I have devised a model for use in the injection of haemorrhoids. The advantages of this new model are that the whole operative field is visible



at the same time the haemorrhoids do not project into the lumen of the instrument, and there is no irritation to cause discomfort to the patient and be a nuisance to the operator.

The instrument has been made for me by Messrs F D. Johnson and Co., who are supplying it with illumination from a battery in the handle or from a separate battery.

### AN ERGOT PREPARATION

"Neo-femergin" (Sandoz Products 134 Wigmore Street W1) is a mixture of two parts of ergotamine tartrate and one part of ergometrine (ergobasine) tartrate. The investigation of the ergot alkaloids has been a long and difficult process but it would appear that the one most recently isolated—namely ergometrine—is the most important member of the group on account of its rapid action. Ergotamine on the other hand is characterised by a prolonged action which is exerted slowly. The combination of the two alkaloids in "neo-femergin" is intended to have an effect which is both rapidly produced and long continued. Messrs Sandoz have prepared an interesting pamphlet which gives an account of the history of the ergot alkaloid and of practical colloidal and clinical studies made with "neo-femergin". They consider that the compound is particularly well suited for post partum use.

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## INSULIN FOR SCHIZOPHRENIA

Encouraged by the favourable influence of insulin on withdrawal symptoms occurring in the treatment of morphine addiction, Manfred Sakel<sup>1</sup> started the insulin treatment of schizophrenics in the Vienna Psychiatric Clinic, and made the first communication on his results in 1933. Since then the interest aroused has been great, and the treatment, which rests entirely on an empirical basis, has now been tried in Switzerland, Poland, Hungary, Yugoslavia, Germany, Russia, France, and Norway, as well as in this country and the United States. The subject had advanced so far by May of last year that an international congress was held in Munsingen, Switzerland, at which workers from different countries compared their results, it was computed that by then some two thousand schizophrenics had been treated by Sakel's method. The atmosphere of enthusiasm at the congress pervades nearly all the addresses published in the report,<sup>2</sup> and subsequent publications seem to show no slackening of interest. But it has not yet been possible to reduce the difficulties and dangers of insulin treatment below a certain level. The attempts of some workers, particularly in America, to obtain results with hypoglycaemia insufficient to produce coma, with treatment at longer intervals than once every two days and with a reduced number of treatments, have been attended with but indifferent success.

Enough insulin must be given in the fasting state to produce coma, which should last one to one and a half hours before being interrupted, from sixty to ninety such comas may be required before all possible benefit has been obtained. Sakel has laid it down that the corneal reflexes must be absent, or at least that there should be an extensor plantar response, before the coma can be considered deep enough. In such a state the patient is for all practical purposes in a state of profound anaesthesia and has to be watched continuously by eyes skilled to detect any change in his condition. Such complications as epileptic fits and failure to come round after glucose has been given by intranasal tube, as well as the fortunately rare cardiovascular collapse, require the immediate intravenous administration of glucose. If the risks are great the rewards may be considered to outweigh

these in view of the intractable nature of the disorder. Those who have employed this method of treatment have observed that a change in the patient's mental state coincides with the daily hypoglycaemia and that this change tends to last for a period that increases progressively after the termination of each coma, finally, in the favourable cases the change for the better persists. Dr. Muller reported to the Swiss congress that of the 495 cases which had then been treated in Switzerland 40 per cent had made a full social recovery. The recovery rate was 57 per cent in those patients who had been ill for less than one year. Alleviation of the symptoms is claimed even in patients obviously beyond hope of recovery, withdrawn and difficult patients have become more social and able to behave in a more normal manner. It is suggested that treatment with insulin produces a better type of remission—and this has been estimated to occur naturally in from 5 to 25 per cent of cases—but whether it also prolongs the length of the remission is at present not known. Much further research will be required before this point, and many others, can be established.

The voices of warning and scepticism have not been wanting amidst the general enthusiasm. Professor Adolph Meyer has drawn attention to the difficulties of making an accurate prognosis and to the impossibility of saying how a treated case would have progressed without treatment. It is clear that if the schizophrenics have been specially selected for treatment their hypothetical recovery rate in the absence of special treatment cannot be fairly deduced from that of an average group. It has even been suggested that not all the patients treated have been genuine cases of schizophrenia, and that their recovery rate has been enhanced by the inclusion of cases with a pronounced affective element. It is, however, difficult to suppose that such a large group of psychiatrists as were represented at Munsingen had so radically altered their standards of diagnosis, when it came to the selection of cases for insulin treatment, as to include many cases of affective disorder, and most psychiatrists would hesitate to back their judgment to the extent of selecting a group of schizophrenics of whom as many as 57 per cent would make a full social recovery. Less benefit is obtained in patients who have been ill for a long time. In cases of over two years' duration Muller found only 11 per cent of recoveries, and in twenty-seven cases of over five years' duration Plattner and Frolicher<sup>3</sup> did not observe one. If, then, the treatment is to be of value it should be started as soon as the diagnosis of schizophrenia can be made with confidence. The early diagnosis of schizophrenia

<sup>1</sup> *Neue Behandlungsmethode der Schizophrenie*. Perles, Vienna, 1935.

<sup>2</sup> *Schweiz. Arch. Neurol. Psychiat.* (1937) Ergänzungsheft zum Band 39.

<sup>3</sup> *Z. ges. Neurol. Psychiat.* 1938, 160, 735.

will become of increasing importance. The attention of medical practitioners will have to be directed to this point and it will be desirable for students to have special training in the early recognition of the disease. If facilities for treatment are adequate it would not seem justifiable in an otherwise suitable case to postpone treatment with the possibility of a spontaneous remission in mind. Some authors have found a marked worsening of the prognosis with treatment when the illness passes into its second six months. As a corollary it follows that where the facilities for treatment are less than adequate for the potential demand the most recent cases should in general be preferred.

What the ultimate importance of insulin treatment may be we cannot yet forecast. Much depends on whether it shows any decided advantages over convulsion treatment with cardiazol. The latter, though frightening and disagreeable for the patient is certainly simpler and safer and it appears to give comparably favourable results. It is likely to become the method of preference in mental hospitals in which adequacy of medical staffing might easily become a difficult administrative problem with the introduction of insulin treatment. The percentage of failures with both methods even with recent cases is considerable but it may perhaps be hoped that the failures of one method will provide some of the successes of the other. The two methods are not mutually exclusive and many workers have reported encouraging results from a combination of both. Insulin treatment is drastic and costly in the time and attention it demands of both medical and nursing staffs. It is a method only for employment in a hospital or properly equipped institution and by a fully trained personnel. With increasing experience and skill many of the dangers become less real but some there will always be. Nevertheless it has stimulated therapeutic activity by what has already been attained and it will encourage research by the problems it has raised and leaves still unanswered.

### SHIPS AND SEAMEN

We are accustomed to think of our Merchant Navy as the finest in the world and to boast of our ships and our seamen. There is much justification for pride for our ships are well found and our men still live up to the highest traditions of the sea. The passenger in a British ship has no cause for anxiety as to his safety or comfort and the merchant ships his goods with confidence in British bottoms. In every respect save one our ships are unequalled. Give one! Where then have we failed to maintain our pre-eminence? In two

articles entitled 'Ships and Men' the Labour Correspondent of the *Times* has answered this question with full knowledge of his subject a full sense of responsibility in his criticisms and a desire to be fair to both owners and men.

It is in the standards of living accommodation for the crews of our ships that we have fallen behind. For many years port medical officers have drawn attention to this but neither port medical officers nor even the Ministry of Health have anything whatever to do with ships under construction. They are not consulted in matters of hygiene or sanitation and not until a ship is completed and actually in commission have they any opportunity of inspecting the housing of passengers or crew. While the ship is building everything is controlled by the surveyors of the Board of Trade who in relation to the hygiene of ships must carry out the Board's Instructions as to the Survey of Masters and Crew Spaces. The Board has recently revised these instructions and in new ships crew quarters will be vastly improved though as the *Times* Labour Correspondent points out British ships which do no more than comply with the new requirements will yet be inferior in this respect to the ships of the Northern European countries and the United States. Moreover well qualified as the Board of Trade surveyors are to deal with everything concerning the seaworthiness of ships and the safety of life at sea they have no special training in hygiene and consequently in the future as in the past they will so far as crew accommodation is concerned often fail to make the best practical use of the instructions which are issued for their guidance. If a Port Health Authority criticizes the crew quarters in a new ship the owner at once replies that they have only recently been passed by the Board of Trade. He feels aggrieved as do also the Board of Trade surveyors who no doubt have carried out their instructions literally but perhaps without a real appreciation of their significance and therefore without careful thought as to how the space allocated to the crew in a particular ship may be fitted out so as to provide the healthiest and most comfortable conditions for the men who will have to make it their home for weeks or months. There still remain a few surveyors as also some masters whose standards are those of their own early days at sea who take the view that what was good enough for them is at least good enough for the present-day seamen the number of such reactionaries is fortunately dwindling.

Neither the Board of Trade however nor its surveyors are primarily responsible for the deficiencies in crew quarters. The former can only issue general instructions and the latter though

they can exert considerable influence, cannot enforce more than bare compliance with such instructions. The shipowner and the shipbuilder must really share the blame. In many cases it is quite obvious that nobody has given any serious thought to the comfort and convenience of the crew. The shipbuilder's excuse will be that competition is keen, and that if he introduces into his plans for crew accommodation anything more than the bare requirements of the Board of Trade his tender will be higher than that of his competitors who are quoting on minimum standards. The shipowner will say that international competition is so great that he cannot afford to provide luxuries. But the retort might often be that neither of them takes the trouble to consider what improvements can be effected without additional expenditure. They have a stock type of accommodation, and it is provided again and again. Fortunately there are a number of British shipowners who have always taken a keen interest in the welfare of their crews, and there are British ships with crew accommodation which is unsurpassed by that in the ships of any other country.

The *Times* Labour Correspondent acknowledges that the new Board of Trade requirements mark a great advance in the housing of seamen, but observes that "they will do no more than establish minimum standards of health and comfort." It is, however, the existing ships, built before the new instructions were issued, with which he is most concerned. The life of such ships may be anything from twenty to thirty years, and "in the meantime thousands of sailors and firemen will be going to sea in conditions that are not creditable to a seafaring nation unless shipowners resolve that the accommodation which is below standard shall be improved to the utmost extent." It would be unreasonable to expect an owner to carry out extensive alterations in a ship which he expects to scrap in a year or two, but ships which are not more than, say, fifteen years old ought to be brought as nearly as possible up to the new standards. Recommendations are put forward by Port Health Authorities—these cannot be enforced, but shipowners should nevertheless give them serious consideration and make a sincere effort to put them into effect or even improve upon them. The Board of Trade and Port Health Authorities must work in harmony, there must be no departmental jealousy, no feeling that every suggestion from one is a criticism of the other. The Board of Trade has the greater influence, but the Port Health Authorities have the greater knowledge in matters of hygiene. If they pull together much can be achieved in existing ships, if they disagree not they but the mercantile marine will suffer in reputation and efficiency.

At the same time the masters and crews of ships must play their part. It is unfortunately true that speaking generally, standards of cleanliness and personal hygiene are higher among the Scandinavian seamen than among the British. Even Port Health Authorities have tended to advocate the severest simplicity in crew accommodation because it has been found that any elaboration has meant more dirt and greater risk of infestation with vermin. To take one example—wooden sheathing of quarters certainly adds to warmth, dryness, and a general appearance of comfort, but because sheathing harbours bed-bugs it has been discontinued and the bare iron surfaces are simply coated with cork cement to minimize "sweating." This is a most unsatisfactory procedure, a rough surface which harbours dirt is created, and the more it is painted the less efficient it becomes in the prevention of dampness from condensation. Probably close-fitted panels of strong plywood could be made vermin-proof and would make quarters much more comfortable and attractive. Again, wash basins and spray baths are often neglected, and sometimes brass and copper fittings are stolen, so that the seaman is usually provided only with a bucket for washing. Fresh water, particularly hot fresh water, is wasted if it is too readily accessible, and fresh water means space and weight, which mean money in a ship. Many an owner, and indeed many a port health officer, has been discouraged by the way crews have misused good accommodation, and has wondered whether it is worth while to try to make them more comfortable. The best men go to the best ships and stick to them, and no doubt improved conditions would attract to the sea many more men of the right type. The worst ships get the worst crews, and so a vicious circle is set up. But ashore it is no longer held that the slum dweller will make a slum wherever he is housed. He has to be encouraged and subjected to a certain amount of surveillance, but in the majority of cases he responds to his new environment, and his standards of self respect, and consequently of behaviour, are raised. So it will be at sea, particularly if the master and his officers will take an interest in the crew's welfare. A harsh discipline, such as was the rule in sailing ship days, would not be tolerated, but instances could be given of sister ships, in one of which the crew's quarters are dirty and untidy and the crew discontented, while in the other the quarters are clean and well kept and the crew cheerful, the difference being entirely due to the personality of the master or the chief officer.

In coasting vessels conditions are often far worse than in foreign-going ships, for quarters are cramped and hours of work excessive. If



men ration themselves and buy in the cheapest market there is no proper provision for the storage of food no cook is shipped the crew are often too tired to do even such cooking as they are capable of doing and the eternal cup of strong stewed tea completes the ruin of their digestive powers. It is little wonder that when employment ashore is good it is difficult to man the coasting vessel and the tramp steamer.

Tradition dies hard in the Merchant Service. True we have moved on from the salt beef the salt pork the weevily biscuits and the brutal discipline of the days of sail but only lately have we begun to apply in ships the improvements in living and working conditions which for years have been steadily taking place ashore. Obviously owners cannot be expected to run their ships at a loss the industry has passed through a long period of depression operating costs have risen manning scales have been increased competition has become keener. But it is contended that if those responsible for the design the building and the running of ships had carefully considered how much they could afford to do for the crew and not merely what was necessary to meet the requirements of the Board of Trade great improvements would have been effected and many more of the best type of officer and man would have been and would continue to be attracted to a seafaring life.

### IS THOROTRAST SAFE?

The suspension of thorium dioxide known as thorotrast has now been used for some years by intravascular injection to produce radio opacity. The particles are phagocytosed in the reticulo endothelial system and a sufficient dose consequently renders the liver and spleen opaque. Hepato-lyenography was the first use to which thorotrast was put. More recently it has been employed mainly for arteriography which requires a smaller dose and sometimes for outlining the ventricles of the brain. Thorium dioxide has two rather forbidding properties it is retained indefinitely in the tissues in which it comes to rest and it is radio active. The fact that radio active substances may consequently be carcinogenic is now generally familiar. The best known example of this effect was seen in the girls employed in painting luminous dials in an American watch factory by pointing brushes with their lips they contaminated their mouths with small amounts of the paint which contained radium and mesothorium and although the factory concerned was closed in 1924 new cases of osteogenic sarcoma among its employees were still being diagnosed in 1931. We drew attention three years ago to the work of Roussy, Oberling and Guerin<sup>1</sup> who first showed that thorotrast is in fact carcinogenic at least in the rat and more recently F. R. Selbie<sup>2</sup> has reported the production

of malignant tumours in mice by injecting it subcutaneously. The former even recommended thorotrast as a convenient and reliable agent for producing experimental tumours and Selbie strongly condemns its use in patients. W. M. Yates and E. R. Whitmore<sup>3</sup> take a different attitude based on the subsequent study of patients to whom thorotrast was given for the purpose of hepato-lyenography. These fall into two classes consisting of sixty four who died from a few days to three years after the injection in whom the study could therefore be a histological one of the tissues concerned and ten who are still alive at intervals of from four to six years after the injection. In the latter the liver and spleen were still radio opaque at the end of the time the only change exhibited being some degree of migration to neighbouring lymph nodes. It appears therefore as indeed is to be expected that anyone who is given thorotrast keeps it for life. These patients had experienced no ill effects they are actually no better in some cases than others with the same diseases such as leukaemia and hepatic cirrhosis so treated. The histological study of cases coming to necropsy showed no evidence of any injury to the liver or spleen or of any abnormal cellular reaction there and a subcutaneous fibrous nodule due to escape of the fluid during injection showed no proliferative activity when excised four and a half years later. It is recorded that the bone marrow was ever examined. These findings are encouraging so far as the future they will not altogether allay the anxiety felt by the over patients who have been submitted to this procedure. Thorium dioxide is evidently not as actively carcinogenic as radium which in the case recorded by Ross<sup>4</sup> gave rise to a malignant tumour in less than three years but there is still no guarantee that the effect already demonstrated in mice will not be paralleled in man. The process in mice is slow and an equivalent period in human life is unfortunately not less than ten years. Those interested in the subject will find much food for thought in the recent review of the thorotrast literature based on 13 original papers by Reeves and Stuck. In the view of these authors there are serious contraindications to almost every form of its use and they are impressed by the fact that most of those who were originally enthusiastic about thorotrast have ended by condemning it.

### DASHBOARD DISLOCATION OF THE HIP

Not long ago we draw attention to the bumper tractor which may be sustained by an unvarying pedestrian. Further investigation of the pathology of motoring has now brought to light the "dashboard dislocation of the hip." Thirteen of a series of twenty cases of dislocation of the hip described by F. W. Kinser and Frankel were caused by the impact of the tibia or of the knee against the dashboard of a motor car involved in a collision. The patients who sustain

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a "dashboard dislocation" is usually a passenger sitting in a front seat beside the driver, the hip is in the flexed and adducted position, and the force of the impact against the instrument panel is transmitted through the femur to the hip-joint. This may result in a simple dislocation or a dislocation with fracture of the posterior rim of the acetabulum. Occasionally a fracture of the tibia or of the patella may be brought about in the same way. A particular lesion is less likely to be overlooked if the ways in which it is commonly caused are known, and recognition of the possibility of bumper fractures and of dashboard dislocations is therefore important. Not long ago a standard textbook on surgery stated that traumatic dislocation of the hip is rare, and, as a type of injury apt to give rise to it, instanced the forcible abduction due to a patient having one leg in a moving boat and the other on a jetty. There can be no doubt that the condition is not so rare as was thought and that the motor car is responsible for many of the cases of traumatic dislocation of the hip met with to-day.

### HUMAN TUBERCULOSIS OF BOVINE ORIGIN

Last year we drew attention to reports on human tuberculosis of bovine origin submitted to the *Office International d'Hygiène Publique*.<sup>1</sup> Several further notes have now been published.<sup>2</sup> In the U.S.A. the disease is apparently being eradicated as the result of slaughter of all infected cattle and by pasteurization of milk. In 1917 tuberculin tests were carried out on 20,101 animals, and 3.2 per cent reacted positively. In 1936 there were only 0.7 per cent of positive reactors among 22,918,038 animals. About 40 per cent of the population still consume crude milk. This applies particularly to rural districts and small towns, but in towns with a population of 500,000, of all the milk sold 98 per cent is properly pasteurized. Human pulmonary tuberculosis due to the bovine bacillus is very rare in Italy. Only seven such cases were found among 552 consumptives in 1932 and 1933. Cattle suffering from tuberculous disease must be notified and isolated according to the Italian regulations, and the sheds in which they were kept must be disinfected. Only tuberculin-negative animals may be introduced into herds giving milk intended to be consumed in the crude state, and they must be re-tested every six months. Germany's regulations for the prevention of tuberculosis in young calves are stringent. Australia has no legislation specifically directed to this end, but the incidence of tuberculosis in cattle is low, only about 8 per cent are infected and "open" cases are rarely seen. The tuberculin test is, however, being increasingly used. In New Zealand, too, this problem is not so serious as in many other countries, about 20 per cent of extrapulmonary infections in man are caused by the bovine type of bacillus. The report from Poland includes a plea for the setting up of a special commission to decide on the best method of examining market milk for tubercle bacilli, and to arrange for a complete

comparative study of the methods of pasteurization practised in various countries. A valuable paper recently published on human tuberculosis of bovine origin is by A. S. Griffith,<sup>3</sup> who states that "the latest findings in regard to this intractable problem should be made widely known, since they prove beyond doubt that bovine tuberculosis is a serious menace which must be fought with the utmost vigour." The Royal Commission on Tuberculosis, in its interim report in 1907 and in its final report four years later, urged the necessity for measures being taken to prevent the sale or consumption of infected milk. Yet this country still has a milk supply so infected that often 5 to 12 per cent or more of samples of ordinary churn milk contain tubercle bacilli, and more than 40 per cent of the milking cows in this country are tuberculous. Griffith describes his investigation of the incidence of the bovine bacillus in pulmonary tuberculosis and mentions the results of other workers. In 1922 only four cases of "bovine" pulmonary tuberculosis had been recorded in this country, and none had been noted abroad. At present the total number discovered in Great Britain is 163. In Denmark K. A. Jensen found bovine bacilli in the sputum or gastric contents of 5 per cent of 1,774 cases of pulmonary tuberculosis, in Holland A. C. Ruys found them in 6.4 per cent of 204 patients. B. Lange in Germany cultivated bovine bacilli from twelve patients, all "cattle contacts," in three of whom the human bacillus was also isolated.

### INTELLIGENCE AND FAMILY SIZE

The problem of differential fertility is one which is of the greatest practical significance, and it is not unnatural that the relationship between size of family and social status should have been investigated extensively. It is apparent, even upon casual observation, that the members of the wealthier classes have fewer children than members of the poorer classes. The interdependence of family size and intelligence is less easy to ascertain because methods of measuring mental ability have to be devised and standardized before such a study can be undertaken. A recent publication, by Roberts, Norman, and Griffiths,<sup>4</sup> is the third of a series in which work carried out at Stoke Park, under the auspices of the Burden Mental Research Trust, is reported. The quality of this investigation is in all respects of a very high order. The investigators first took very careful steps to standardize the Otis series group test of intelligence in such a way that the series of children of different ages could be accurately compared. They proceeded to investigate the distribution of intelligence in the entire community of a selected area by testing every child between specified ages. If accurate material collected in their survey has now been analysed from the point of view of family size, and there are, no doubt, other types of analysis to which the material will lend itself. A comparison of the sibship of each child with the Otis test score in 3,305 cases leaves no room for doubt that the

<sup>1</sup> *British Medical Journal* 1937, 1, 980.

<sup>2</sup> *Bull. Off. int. Hyg. publ.* 1937, 29, 1649.

<sup>3</sup> *Tubercle* 1937, 18, 529.

<sup>4</sup> *Ann. Eugen.*, Camb., 1938, 8, 178.

exists in the community a significant inverse relation ship between family size and intelligence the correlation is  $-0.224$ . A parallel study of 1271 children who belonged to specially selected groups and who were given the Stanford-Binet tests led to similar results and the corresponding negative association was even stronger when the Binet test was used. The authors give reasons for supposing that the Binet test is a better measure of general intelligence than the Otis test. The partial correlation between intelligence and family size for constant social conditions has been shown to be highly significant by previous studies in the United States. In the Stoke Park investigation however differential fertility with respect to intelligence was found to be diminished if the children were first classified according to social status. For this purpose data from four types of schools which catered for children of different social classes were separately analysed. Within the limits of the highest social class a negative association between family size and mental ability was not detected. The average number of sibs of children in private schools was so small that the reproductive rate it represents must be far too low to ensure survival. The number of sibs was far smaller even than would be expected if it were merely due to the superior average intelligence of these children. This fact clearly indicates an association which is independent of mental grade between social class and fertility. The survey has been so well conceived that these results cannot be criticized as the results of some previous surveys have been on the grounds that the sample of children tested is not representative or that the tests employed are inaccurate. Future investigators who propose to work on similar problems will be well advised to study in detail the methods of Dr Fraser Roberts and his colleagues.

### PAINLESS SELF-MUTILATION

Some almost incredible examples of insensitiveness to pain were mentioned to the Hunterian Society when Dr J H Hunt addressed it on his experiences among Indian fakirs. His remarks related to a sect of Moham medan fakirs at Hyderabad whose annual festival at which self-mutilation occurred had never before been seen by Europeans. Dr Hunt was able not only to show flashlight photographs of the dervish-like dances (which took place in their burial ground at night) but also to exhibit metal spikes and skewers which they used in their frenzies. The sect was founded in Persia in the tenth century the founder believing that the way to heaven was by self-torture and his descendants followed his example. His fourteenth direct descendant migrated to Hyderabad three hundred years ago and there the annual festival was continued in his family with occasional performances in the palaces round about. Lord Curzon in his *Tales of Travel* described similar performances which took place in a dimly lit mosque in North Africa the people in a cataleptic state engaging in an orgy of self-mutilation. Dr Hunt said that apparently no pain was felt and although punctures and gashes were inflicted they seldom bled. A sharp skewer would be run through the cheek

or still more remarkable through the neck coming out on the other side or through the abdominal wall but in such a way as not to touch the peritoneum. The ability to pass a skewer through the neck was the most interesting exploit. If the man were watched it would be noted that he manipulated the other side of his neck with his hand what he did was to pull the vital structures forward so that the skewer passed behind the trachea and bronchus and in front of the vertebral column. A manipulation that was outwardly the most horrifying was the easiest to explain. This was the placing of a sharp instrument behind the eye so that the eyeball was levered out apparently no hurt was sustained and visual acuity remained normal in the eye so maltreated. When these people were children they would put a small stick to the corner of the eye with the result that the eyeball came out a fraction of an inch and with repetition a complete exophthalmos could be produced. The instrument did not actually touch the conjunctiva it went into the corner of the outer canthus. Dr Hunt said that various operations could be offered for the insensitiveness to pain. Many of these people through long usage had a good deal of scar tissue which was relatively insensitive and did not bleed easily and this accounted for the walking and lying on beds of nails. Drugs especially Indian hemp might account for much but the people swore they did not use drugs. The most likely factor was self-hypnotism assisted by reverberations of drums which never ceased throughout the performance. The absence of bleeding might be explained by the fact that the instruments made a slight puncture in the skin and for the rest pushed the tissues aside rather than cut them. Suppuration of the wounds was unknown despite the filthy conditions in which the instruments were kept. In the subsequent discussion some wartime experiences were related in which the victim of a severe wound although fully conscious was not aware of his condition until told of it. It was suggested that the booming of the guns had the same hypnotical effect as the continual drumming in the dervish dances. With regard to fakirs' tricks Dr Hunt mentioned that the late Lieutenant-Colonel R H Elliot from his experience of thirty years in India had declared that none of the fakir performances could be explained without ascribing supernatural powers. The various trick of the mango tree which grew before the astonished eyes of the audience said Dr Hunt, was pure conjuring the conjurer diverting the attention of his audience while he substituted larger plants from under his cloak. The rope trick had never been performed in the open with an ordinary rope but only under a tree where there was a boy in the branches to catch it when it was thrown.

We regret to announce the deaths of Surgeon Vice Admiral Sir Robert Hill KCB who was Principal Medical Officer with the Grand Fleet 1916-19 and Medical Director General RN 1919-23 and of Mr J Bright Banister osteo-physician to Charing Cross Hospital surgeon to the Chelsea Hospital for Women and consulting obstetric surgeon to Queen Charlotte's Maternity Hospital.

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## INJURIES AND INFECTIONS OF THE EYE

BY

ARNOLD SORSBY, F.R.C.S

Diagnosis and treatment of the minor injuries and infections of the eye and eyelids do not call for the specialized knowledge and methods that major ophthalmology requires, but minor ophthalmology does none the less necessitate something of the same faithfulness to detail and care in examination. These are acquirements not beyond the reach of the conscientious practitioner. Since the complicated ritual of "inspection, palpation, percussion, and auscultation" is replaced in ophthalmology almost entirely by inspection, the first essential in the treatment of eye conditions—the minor no less than the major—is facility in the use of the inspection lamp, the condensing lens, and the loupe. That amaurosis which has been defined as the condition in which the patient saw nothing and the doctor also saw nothing most definitely has no place in modern ophthalmology. To undertake the diagnosis of an eye lesion without the aid of suitable illumination is folly, to attempt treatment under such conditions borders on malpractice. Equipped with an irreducible minimum of special information, an average of general knowledge, and the maximum of suitable conditions in the way of illumination, minor ophthalmology falls well within the province of the general practitioner.

### Foreign Bodies

The conjunctival sac is a self-flushing mechanism, so that most foreign bodies are washed away automatically, this being helped by the excessive flow of tears caused by the irritation from the foreign body. It is only when a foreign body becomes embedded that mechanical removal is called for. The simplest mechanical procedure, one which works quite well in a large proportion of cases of foreign bodies lightly fixed on to the cornea, is to pull the upper lid on to the cornea and by a few brisk vertical and lateral movements of the lid set the foreign body free. Once it floats freely in the conjunctival sac it is usually washed away. When a foreign body is more firmly embedded in the cornea instrumental removal becomes necessary. The eye should be anaesthetized by the instillation of two or three drops of 4 per cent cocaine solution, repeated after an interval of two minutes. Whilst the cocaine is exerting its action the eye should be kept closed. When the eye is fully anaesthetized an assistant should keep the lid open the patient being instructed to open the unaffected eye. It is also the duty of the assistant to concentrate the light on to the cornea, using a condensing lens if necessary. Having located the foreign body with the naked eye when it is fairly large, or with the aid of the loupe when it is small the operator should proceed to dislodge it by introducing a dissection needle behind it. The widespread practice of scratching the foreign body away with a flat spud should not be employed, it is a crude procedure which does not dislodge any firmly embedded foreign body, and it damages the corneal epithelium over a large surface, producing an abrasion. The use of the dissection needle is easily acquired, and the one important

thing to remember is that manipulations with a fine point should be in a plane parallel to the cornea and not at right angles to it, as otherwise the cornea may be perforated, with dire consequences. Foreign bodies that have been embedded for a day or so generally leave some discoloration of the bed. Unless one is expert at removing tiny particles it is better to leave that alone. The instillation of some antiseptic drops, such as gutt. emul. o. acriflavin 1 in 2,000, or gutt. coll. argentum 1 in 2,000 or gutt. argyrol 10 per cent, after a foreign body has been removed, is useful. As the cornea remains anaesthetized for several hours it is essential to bandage the eye after this procedure.

Foreign bodies giving trouble are not necessarily always on the cornea. Occasionally much discomfort is experienced from the lodgment of a foreign body, sometimes of surprising dimensions, in the fornix of the upper lid. No search is therefore complete if it only involves inspection of the cornea. The lower fornix is easily seen, and the upper lid must be turned out with due pressure on the fornix to disclose its folds. Foreign bodies of this type are generally quite easily removed with a pledget of cotton-wool, cocaineization of the eye not often being called for.

### Corneal Abrasion

A baby's finger poked into an eye is a common cause of corneal abrasion, scratching of the cornea by other means is relatively uncommon, if one excludes unskilled attempts to remove foreign bodies. Spontaneous abrasions may sometimes occur as a familial corneal lesion. Abrasions are never silent lesions—they produce extreme irritability, and advice is invariably sought. The irritability does not subside until the epithelium covering the exposed nerve terminals is healed again. The discomfort can be alleviated by the instillation of a mydriatic such as atropine 1 per cent in all patients under 40 and in the over 40 who have normal ocular tension, in addition a pad and bandage should be placed over the eye. In most cases the symptoms subside within three or four days, though they may persist for as long as a week.

### Corneal Ulcerations

Trauma is responsible for a large proportion of corneal ulcers. An unremoved foreign body, an infected abrasion, and traumatic loss of tissue can cause a corneal ulcer. The treatment of a corneal ulcer depends entirely upon whether the ulcer is infected or not. The uninfected ulcer has a clean base and clean margins. The infected ulcer has a yellowish or dirty greyish appearance, usually most pronounced at the margins. An uninfected ulcer is treated in the same way as a corneal abrasion. Indeed, there is little difference between an abrasion and a corneal ulcer in the one the epithelium only is concerned, in the other interstitial tissue is also involved. Where infection has occurred serious consequences may result, even to the extent of the whole of the cornea being destroyed. The sepsis must be combated energetically, and most corneal ulcers respond well to carbolic acid. This is a simple procedure, as follows:

(a) The extent of the ulcer is clearly defined by painting out with two drops of watery fluorescein 1 per cent solution.

into the conjunctival sac and washed away with two drops of cocaine 4 per cent the excess fluid being drawn off with clean blotting paper.

(b) The ulcerated area thus marked out is then lightly touched with pure liquefied carbolic acid applied with a match cut down at one end to a fine point which is soaked in the carbolic acid. The amount of acid actually brought in contact with the ulcerated surface and the infected margins is therefore very small. If an excess of carbolic acid has been applied it forms a greyish film on the healthy epithelium; this should of course be avoided but no serious consequences result from the presence of a minute drop of carbolic on the healthy cornea. Special care should be taken with the margins particularly in the case of a spreading ulcer.

(c) The carbolic acid acts as an analgesic as well as an antiseptic but the procedure is none the less painful; the pain often being more intense an hour after the carbolizing than during the process itself. The discomfort can be alleviated by instilling pure castor oil drops into the conjunctival sac and bandaging the eye though bandages should never be applied where there is a mucopurulent discharge. Symptomatic treatment for the pain such as the administration of aspirin, phenacetin etc. may be necessary. If a corneal ulcer does not respond to carbolizing the matter becomes an emergency to be left to an expert for at its best a corneal scar seriously affects vision. Carbolicizing can be repeated at daily intervals but excessive carbolizing is to be deprecated.

#### Industrial Accidents

Many cases of foreign bodies in the eye abrasions and corneal ulcers are industrial accidents. These occur with far too great a frequency for though excellent protective measures are now available they are unfortunately not widely used. Protective goggles that can be comfortably worn have been devised to overcome the special dangers to which workmen exposed to flying chips of stone and metal are liable. The Home Office Industrial Museum has a large collection of such appliances and the example of the Royal Eye Hospital London where there is a permanent exhibition of different types of goggles and special protective appliances might well be copied by other ophthalmic centres. Industrial accidents are not confined to minor injuries; intra ocular foreign bodies are not uncommon and when they do not lead to the loss of the eye they often seriously lower the visual capacity and limit the industrial efficiency of the victim. Every perforating wound of the eye and every case in which an intra ocular foreign body is suspected should at once be referred to a properly equipped ophthalmic department. Radiant energy is also a factor in industrial injuries with a range extending from transient conjunctivitis to cataract formation. These conditions too are largely preventable by the use of suitable goggles.

#### Styes

An isolated styne calls for no further treatment than the epilation of one or more infected lashes together with hot fomentations. Incision of a styne should be avoided. A spreading crop of styes from the infection of adjacent hair follicles is not infrequent and makes treatment of the condition tedious. When multiple infection occurs rational treatment aims at increasing the patient's resistance. In addition a course of colloidal manganese injections is sometimes helpful 1 ccm being injected intramuscularly at weekly intervals for six weeks.

#### Blepharitis

Blepharitis is essentially a disease of childhood. It would appear that there is no local exciting factor but any refractive error present should be corrected. The milder forms of blepharitis respond to washing away of the crusts with bicarbonate solution 20 grains to the

ounce. The lid margins are best washed by means of pledgets of cotton wool soaked in the solution and this should be done at night and in the morning. More severe cases require the washing off of the crusts with pledgets of cotton wool soaked in hydrogen peroxide 10 or 20 volumes and painting the lid margins with liquoratorium B.P.C. every night. This treatment has the advantage of imparting a bluish colour to the lid margin but it is far more efficacious than the measures usually adopted. It has proved singularly successful at White Oak Hospital where the severest cases of blepharitis in London school children are treated. The general factor of blepharitis must not be overlooked; the children affected are often undernourished and attention to their general health is essential.

#### Phlyctenular Ophthalmia

In contrast to the exogenous type of phlyctenular ophthalmia sent by the traumatic ulcer the endogenous type is that is endogenous in origin. Phlyctenular ophthalmia represents one of the commoner types. While phlyctenular conjunctivitis causes much discomfort, it is not a sign of the intense photophobia and corneal involvement is a grave complication not only because the symptoms are much more intense but also because of the sequelae in the form of corneal scarring. In view of the liability to frequent relapses phlyctenular ophthalmia should be regarded as a condition calling for an intensive examination of the child. In practically all cases evidence of tuberculous infection as shown by the Mantoux test will be found, though active clinical tuberculosis is the exception. Phlyctenular may indeed be regarded as a sporadic tubercular reaction in the cornea of a tuberculous child and every care is to be taken to eliminate contact with tuberculous patients. The general health of the child calls for attention and a prolonged stay in the country is indicated particularly in cases in which the cornea is involved. At the height of an attack much can be done to make the child more comfortable. Protection against light can be given by the use of dark glasses supplemented if necessary by a double shade over the eyes. These shades should be home made the material used being some flexible cardboard the shades generally sold do not readily allow discharge to drain away from the eye and are often pained with irritating dust. Where the cornea is involved gutta atropin 1 per cent 2 drops thrice daily should be instilled in the affected eye. Various vitamin preparations as also cod liver oil have been recommended as specifics they are useful in so far as they help to build up the patient. The child with phlyctenular ophthalmia should be regarded as a potential victim of clinical tuberculosis and the general lines of treatment for this type of patient are more important than a narrow adherence to some special medication. Where the corneal complications of phlyctenular ophthalmia consist of relatively evanescent vesicles which break down leaving a small ulcer that heals readily local applications other than atropine drops are to be avoided. The scarring that corneal phlyctenulae leave tends to become less marked with time where the scarring is heavy restoration to the normal is helped by the use of ethylmorphine hydrochloride ("diormin"). This in solution should be instilled into the eye when all signs of irritability have been abated for at least four weeks the strength being increased up from 2 per cent to 3 per cent increasing to 1 per cent at fortnightly intervals. The drops should be used once a day only preferably in the evening and as they are irritating they should be discontinued at the first sign of irritation of the eye.

### Rosacea Keratitis

In contrast to phlyctenular keratitis with its heavy incidence in children, rosacea keratitis is essentially an affection of youngish women suffering from acne rosacea. The corneal lesion may be present when the skin condition is in abeyance, and this affection is to be suspected in cases of recurrent corneal ulceration in women 20 to 30 years of age. Gutt atropin 1 per cent, 2 drops twice daily in the affected eye and dark glasses if necessary, constitute the local treatment where ulceration is active. Of greater importance is the adjustment of any alimentary disorder that may be present. Generally a mixture containing 15 to 20 minims of dilute hydrochloric acid taken by mouth three times a day proves most helpful as hypochlorhydria is commonly present.

## THE CANCER CAMPAIGN

Viscount Hailsham presided at the sixty-sixth quarterly meeting of the Grand Council of the British Empire Cancer Campaign held at 11, Grosvenor Crescent, S.W., on April 11. Those present included Lady Barrett, Mr Stantford Cade, Dr Malcolm Donaldson, Sir Charles Gordon-Watson, Mr W Sampson Handley, Dr G W C Kaye, Professor J McIntosh, Mr W Ernest Miles, Mr W H Ogilvie, Mr Cecil Rowntree, Mr R H Jocelyn Swan, Sir James Walton, Sir David Wilkie, and Dr R W Scarff (honorary secretary of the Scientific Committees).

A further sum of £1,338 was allotted for one year for the extension of the national propaganda work being carried out by the Central Propaganda Committee. The committee will now proceed to arrange these free educational lectures in Cornwall, Devon, Dorset, Gloucestershire, Somerset, Wiltshire, and also in South Wales. Dr Malcolm Donaldson, the chairman of the committee, reported that to date over 700 public lectures had been given in the fifteen English counties which have already been organized. A report was received from the Co-ordinating Committee, which represents headquarters and the principal autonomous provincial councils of the Campaign concerning the production of a propaganda film to be used in conjunction with the educational lecture schemes. It was unanimously decided that such a film should be produced by the Central Propaganda Committee in collaboration with the autonomous councils.

### Investigations in Progress

Sir Charles Gordon Watson, vice-chairman of the Clinical Cancer Research Committee reported that the organization for the statistical cancer inquiries in the teaching and special hospitals of London and the hospitals of the London County Council and the Middlesex County Council had now been completed. All these institutions had appointed registrars to take charge of the records at their respective hospitals and the headquarters arrangements were being perfected to deal with the data concerning over 17,000 new cases of cancer yearly in the metropolitan area of London. Grand Council confirmed the recommendation for the appointment in the near future of a full-time medical secretary and registrar at headquarters for this purpose.

A further grant of £1,000 for one year was placed at the disposal of the North of England Council of the Campaign to enable the short wave investigations to be continued under the direction of Dr F Dickens and Dr S F Evans. This work, which is a continuation of that which appeared in the last annual report of the Campaign and in a recent issue of the *American Journal of Cancer* concerns the investigation of the effect of varying forms of heat upon malignant tissues.

### Early Diagnosis and Treatment of Cancer

The incidence, prevention, and treatment of cancer was discussed by Sir Arthur MacNalty, Chief Medical Officer of the Ministry of Health, in an address delivered on the following day at a meeting of the British Empire Cancer Campaign at the Mansion House. The Lord Mayor of London, who presided, explained that the Minister of Health, who was to have delivered the address had been detained by business in the House of Commons.

Sir Arthur MacNalty said that, although cancer had now risen to second place in the list of fatal diseases in this country, it did not necessarily follow that the causes of the disease, whatever they might be, were becoming more prevalent. Increasing longevity (to day people lived on the average, fifteen years longer than they did a generation ago), increased ability to diagnose cancer in difficult cases, and true certification of the causes of death all played a part. The main lines of attack on the disease were prevention and treatment. On the side of prevention it could be said that the study of the causes of cancer was being carried on with great vigour throughout the world, and the boundaries of knowledge had been considerably extended.

In the realm of diagnosis and treatment radium and x rays were now associated with surgery, and the large hospitals of the country were now supplied with facilities for treatment by radium. Excluding London, there were at present in Great Britain twenty-two radium centres of which seventeen were in England, one in Wales and four in Scotland. The chief national concern was clearly that facilities for early diagnosis and adequate treatment should be readily available to the whole population. That adequate facilities were still far from being readily available appeared from investigations made by the Radium Commission and in the Ministry of Health. The problem was to ascertain how a small number of hospitals specially equipped with radiation plant might serve the whole population, in other words, these hospitals should serve for the purposes of cancer, areas larger than those they normally served. The extension of the sphere of influence of such hospitals and the creation of more treatment centres both offered possibilities as means of approach to the problem, but whatever arrangements were adopted it was evident that to throw a burden of this national kind wholly upon a small number of hospitals would be impracticable.

### Need for Joint Efforts

The Minister of Health felt satisfied, and was supported by the views of the Radium Commission, that the position could best be met, and indeed could only be met, by more active co-operation on the part of local authorities. Broadly speaking, the division of function between voluntary hospitals containing treatment centres and local authorities would be that treatment would remain with, and be carried on in, the hospitals (the "centres"), while the peripheral "field" work would rest with the local authorities. Another important work was that of bringing to the notice of the public and of medical practitioners the provision of additional facilities. The Propaganda Committee of the British Empire Cancer Campaign had done good work in this connection and a wider provision for diagnosis and treatment should enable more people to follow the advice, "Go and see your doctor without delay."

"The general view of the situation," concluded Sir Arthur MacNalty, "is that, even though the results of research may eventually put into our hands one or more means of prevention, their effects cannot be expected to be immediate and striking. Until those effects can be fulfilled we must expect the usual incidence of cancer and consequently provision of means for diagnosis and treatment cannot be regarded as other than essential."

## CRIME AND CRIMINALS

## STATISTICS FOR 1936

One reflection prompted by a study of the *Criminal Statistics 1936*<sup>1</sup> is the small proportion of all crime that is really serious. In 1936 the total number of persons found guilty of offences of all kinds was about 825,000. Of these over 99 per cent were dealt with by magistrates and under 1 per cent were tried by jury. Nearly 60 per cent had committed traffic offences. Nine per cent had committed indictable offences of which the great majority were thefts and the remainder had misbehaved themselves in various non indictable ways—for example drunkenness, failure to take out dog licences and Sunday trading. Of all these offenders 81 per cent were fined, 10 per cent were dismissed with a caution, 5 per cent were bound over (3 per cent being put on probation) and 3 per cent were sent to prison or Borstal. The figure for traffic offences was 13 per cent higher than in 1935. The curve is rising steadily but so is that of the total number of vehicles on the road. From 1920 to 1932 there was a continuous decline in the number of persons convicted of drunkenness, since 1932 there has been a continuous increase. It is permissible to speculate whether this is not part of the increasing tendency towards insecurity, pessimism, and chaos which is showing itself in various forms all over the world. On the other hand the figures for non indictable assault have shown a steady fall since 1931. Eight times as many males commit indictable offences as females and the incidence of crime is highest under 14 and drops steadily with the advance in age.

## Young Offenders

The increase in crime among persons under 17 continues but the rise in 1936 was not nearly so great as in 1935—possibly because the population as a whole is settling down to the operation of the Children and Young Persons Act, 1933. This Act with its provision for the optimistic treatment of young offenders probably induced many more persons to prosecute children and young persons than would have done so before. The figures show wide discrepancies between the different districts in the use of probation for persons over 17. The percentage for the whole country of adult offenders placed on probation was 19.1. In the Metropolitan police district it was 29, in Hertfordshire 50, in Bradford 45 and in Nottingham City 40. In Liverpool the percentage was only 10, in Manchester 12 and in Leeds 14. In the West Riding of Yorkshire it was 7 and in Durham County 6. In Bristol it rose during 1936 to 21 from 12.8 the year before and in Glamorgan it rose from 4.8 in 1935 to 10.1 in 1936. Of the juveniles found guilty of indictable offences 48 per cent were placed on probation.

The police of course know of more crimes than are proved in court partly because the offender either cannot be detected or for some reason cannot be prosecuted or because he admits former offences in order that they may be taken into consideration when he is being sentenced for another offence. In 1936 the police knew of over 176,000 larcenies against 165,000 in 1935. They knew of over 38,000 cases of breaking and entering against 26,000 in 1935. These figures include a large number of minor crimes. The value of the property stolen in 180,000 cases of theft was under £5 in 79 per cent and over £100 in only 1.3 per cent. The number of sexual offences known to the police was 4,358 against 3,835 the year before and the number of cases of violence against the person 2,545 compared with 2,431. In 1926 the police knew of 99 cases of murder of 112 victims over one year old. In 33 cases the murderer or suspect committed suicide. In 61 cases 64 persons were arrested in five cases no arrest

was made. Of these 64 prisoners eleven were found insane on arraignment and fifteen were found guilty and insane after trial. Ten were acquitted and 23 were convicted. Of these two were certified insane, thirteen were reprimanded and sent to penal servitude and only eight were executed. The remainder died before trial, were rescued abroad or were discharged at the police court.

## Growing Incidence of Suicide

Five thousand persons committed suicide and over 200 cases of attempted suicide came to the knowledge of the police. The steady growth in the incidence of suicide which has been noted since 1921 is accounted for at the Home Office by the increase that has taken place in the higher age groups of the population for the number of suicides occur in the higher age groups. Among men under 55 the suicide rate was 10.6 in 1936, than in 1911, among men over 55 it was 11.1. Among girls and women under 25 it was 10.1, than in 1911, among women between 25 and 45 it was 11.1, higher and among women over 45 it was 10.1, higher. The Home Payments Act 1933 has had an effect which was hoped of decreasing the number of persons committed to prison for debt and for other reasons sums due from them—for example from men in the orders of affiliation and rates.

## SCIENCE IN MODERN LIFE

## WORK OF THE N.P.L.

The National Physical Laboratory is by no means a aloof scientific institution. Its work as its name implies testifies is closely related to the needs of the man in the street—literally in the street because among the major matters referred to in the present report are the lighting of streets and street noises. A prolonged investigation is taking place in order to ascertain the advantages of lighting schemes or different colours for enabling persons and objects to be picked out on the roads at night.

## The Control of Noise

As for street noises tests in which two hundred persons have assisted have been carried out to decide what sound emitted by a motor horn may be called a warning without assaulting the nerve. It is recommended that the sound should not exceed 140 phons, the phon being the unit of equivalent loudness recommended by the British Standards Institution. The motor horn may be another noise nuisance on the road. Here owing to the lack of noise measuring apparatus and in all this work measurement comes first and afterwards rectification—the silencing of motor cycles has not been uniformly carried out. A new investigation of the problems of both exhaust and mechanical noise has been started at the Laboratory using the accurate noise meters and analysers which have now been developed and it is hoped that the information obtained will enable improved silencers to be designed for the various types of machinery in use. The London Passenger Transport Board has also requested the assistance of the Laboratory with a view to the reduction of the noise of tube trains. The noise emitted by aircraft at high speed is becoming a serious nuisance and as air raid precautions appear to be a part of our daily existence it is just as well that the Laboratory should be placing on a scientific basis the sounds emitted by sirens and maroons.

In a noisy world the authorities at Teddington are doing their best to discover the out-pedal words from outside noises of a passing nature are the words which are com-

<sup>1</sup> Cmd 5690 H.M. Stationery Office 1938 35 6d

pelled to live with indoors, especially with the increasing habit of people in cities to live on the top of one another. The transmission of sound through walls and floors has been studied, and architects have been assisted in the designing of silent buildings. Possibly in flats the source of greatest irritation is the conduction of sound along water pipes and it has been found that by inserting short lengths of rubber hose in the pipes this trouble can be eliminated. A large amount of work remains to be done not only in the suppression of sounds we do not want to hear but in the better transmission of sounds that we do. The acoustics of public halls is far from perfect, as witness the frequent difficulty in hearing and the hasty improvisations at Annual Representative Meetings of the B.M.A. Microphones and amplifiers sometimes make matters worse instead of better. We have known a microphone set up such interference in its vicinity that it was impossible to hear the speaker a yard away, while a hundred yards away his voice rolled like thunder. Workers from the Laboratory have been engaged during the year in advising on the acoustical properties, now said to be perfect of what is probably the most magnificent assembly hall in the world—that of the new League of Nations building at Geneva. A pity if, having got it perfect acoustically, no sounds should be heard there save the echoes of a mausoleum!

#### Direct Services to Medicine

In two other directions of interest to medicine the Laboratory has lately done good service. It was the publication of its work on the measurement of gamma ray dosage which influenced the important decision at Chicago last September by the International Committee on Radiological Units to generalize the definition of the "roentgen"—the unit of x-ray quantity—to include gamma radiation. The employment of gamma rays of radium independently of or in conjunction with x-rays makes it desirable that both kinds of radiation should be measured in terms of the same unit, and the use of the same unit of quantity has been shown to be practicable. When the "roentgen" was introduced ten years ago the maximum voltage used in x-ray treatment was of the order of 200 kilovolts. Nowadays much higher voltages are used and it is important that satisfactory measurements of quantity should still be possible.

The other matter relates to the risk of explosion of anaesthetic vapours as a result of sparks arising from static electrification in operating theatres. Experiments have shown that it is possible by the movement of blankets and the like to produce electrification of sufficient intensity to give rise to a spark capable of igniting the mixtures of gases and vapours commonly used for anaesthetic purposes. Possible methods of avoiding this risk have been studied and the provision of earthing chains trailing from operating tables, trolleys and other equipment on to a semi-conducting floor is recommended while the use of the partially conducting rubber now available promises to be of value.

An international postgraduate course in malariology will be held in Rome from July 18 to September 17. The language used will be French and many interpreters will be available for those taking part in it. The fee payable is 1,500 lire and this sum must be received before June 20. The aspects of malaria to be dealt with include haematology of the disease, protozoology, microscopical diagnosis, the pathological anatomy and clinical considerations, entomology, epidemiology, prophylaxis, field work, malariatherapy from the psychiatric point of view, laboratory work and a visit to a clinic. Excursions in connexion with this course will be made to various sanitary stations near Rome, Ostia, Venice and Sardinia. Further details may be obtained from Professor G. Bastianelli, Istituto di Malariologia, Ettore Marchisio, Policlinico Umberto I, Rome.

## Reports of Societies

### AIR RAID PRECAUTIONS ORGANIZATION OF MEDICAL SERVICES

At a meeting of the United Services Section of the Royal Society of Medicine on April 11, Colonel A. G. BIGGAM presiding, a paper was read by Colonel E. M. COWELL on the organization of medical services in air raid precautions.

Colonel Cowell explained that the suggestions he had to put forward were made after three and a half years' experience in a casualty clearing station in France during the great war and nearly four years' work as Red Cross organizing officer in Surrey in connexion with the air raid precautions scheme. Practically every 'civilized' country in the world was preparing to defend its civil population against air warfare, including gas. He showed some interesting posters issued by the Soviet Government. In Paris a large number of underground shelters had already been erected, including first-aid posts which were practically hospitals of considerable size. In Berlin a first aid post was organized at each of the 200 police sub-stations. Something was to be learned from the war in Spain, where, however, gas had not been used. In eighteen raids on Barcelona—earlier than the continuous raiding which took place in the middle of March—over a period of two months 100-lb. bombs were chiefly used and the total casualties were said to be 700 killed and 700 wounded.

All European countries, except perhaps Turkey, could attack these islands by air. The modern high speed bomber could fly at a height of 20,000 feet and at a speed of 200 or more miles per hour, carrying four or five 500-lb. bombs. A formation of thirty-six machines, attacking a given locality, dropping a ton of bombs in an area with a population of from 30,000 to 50,000 per square mile, might be expected to cause 1,000 casualties by night or 2,000 by day. The ratio of killed to wounded was likely to vary from 1:1 to 1:2, and the proportion of walking to lying casualties might be taken roughly as 2:1, but half the "walking" cases would require sitting transport. With regard to gas casualties many uncertain factors such as weather conditions would come into play. Estimates of what was required to gas a big city had been made, the figures were such that the gassing of a capital might be regarded as practically impossible. He also gave some figures for possible casualties from incendiary bombs, and pointed out that the uncertainty of the locality to be attacked and the absence of warning made it imperative that medical units should be mobilized everywhere, and some units which would not be actually engaged must be mobile enough to reinforce the units in less favoured localities.

#### Medical Personnel

In considering the organization of the medical services Colonel Cowell emphasized the need for the appointment of surgical and medical consultants in time to assist in the training of volunteer surgeons and physicians, anaesthetists, and general duty practitioners. The Air Raid Precautions organization was the greatest task ever imposed on this country, and up to the present practically a voluntary one. In densely populated areas a percentage of 1:30 of the population must be found and trained for medical purposes only a personnel of 1:100. The medical personnel approximately 1 in 25 should be doctors. Dental surgeons would be useful in organization, some to act as assistants to operating surgeons, others, after a little extra training as medical students in their final year, should be called upon in exactly the same way. In the early days of the services of Territorial troops might be called upon, the local authority, and steps should be taken to



familiarize them with the use of protective clothing and the handling of stretchers. As many of the civilian casualties might be women and children, more easily handled than men, a certain number of women might be trained in this duty.

The collection of casualties would probably have to be done in darkness. After the rescue parties had brought the casualties out of damaged buildings the duties of the medical personnel would begin. A stretcher party would need a stretcher in an oilskin cover, a blanket, a surgical haversack and spare respirators. Colonel Cowell suggested that the criss used by stretcher parties should have a zip fastener and should contain triangular bandages, shell dressings, splints, tourniquets, scissors and safety pins also labels for priority cases, an electric torch and a notebook for messages. In towns where large numbers of casualties might occur it would be advisable to send all the walking and some of the lying cases to the first aid post and certain of the lying cases to the casualty clearing hospital direct, the dead being taken to a central mortuary. Motor ambulances should be stationed two at each first aid post, two at the casualty clearing station, four at headquarters in reserve and three, for evacuation at each of the base hospitals.

A certain number of slightly wounded and gassed cases would make their way home and call in their own doctor. With this fact in mind appeals had been made by the Home Office and the British Medical Association for doctors to study the treatment of gas casualties. Private practice, however, would be uneconomical in manpower; large numbers of doctors would be required to serve with the medical units and it was hoped that the medical profession would collaborate with the local authorities and volunteer their services for this organized effort.

#### Selection of Buildings

For first aid posts schools were convenient and in view of gas cases the necessary alterations, including the provision of bathing rooms should be taken in hand. It would not be possible to render existing buildings entirely proof against bombs, splinters, fire and gas, but attempts should be made to do the best possible in the circumstances. Where practicable sufficient 6 ft trenches should be dug in the immediate vicinity, these if rooted and covered with sandbags would afford some protection for patients who could walk. Where new hospital or school buildings were being erected the ceilings of the ground floor should be made strong enough to carry the structure above and include a 12-in layer of concrete. The roof if tiled or slated could easily be pierced by thermite bombs. To prevent fires the attic floors should be covered by a layer of concrete slabs.

First aid posts should be large enough to accommodate 300 patients—100 lying and 200 walking. The personnel of the first aid post should be fifty, including twenty-five nursing orderlies. In Colonel Cowell's opinion the presence of a doctor at the first aid post was essential. He would sustain the morale of the patients, diagnose doubtful cases, give priority to urgent ones, perform immediate operations required to save life and exercise general supervision over the medical work.

As to the casualty clearing hospital, tents or huts were undoubtedly ideal but it was difficult to render these gas-proof and existing buildings would in most cases be chosen. Probably in future wars forward medical units would best protect themselves by camouflage. At the heights at which aeroplanes might now fly, signs would be indistinguishable. The forthcoming International Red Cross Congress in London was to consider the question of securing recognition of neutralized hospital areas or *villes sanitaires*.

The casualty clearing hospital was the most important unit in the medical organization. One such hospital was required for 100,000 population. It should accommodate 200 cases, seventy-five only of these to be in beds, the

remainder on cots or stretchers. The hospitals should be in groups of two, three or four. The officer in charge should be a doctor with an assistant or deputy for night duty. The personnel per unit should be ten medical officers, twenty nurses, three duty officers, thirty nursing orderlies and others bringing the total voluntary personnel to eighty. In such a hospital 100 lying cases could be dealt with by six teams in eight hours. The treatment room should be large enough for eight stretchers and for sitting cases. The best results would be obtained with teams of seven persons—surgeon, anaesthetist, six stretcher orderlies and two stretcher bearers. The use of a portable system was advocated, whereby two tables per team allowed the second case to be prepared for operation while the first operation was being completed. The mobile operating theatre rushing to a casualty on a stretcher and operating on the spot, appealed to the imagination, but it was bad for the patient and hardly to be recommended. The surgical maxim must remain: Efficient first aid and rapid evacuation.

Finally the base hospital should be as far removed as possible from any definite target. In general terms it would approximate closely to an ordinary civil hospital. Accommodation for 1,000 casualties per 100,000 population might be required, but all localities would not be attacked at once and one hospital would be available. The work of the doctors at the first aid posts and casualty clearing hospitals would only be of short duration; raids would not last continually day after day and therefore the would be able to attend the base hospital. Here as in every part of the organization Colonel Cowell gave details of the personnel and accommodation required and concluded with a time table of performance of medical units in an imagined air raid on a concentrated population.

#### General Discussion

Air Commodore W. TYSSELL said that in a country became a target for attack the responsibility would have to be on national lines. The arrangements should be centrally co-ordinated on basic principles which could be applied to civilian emergencies equally in Navy, Army or Air Force emergencies. This meant a uniformity in the terminology, procedure and technique given in textbooks. If ordinary administrative instructions and from a co-ordinated policy were centralized and then applied with sufficient elasticity to allow for modification to suit local or defence force circumstances it would be of considerable help in dealing with panic—the first element in all bombing and gas attacks. The arrangements for evacuation, treatment and disposal of casualties should be based on the assumption that casualties would only be in a forward area and that once they had been placed on to clearing stations they were relatively safe. But in the event there would be no relative safety and therefore it would be necessary to provide in every part of the country arrangements for collection; this was being done by the Home Office. It was in the case of the co-incident destruction of a first aid post and a clearing hospital that Colonel Cowell suggested co-operation and co-ordination would come in where another area would be requisitioned for help. This emphasized the need for central co-ordination in the first place, then centralization through central channels. Yet another problem was how to overcome the apparent incompatibility of treatment, shock and collapse and decontaminating the patient. This applied particularly to mustard gas. The protection of hospitals against proved mustard gas was a problem that needed solution.

Dr J. N. DOBBIE (London County Council) said that the term casualty clearing hospital was a misnomer, as each first aid post and clearing hospital would be in the front rank. Hospitals would have to be established out of London. He suggested tent or huts in a building district. There might be established under the National Fireworks Campaign as holiday camps and hostels or huts and turned into the other use it and when the need arose. School buildings did not lend themselves to conversion into hospitals.



Dr DONALD STEWART (Imperial Chemical Industries) said that he had been called upon to arrange medical services to deal with possible casualties among factory workers in the Midlands and although the relevant Home Office publications were helpful when it came to the accurate disposition of personnel he found little apart from R A M C training, which was of help. The problem of rehabilitation and return to work of those persons who might be injured in an air raid was one that should be considered now as part of the whole scheme. It took several years of war after 1914 to evolve satisfactory schemes for rehabilitation and to make traumatic war surgery a definite entity. To deal with the problem these emergency measures had to be put into force, and these measures had a most significant bearing on the present day problem of treatment and rehabilitation in general. Dr Stewart suggested that thought should be given to this subject now and the practical application of the rules which were worked out during the years 1914-19, and the lessons then learned should be seriously reconsidered by the medical profession. One other point concerned the wearing of protective clothing. Recently he had seen a number of strong healthy men taking part in decontamination and anti gas measures who were wearing this clothing and found themselves quite unfit to carry on for longer than a few minutes. On this same matter of gas-proof clothing Surgeon Commander S G RAINSFORD said that the Admiralty carried out an investigation some years ago and were surprised at the length of time the men could work.

Group Captain STRUAN MARSHALL drew attention to the 'contra-gas tent'—an oilskin tent impervious from the outside and containing a small oxygen apparatus. Being soft-walled this tent could stand a great amount of blast without breaking. Dr D W WALKER referred to the need for all medical officers to be trained in anti-gas treatment. It was not always easy to secure such training.

Colonel COWELL in reply said that his paper would appear in full in the *Journal of the R A M C*. The question of the provision and co-ordination of a central staff was very important, and he hoped much would be done in that way shortly. It was felt that each local authority knew its own difficulties and could provide its own organization but with regard to medical services there must be co-ordination with neighbouring authorities under central control. He agreed that allowance must be made for medical units themselves becoming casualties. With regard to admission to hospitals if serious cases were sent straight to the casualty clearing hospitals these would be swamped, by using dressing stations first cases could be fed to clearing hospitals as arrangements were made. Territorial London general hospitals were not in London, No 2 was at Epsom and No 5 at Orpington. He added that most local authorities had developed a conscience in this matter of air raid precautions. He had worked at it in Surrey for three and a half years and had organized a personnel of 10 000 for the Red Cross. It was not difficult to get people to begin with, the difficulty was to keep up their interest.

### JUVENILE NERVOUS AND MENTAL INSTABILITY

A meeting of the Liverpool Medical Institution was held on March 17 with the president Dr E GILBERT BARK in the chair. Dr MURIEL BARTON HALL read a paper on juvenile nervous and mental instability, based upon records of 1 000 consecutive cases of young persons in the second decade of life.

Dr Hall said these cases were examined between 1924 and 1937. Nearly half (496) were seen at the Liverpool psychiatric clinic, opened in May 1924, 186 were seen at the Liverpool child guidance clinic, opened in November, 1929, 139 were seen in the department of psychological medicine of the Liverpool Royal Infirmary, opened in 1930 the remainder (179) were cases from her private practice. The series included every case of a boy or girl

who was aged not less than 10 or more than 19 who had first examined, 387 patients were under 15, 613 were over 15. Unselected in any way, the condition connected to the cases was that by those who referred them in the course of ordinary practice all were considered suitable to be dealt with by a medical psychologist. There were 554 girls and 417 boys, with the exception of one girl who was unmarried. The cases were referred for investigation and treatment from three main sources:

- 1 General practitioners, consultants and specialists 431
- 2 Social organizations concerned with the moral and physical welfare of young people 376
- 3 Public authorities, including school medical officers, public health officers, Home Office and police court officials 192

Each case was recorded in detail according to a prepared system, which included a record of the family and personal histories and of physical and mental examinations and a statement regarding the diagnosis and prognosis arrived at and the recommendations made. The personal history included details of birth, early development, physical health, school progress, general conduct, environment and difficulties or changes, and occupations followed. Each patient underwent a general physical examination in which particular attention was paid to the central nervous, endocrine, and allied systems, a mental examination was conducted in every case. Where necessary, and this included the majority of cases, detailed psychometric examination of intellectual development and powers was undertaken. The chief purposes of the investigation, however, were those of arriving at a diagnosis, recording a prognosis, making recommendations concerning treatment and instituting a system whereby each case could be followed up at subsequent intervals for the purpose of checking the two former and noting whether the recommendations had been put into practice and, if so, with what result. The cases referred comprised 515, in which disorders of conduct varying from laziness, violent temper, and pilfering to truancy, stealing, vagrancy, and forgery were the prominent symptoms, 448 in which nervous symptoms including fears, obsessions, dreads, depressions, stammering, and enuresis were noted, and thirty seven in which the outstanding difficulty was an educational problem such as backwardness in school work or failure in competitive examinations.

### Aetiological Factors

The main aetiological factors explored were those of (i) heredity, (ii) intellect, and (iii) home environment. A psychopathic family history was found to be present in 56 per cent of cases. A positive finding was indicated where there was a history of nervous breakdown, nervous insanity, suicide, mental deficiency, alcoholism, epilepsy, tuberculosis, syphilis, immorality, violent temper, crime, delinquency, or allied disorder in the patients' grand parents, parents, aunts, uncles, or siblings. In view of the fact that relatives tended to show reluctance in revealing adverse family traits it was possible that 56 per cent represented a minimum figure, a hereditary taint was found to be present in relatives of 70 per cent of mentally sound people. The difficulty of disentangling inherited and acquired factors in any particular case was such that it was not considered possible, in so varied a group of cases as this paper embraced and where figures for a control group were not available, to make positive statements regarding the part played by heredity, although in many of the cases it was undoubtedly a contributory factor.

In 562 of the cases the intelligence quotient was assessed at by the Stanford revision of the Binet-Simon scale. In the remaining 438 it was assessed on school records. Taking the series of 1,000 cases together 60 per cent were considered to be of very superior intelligence, 41.9 per cent of superior intelligence, and 29.4 per cent were dullards.

168 per cent were considered to be mentally defective. These figures differed from those expected from a sample of the ordinary population in two respects—namely in the high proportion of dullards and of mental defectives which the series contained.

In the investigation and treatment of adult cases of nervous and mental instability the history of an unhappy childhood was of frequent occurrence. It was not surprising, therefore, in investigating the nervous and mental instabilities of adolescence unhappy or unsatisfactory home circumstances were found to have contributed to a considerable extent. Nearly 45 per cent of the cases were found to have suffered parental loss as a result of which the child had lacked dual parental control or had come under the care of a step parent or other relative, or had been fostered, adopted or placed in an institution. Cases of desertion, separation or divorce were numerous. In a number of cases a parent was an inmate of a mental hospital in others the father was employed overseas. The series included seventy-seven cases of young people of illegitimate birth. Excluding this group 14 per cent of the cases were only children, in 22 per cent the patient was the eldest child, in 20.8 per cent the youngest in the family. The greatest proportion, however, actually 35.5 per cent, were found to belong to none of these groups but to the middle section of families of three or more children. There were twenty cases in which the patient was one of twins but no case in which both twins were brought for advice. Ninety-nine had been subject to court proceedings, seventy-three had been placed on probation, fifteen had been inmates of Home Office approved schools, three had been to Borstal, two had served terms of imprisonment, seven girls were the mothers of illegitimate children and thirteen of the young people had attempted suicide. After full investigation it was found that each of the cases could be placed in one of six main groups according to the diagnosis arrived at.

#### Grouping of Cases

The largest group comprising 33 per cent was made up of those cases diagnosed as conduct disorders for which no mental, physical, intellectual or purely nervous cause could be found. Cases of psychoneurosis amounted to 31 per cent, this term being used to include those conditions diagnosed or described as neurasthenia, psychasthenia, anxiety states, anxiety neurosis, anxiety hysteria, compulsion neurosis, conversion hysteria and such other conditions as stammering, enuresis and masturbation. A further 16 per cent were cases of mental deficiency and 12 per cent were found to be suffering from some organic disorder to which the symptoms complained of were attributable. Chronic epidemic encephalitis and epilepsy were the commonest of these, there being twenty-six cases of each disorder in the series. Organic lesions of the central nervous system and cases of chorea accounted for a certain number and the remainder were found to be suffering from disorders of other systems. Some 7 per cent were considered to be psychotic—that is mentally disordered, true psychotic conditions in children under 15 are of rare occurrence but become considerably more prevalent between 15 and 20, the two common varieties being dementia praecox and manic-depressive psychosis. Only 1 per cent of the cases were normal individuals seeking vocational or educational advice. Some attempt was made throughout to assess the prognosis in each case. In only 29 per cent was the prognosis considered to be favourable, while in 34 per cent it was considered to be definitely unfavourable. In the remainder it was not found easy to make a decision either way.

Treatment tended to fall into three main categories: (i) active psychological treatment which was considered in the present series of cases to be applicable in 33.3 per cent; (ii) social adjustment, or a means whereby some adjustment was brought about in the home, school, train-

ing or occupational environment which relieved the stress upon the patient and thus assisted him in overcoming his nervous or behaviour symptoms—21.6 per cent were considered to require this form of treatment; and (iii) placement which may take the form of voluntary placement in a home or training school or may require some legal measure under the various Acts relating to mental disorder, mental deficiency or unruly behaviour and was recommended in 26.8 per cent of the cases. Fall common causes of nervous and mental breakdown in young people arose out of attempts to adapt to what were for them quite unsuitable occupations. In 6.2 per cent of the series a change in occupation was the sole recommendation made, 6.4 per cent were considered to be in need of treatment along general medical lines and in the remaining 55 per cent it was not felt that a recommendation could be made.

#### Late Results

An attempt to carry out a follow-up of the cases diagnosed and treated as well as of those to which no recommendations were made was considered to be an important feature in the investigation. The matters inquired into in the follow-up were (i) general physical and physical state of the patient as compared with condition at the time of the initial examination; (ii) situation as regarded employment; and (iii) place of residence. Although an after history of one year or more had already been obtained in 52 per cent of the cases it had so far been possible to obtain a complete five year follow-up in only 12 per cent. Of the 120 cases in which the follow-up had been completed 40 per cent had made a complete recovery, 24 per cent a partial recovery, 17 per cent were unchanged and 19 per cent had deteriorated or died.

The three main sources from which the cases were derived were medical, social and official. An analysis of the findings in relation to each of these sources revealed considerable differences between the characters of the group referred by medical practitioners and those of the other two groups in which the findings showed such close similarity as to warrant their being considered together. The great majority of the first group were referred on account of nervous symptoms whereas in the other two groups the majority were referred on account of some conduct disorder. In the first group a sound family history was more commonly present than an adverse one, while in the other groups the reverse was the case. The dullard did not take a prominent place in the first group, in the other groups however dullards and mental defectives were in the majority. In the first group the normal home was three times as prevalent as the broken home, whereas in the other groups the broken home was more prevalent. The cases from medical practitioners were in the main diagnosed as suffering from a psychoneurosis and physical and mental disorders took a prominent place, cases of conduct disorder being relatively infrequent. In the other groups a large majority were cases of conduct disorder. In the first group a good or uncertain prognosis was made more frequently than an unfavourable one, while in the other two groups the reverse was the case. In the first group psychological treatment was the commonest recommendation made, while in the other groups advice as to voluntary placement was most often given, some legal measure being the next most common. Dr Hall concluded by saying that it seemed that two distinct categories of patients were being referred to psychiatrists for investigation at the present time—first persons handicapped by physical, mental or moral infirmities or who had been called into a social problem group, and secondly a group of much more promising material.

#### Other Papers

At the same meeting Dr A. G. C. FELLITT read a note on a case of trombiculosis of the face and neck. The patient was a married woman aged 9. She had had urticaria

in the right leg, since the age of 18. Thrombosis occurred in the middle third of the leg and extended proximally at the rate of two inches a day. On the seventh day a non-fatal pulmonary embolus occurred. Eventually suppression of urine and coma occurred due to obstruction of the renal veins. This persisted for three days after which the kidneys began to function again and the patient made a slow but complete recovery.

Mr JOHN ROBERTS read a paper on 120 consecutive cases of foreign body removed from the oesophagus and upper respiratory tract and in the discussion which followed Mr H V FORSTER, Dr REGINALD GEMMELL, and Dr COTTON CORNWALL took part.

## GONORRHOEA IN WOMEN AND CHILDREN

At a meeting of the London Association of the Medical Women's Federation held on March 22, with Miss E C LEWIS the president in the chair, Mrs MARGARET RORKE read a paper on this subject.

Mrs Rorke, speaking first of signs and symptoms of gonorrhoea in adults, said that diagnosis was nowadays made by films and cultures and by blood complement-fixation tests in cases with more than ten days' history of discharge. In all cases with bowel symptoms, and at some time in the treatment of cases without such symptoms, careful rectal examination and tests were required, a surprisingly large number of patients were carriers of gonococcus in the lower rectum. She spoke of the local areas most often affected—the urethra in 80 per cent of all adult women, the vulva in some, a Bartholin abscess should be treated by free incision under general anaesthesia, for otherwise a residual sinus might remain as a chronic infective focus. Cervicitis was primary and vaginitis a secondary infection; local extension might be to the bladder, causing acute cystitis, to the endometrium, and to the tubes. Extension to the peritoneum was not rare but caused remarkably few symptoms and little pyrexia after a day or two of acute pain. Warts of the vulva sometimes disappeared spontaneously if kept dry and dusted with compound "dermatol" powder or the like. They were best treated by excision under a general anaesthetic after the urethral infection had cleared up, and dressed with flavine in sterile paraffin. Trichomonas infection was often complicated by gonorrhoea, which was often not demonstrable until the trichomonas had been subdued. The possibility of gonorrhoea as an underlying focus in cases of arthritis of the wrists, hands, knees, ankles, or feet must not be forgotten.

Gonorrhoea in children was mostly due to indirect infection from towels, sheets and sanitary appliances previously used by an infected and careless adult. Direct vulvo-vaginitis due to criminal assault was relatively rare. The other direct infection was ophthalmia neonatorum, due in 90 per cent of all cases in England to the gonococcus in the mother's cervix or vagina, 100 to 120 cases were still being notified every week in England and Wales. The most modern treatment for vulvo-vaginitis was administration of an oestrin preparation (often menformon) in addition to local treatment, and prontosil album cautiously given in doses amounting to 1 or 2 grammes daily was useful in children over 18 months. Dr D K BROWN had reported good results with prontosil in a short series of cases treated at the Children's Medical Home, Widdowson. The great advantage of the treatment was the reduction of local applications to a minimum. Since a few cases of intolerance had occurred, the drug was now given for ten days only, with equally good clinical results so far; maximum total dosage 20 grammes.

Turning to treatment in adults, Mrs Rorke said that the essentials of treatment were rest, drainage of uterus, local treatment by sitz baths, douches and oral medication. The public laid far too much stress on douches,

long-continued self-administration of which often led to local damage without touching the underlying pathological condition. Rest was of paramount importance, and where treatment in bed was impracticable the patient should be urged to have long nights and Sundays in bed. Where possible, a generous diet. Local douches should be given by a trained nurse and not continued too long. When the massive purulent discharge had gone the cervix should be cleaned and dried and treated with glycerin also in combination with other drugs such as protargol or boracic on a probe. During the last few months Mrs Rorke had used prontosil album in doses of 35 to 40 grammes daily for a week and half this dose for a second week in combination with an acid or an alkaline salt depending on the vaginal pH. In the main the results were highly encouraging, and in some cases even dramatic. It was essential to watch the patient and to spread the dosage well over the day, the last tablets being taken at bed-time.

Mrs Rorke spoke of the treatment of gonorrhoea by heat, electrically or chemically produced. She had found diathermy admirable, particularly in the urethra and rectum. More recently she had procured great relief from the pain of salpingitis by the use of the E. L. machine, which consisted of a latex bag attached by rubber tubes to a small machine containing electrically heated water. The bag was placed in the vagina, and the temperature of the water was raised slowly from 110 to 128° F, the patients derived much comfort from treatment. The use of artificial pyrotherapy by Kettering hypertherm had been found beneficial in America for patients with resistant gonorrhoea. The temperature in the machine was slowly raised to 105 to 110° F, and was kept at this level for five hours. Mrs Rorke showed films demonstrating the effects of this treatment in advanced cases of gonorrhoeal arthritis. Finally she discussed tests of cure, quoting figures from the pathology laboratory at the Royal Free Hospital to show that cultures as well as films were essential. She required as minimum criteria negative films and cultures taken at the end of three menstrual periods, the last being after at least a month without treatment and after provocative painting with alcohol. The blood complement fixation test must be negative and the patient's clinical condition must be free of all signs and symptoms of infection before she was allowed to regard herself as cured.

A meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland was held on April 1. Dr G C DOCKERY who presided, described a case of cirrhosis of the liver with macrocytic anaemia. Dr W R O'FARRELL showed a specimen of infarction of the ventricle. Professor J McGRATH and Dr T C O'CONNELL discussed a fatal case of carcinoma of the kidney with secondary deposits in bone, and Professor McGrath also read a paper on some methods of testing the efficiency of hospital sterilization plants. In the discussions which followed the president of the Academy, Dr A R PARSONS and Drs E HARVEY, J C HENRY, M P O'CONNOR, S J BOLAND, W A GILLESPIE and J C McSWEENEY took part.

At a meeting of the North of England Gynaecological and Obstetrical Society at Liverpool on February 25, FRANK STABLER (Leeds) described two cases of advanced extra-uterine pregnancy, Mr ST GEORGE WILSON read a case of sarcoma of the femur complicating pregnancy. Mr C J K HAMILTON (Liverpool) discussed a case of Siamese twins, Dr A A GEMMELL described a case of a sacculated pouch of the posterior wall of the bladder, and Dr C E B RICKARDS read a paper on uterine rupture following Caesarean section which will appear in the coming issue of the *British Medical Journal*.

## Local News

### ENGLAND AND WALES

#### A National Physical Training College

Plans for the establishment of a national physical training college for teachers have reached an advanced stage. This was indicated by Sir Kaye Le Fleming, Chairman of Council of the B.M.A. when he gave a talk at Olympia on April 13 in the series arranged by the Association on the medical aspect of fitness. Sir Kaye, whose subject was "Physical Education in Schools," said:

I am glad to be in a position to say as a member of the National Council of Physical Fitness that the plan for this project has passed the necessary tedious process of preliminary investigation with regard to a suitable site, a process necessarily shrouded in a good deal of secrecy, and before long I am confident it will be possible to give the public more information on the subject. The college when complete will include all the necessary facilities for the purposes of training and teaching the subject such as a residential college should provide in addition to special requirements such as gymnasia, swimming baths, running tracks, a stadium and playing fields in surroundings which will be permanently secure from undesirable encroachments. Research will also be undertaken. Sir Kaye stated on such matters as the relation of physical fitness to nutrition, fatigue, heart tolerance, and muscular exertion. We have to day no standards of measurement of physical fitness. Here is a vast new field for medical and scientific research into which those who have ventured have done so as solitary explorers without any attempt at systematic and co-ordinated effort to cover the ground.

#### Health and Cleanliness Council

The Health and Cleanliness Council now a thriving twelve year old, gathered its friends together on April 13 at a luncheon in London with Dr G. F. Buchan, the president, in the chair. The large company attending included many medical officers of health, also representatives of local education departments and of voluntary organizations. The principal guests were Lord Horder and Sir Arthur MacNalty. In proposing the health of the council Lord Horder said that it stood for preventive medicine in relation to the individual and to the home. Some of its slogans—namely "Where there's dirt there's danger"—made a great appeal to him. He believed the inculcation of cleanliness struck at the very root of disease. Children took kindly to being clean if shown how and given facilities and to vary an old adage regarding the volunteers, one child who washed itself was worth ten washed children. Such work as the council undertook, Lord Horder went on, required courage and persistence, even more persistence than courage, for while there was often little difficulty about the initial effort the continued effort called for more resolution. In the home cleanliness was the preventive medicine of housing. One of the council's aims was to see that no tenant owing to lack of instruction made a contribution to new slums. In Great Britain they boasted of the best public health services in the world and not without reason, but the enemies of public health were not only poverty and economic maladjustment but ignorance and laziness and therefore such successful propaganda as the council had initiated was very much needed.

Dr G. F. Buchan said that 285 bodies, some of them municipal and some voluntary, were now represented in

the council. In preaching cleanliness as the first law of health the council had not tried to supplant any existing organization and it had worked largely through ready-made audiences of women's institutes and the like. Last year between 700 and 800 lectures were given and a very large number of posters had been displayed and pamphlets distributed. While attention was mainly directed to personal and domestic cleanliness, civic cleanliness also came within the council's ambit. Dr Buchan reminded his audience how comparatively recent a thing was cleanliness as the modern world understood it. Not until the days of Elizabeth was soap discovered and for many a long year it was a crude and expensive product. He might have added that the word "soap" does not appear in Shakespeare, though Coriolanus bids the citizens "wash their faces and keep their teeth clean." Only during the nineteenth century, said Dr Buchan, did the means of cleanliness become available for all and now there was more money spent in this country on keeping clean—including not only personal lavation but laundries, house cleansing and city scavenging—than on clothes or education. Cleanliness in fact was the index of civilization, the foundation of health, work, and of great aesthetic values.

#### Care of the Blind

Sir Kingsley Wood, the Minister of Health, after opening the new municipal workshops for the blind at Stratford, E., gave an address in the Town Hall, West Ham. He said there were some 78,000 registered blind persons in England, Wales, and Scotland, and of these nearly 50,000 were aged 50 or over. He did not think the number of blind people in this country was increasing, and owing to increased knowledge of the causes of blindness, which operated at birth and in the earlier years of life, fewer at which persons were first registered as blind were becoming progressively later. There had also been a falling tail in the number of blind children. Despite the terribleness and ineffectuality with which blindness was borne it was a terrible handicap—more particularly to the great majority of blind persons over 40 years of age—because it was not then normally practicable to train them in a new form of employment. The lowering of the pension age to 40 would at any rate secure to many of the blind population a regular source of income. He believed Parliament had also expressed the general opinion of the country in enacting that domiciliary assistance to blind people should no longer be given under the Poor Law but under the Blind Persons Act. Blind people should have as many contacts as possible with life and the world. It did much for their adaptability that many of them were filling odd jobs, positions not only of responsibility but such as required considerable technical and mechanical skill and aptitude. The blind had contributed many able members to professions and many skilful craftsmen to trade and industry. Prevention of infantile blindness and preservation of the sight of school children were having an increasing effect in restricting the number of persons becoming blind in early life. The Minister in conclusion stressed the importance of home visiting and home teaching. Efficient visiting helped to discover cases of blindness and he particularly desired to see the blind trained in the early years of their affliction.

#### Milk Pasteurization Plant

In view of the increasing number of pasteurizing plants the Royal Sanitary Institute (90 Buckingham Palace Road, S.W. 1) conducted during the winter of 1937-38 a series of lectures and demonstrations for medical officers of health, sanitary inspectors, and others interested in the subject of pasteurization. During the course of these arrangements were made for those at end of the road to visit the plant in operation which proved very helpful to illustrate the difficulties to be overcome in practice. It seemed

evident that the demand for such courses was not fully met so it has been decided to hold a further course on Thursday and Friday May 26 and 27

## SCOTLAND

### Research in Surgery at Edinburgh

A unit for clinical research in surgery has been established at Edinburgh by the Medical Research Council, acting jointly with the Royal Infirmary, the University, and the Royal Hospital for Sick Children. The unit will be located in the Infirmary, with facilities also in the University Department of Surgery and at the hospital. The director is Mr W C Wilson FRCS Ed, who has for this purpose been appointed to the whole-time staff of the Council. The arrangement has at present been made for a period of five years from April 1, 1938. The establishment of "units" or departments of this kind in selected hospitals forms part of a policy adopted by the Medical Research Council for the promotion of research work in clinical science, as opposed to the laboratory branches of medicine. Two units for research in clinical medicine and one for research in neurology have already been established in London. The new surgical unit is the first one under the scheme to be set up outside the Metropolis.

### Mental Defectives as Good Citizens

In an address to the Edinburgh Committee for Mental Welfare on April 4 Dr W M C Harrowes, physician to New Saughtonhall Mental Hospital, said there was no more useful citizen than the mentally defective person if he received good habit training. Society would always need hewers of wood and drawers of water, and if the mental defective was properly habit-trained he would be content with these menial occupations and, indeed, was far better at them than anyone else. Parental authority was seldom questioned by society except in flagrant instances, but it was always being questioned by the child, sometimes aggressively sometimes implicitly, but always with reason. A certain quality, which William James had called sagacity and which was customarily called judgment or common sense existed as an innate endowment, and the child's capacity for judgment was similar to that of the adult. The child's life was simple with few distractions and he was the closest possible scrutineer of discrepancies in conduct. The adult before criticizing the child should examine his own attitude to authority. Much was heard to-day of the controversy about the relative influence of environment and heredity in causing maladjustment, but the facts of each case should be taken for what they were worth. The important principles in any investigation of a case of maladjustment in child or adult were freedom from preconception and readiness to utilize proved facts dealing with the individual as a unit in changing environment and refusal to use a complicated technical terminology. The chairman, Mr Charles Milne KC said that the need for a remand home for juvenile delinquency in Edinburgh was urgent, and the plans for a new home were already in preparation. Many cases of juvenile delinquency were really cases of mental deficiency.

### "Fitter Britain" at Glasgow

The Empire Exhibition at Glasgow, which is to be opened by the King on May 3 will include in the United Kingdom Government Pavilion—a building equal in area to St Paul's Cathedral—a "Fitter Britain" exhibit, arranged by the Ministry of Health in collaboration with the Board of Education, the Scottish Department of Health and the National Fitness Council. The exhibit, the most ambitious scheme of the kind the Ministry has ever attempted is in portable form and when the exhibition at Glasgow is over it will be shown in other parts

of the country, and may be seen in London early next year. The most startling feature is a piece of mechanical engineering in the form of a working model four times life-size, of the upper part of the human body showing the processes of respiration and digestion and the circulation of the blood. Thanks to the modern technique of sound-recording, the "mechanical man" will lecture on his own physiology every quarter of an hour. More artistic if less fascinating will be a gigantic sculpture representing the ideal man, woman, and child after which the National Fitness Council strives, and below this will be a panel of facts and statistics illustrating the improvements in national health during the last century and especially the last forty years. A model of a central health clinic is one of the leading features of the exhibit and reproduces on a small scale the apparatus for orthopaedic and x-ray treatment, the arrangements for maternity and child welfare, and so forth, all in minute detail down to the liquid soap containers and the accessories of the dental chair. A model of a general hospital has been lent by the King Edward's Hospital Fund, and here again everything is in scale, down to the bedspreads which replace handkerchiefs given by ladies of the Royal Family. In the bays on either side of the hall there have been arranged illuminated pictorial sets depicting the modern care of infants (contrasting the methods of Betty Hilder in *Our Mutual Friend* with infant hygiene as practised to-day), the work of the school medical service, the provision of games and recreation in a community centre, the work on nutrition and on housing, and the guard against infectious disease. The story of some of the enemies of health—tuberculosis, cancer, venereal disease, rheumatism—will be graphically told, and the agency of the bed-bug, the flea, the house-fly and the louse in spreading disease will be vividly brought home.

The Ministry of Health exhibit will not be the only one that deals with health. The work of the R.A.M.C. is to be shown in the Army Pavilion, and the Home Office has an exhibit illustrating methods of accident avoidance in factories. Here power presses, hydro-extractors, circular saws, printing machines, and machines used in the food trades will be shown with which it is almost impossible to sustain an injury. One machine is so interlocked that the operative cannot put his hand into the danger zone, in another, if he does place his hand near the danger zone, the machine stops instantly, in yet another, if the hand is brought near the rolls of the machine they will reverse and push the hand out of danger instead of drawing it in. Other Home Office exhibits deal with ventilation, lighting, protective clothing and first-aid equipment. Scotland itself is represented by two pavilions, one showing its past and the other its present, and in the latter there is being staged the statutory services which are provided for the individual from before birth down to old age. The contribution of Scotland to medicine is the subject of an exhibit in which the Scottish Committee of the British Medical Association has collaborated with the Department of Health, it is far historical in character, and deals with the part played by individuals, medical schools, and hospitals.

At a Government reception to the Press the other day those who attended were given an embarrassing amount of typewritten material testifying to the research and ingenuity of those responsible for the department's exhibits. But in those which had to do with health and fitness no reference was made to private practice, and one might have imagined the family doctor to be non-existent. The first bulwark of the State will be represented among other mural paintings in the vestibule. It is natural that in an exhibit arranged by the Government statutory health services should be emphasized, but the medical service under the National Health Insurance Acts is a statutory service and no reference whatever is made of it in the 16 page pamphlet *Fitter Britain Exhibit* issued with the compliments of the Ministry of Health.

## Correspondence

### After-effects of Modern Treatment of Carcinoma

SIR—The correspondence following my original communication (*Journal* February 26 p 430) has been interesting and instructive. From it I realize that there is no generally accepted method of applying radium; that selection of the best method of treatment for each individual case depends purely on the surgeon's predilection; that the miseries of radium necrosis, neuritis and myalgia are still of frequent occurrence; and that no correspondent of mine has ever been warned of the possibility of this before treatment began. Walkhoff and Giesel announced in 1900 that radium had certain physiological effects and Professor Regaud wrote in 1934: "Madame Curie can be counted among the eventual victims of the radioactive bodies." Surely these facts call for further research; the results of which should be readily available to all members of the profession—I am, etc.

Northam N. Devon April 11

PERCY FURNIVALL

### Classification of Adventitious Sounds

SIR—A most important point is raised by the correspondence on the classification of adventitious sounds. While it is interesting to follow the development of the nomenclature from the time of Laennec onwards it is unfortunately of very little use to the student of to-day who is often confused by the different terms which are used by his teachers to describe the same sign. The ideal classification should have the merit of brevity and conciseness and should avoid so far as possible the use of indeterminate adjectives; it is also desirable that the recognition of an added sound should help to indicate the site and probable nature of the condition which causes it. The following classification seems to me to meet the requirements of the student:

1 *Sounds produced by Narrowing of the Bronchial Tubes*—These are sometimes termed "continuous sounds"—rhonchus and sibilus. The rhonchus is low in pitch and is produced in the larger bronchial tubes; the sibilus high pitched is produced in the bronchioles. Each of these sounds indicates narrowing of the tube by swelling or by spasm and they are therefore present in bronchitis and in asthma.

2 *Rales*—These are bubbling noises which are produced by the passage of air through liquid. They may be heard when the liquid is in a bronchial tube or in a cavity in the lung tissue. They are therefore a feature of pulmonary congestion, bronchiectasis, certain types of lung abscess and of tuberculo with cavitation. They may also be heard in other conditions which produce the necessary combination of air passing through liquid.

3 *Creptations*—These are the finest of all added sounds and are produced by abrupt separation of the walls of the alveoli. Creptations therefore indicate a lesion of the lung parenchyma and they are most commonly heard in early and late pneumonia and in early pulmonary tuberculo.

The adoption of a classification of this type would greatly simplify the problem, which confronts the student and it has the additional advantage that a fairly clear mental picture is conveyed of the type or process which is causing the adventitious sound—I am, etc.

London W 1 April 14

JAMES MAXWELL

### Modern Views on Pellagra

SIR—Drs W J Dann and Y Subbarov in a letter in the *Journal* of April 9 (p 809) make the statement that "applying these criteria, canine black tongue and the recently described disease in pigs (Chick H *et al* 1935 *Br J Vet J* 32 10) are the only true analogues of human pellagra which we know to-day." From the description given of the condition in pigs it seems almost certain that we are dealing here with one of the major sequelae of iron deficiency. In connexion with this condition I have noted elsewhere that in a certain proportion of the affected pigs there occurred as a late manifestation an anaemia of the macrocytic type which was associated with great distention of the parenchyma of the liver. This anaemia was completely refractory to treatment with iron but responded to feeding with raw liver. I interpreted these findings as indicating (1) that in the normal animal iron is elaborated further a precursor substance formed in the stomach by the interaction of intrinsic and extrinsic factors; and (2) that in such cases as have at present yielded to feeding with raw liver, as demonstrated chiefly because of the great distention of the liver, the condition which however acted in combination with a toxic deranged by the anaemia (with consequent effect on the intrinsic factor) and told of a nature affording a poor supply of extrinsic factor. Absorption did not appear to be affected as was evidenced by the reaction to liver extract administered orally.

In 1931 in collaboration with Dr R D Sinclair (*Edin Med J* 1931 38 403) I showed that the anaemia (and the condition as a whole) could be influenced in a rather dramatic fashion by the oral administration of a liver extract. Recently Elvehjem has demonstrated that liver extract has as one of its important ingredients nicotinic amide. Under these circumstances two points of considerable moment arise for consideration. In the first place it seems possible that yeast may contain preformed as a nicotinic acid containing body, liver agent precursor—that is to say the equivalent of the interaction of intrinsic and extrinsic factors; and secondly the question arises as to whether we are really dealing here with a condition comparable to pellagra as it occurs in human beings. It thus happens to be the case, unfortunately, that will have been thrown on the details of the general human disease—I am, etc.

Aberdeen April 11

J P McGOVERN

### Pasteurization of Milk

SIR—I must admit to Dr Halliday Sutherland (*Journal* April 9 p 812) that I gave out slight attention to his suggestion that the substitution of pasteurized for raw milk might prejudice human fertility. As he cited no evidence in support of this proposition and as in a fairly varied dietetic and climatic conditions man has not failed to multiply and to replenish the earth, a speculative possibility of the effect of a slight vitamin change in a relatively small factor of an ordinary mixed diet seemed to me to offer no chance of fruitful discussion. Even if ineffective would be the consideration of the possibility of confining man to a diet consisting solely of pasteurized milk for no one proposes this as a mere experiment. Even if it be true that the use of pasteurized milk and the falling birth rate have an apparent time relation Dr Sutherland is hardly of those who argue that the burning of Tenterden sheep is responsible for the condensed appearance of the Galloway Sires.

Since writing my letter (April 2, p 753) I have learned that an experiment much on the lines desired by Dr Sutherland has already been made and recorded. Conducted under strictly scientific conditions of observation and control, the experiment in essence was a study of the effects of raw and pasteurized milk, respectively, in two groups of mice, each comprising some 1,100 individuals. Among the conclusions supported by full statistical details may be read "Little or no difference was noticeable between the raw and pasteurized groups in relation to rapidity of conception, average number of litters produced, or average number of litters reared" (G S Wilson and Irene Maier, *Journal of Dairy Research* June, 1937). Professor Wilson's study is valuable in several directions, but I must limit my quotation to the point on which Dr Sutherland particularly desires information—I am, etc,

London W1 April 12

C O HAWTHORNE

SIR—Although I am not a member of the medical profession I have been a producer of tuberculin-tested milk for a good many years, and have always taken the closest interest in the Raw v Pasteurized Milk controversy. It seems to me that in many cases misleading conclusions have been drawn from experiments which have been carried out. In Professor G S Wilson's experiment, for instance, which has been much quoted, although it was stated that there was no difference in outward appearance between calves fed on raw and those on pasteurized milk, I would call attention to the fact that there was a considerable difference in the prices realized, even excluding those calves which were admitted to have suffered from scour in the pasteurized group. This difference cannot be easily explained away.

In the later Hannah experiment, which has also received much publicity, the results of the inspection by four separate judges—who classified the calves into three different classes (A) those in exceptionally good condition, (B) those in a satisfactory condition, and (C) those in a definitely unthrifty condition—show the following: Calf No 9 was classified by one judge in Class A, by two judges in Class B, and by one judge in Class C; Calf No 11 by two judges in Class A, one in Class B, and one in Class C; Calf No 13 by one judge in Class A, one in Class B, two in Class C; Calf No 17 by one judge in Class A, two in Class B, one in Class C; Calf No 25 by one judge in Class A, by two in Class B, and one in Class C. These are not the only examples, but others could be chosen, showing that there was great diversity of opinion. Calf No 36, for instance, was classed by three judges in Class A and by one judge in Class C. How is it possible to reconcile judges' conclusions such as these? Surely, although there may be some doubt about classification, there should be no doubt whatsoever as between "exceptionally good condition" and "definitely unthrifty," and yet these are the results on which we are asked to compel the public to buy pasteurized milk.

I should like to see experiments carried out to decide the relative growth in raw and pasteurized milk of pathogenic bacteria which have passed successfully through the process. Surely Dr James Kirkland will not maintain that all thermotolerant strains of *B coli* are non-pathogenic. If so on what evidence does he base his conclusions?

Would it not be better if the British Medical Association were to pay some attention to the grossly excessive margins demanded by the large dairy companies in London for tuberculin-tested milk so that this could find its way into more homes and more producers be induced to set their house in order? Perhaps they are unaware that ordinary

milk pasteurized costs 3½d per pint tuberculin tested and a pasteurized 4½d, or 8d per gallon more, whereas tuberculin-tested milk unpasteurized is priced at 8d per pint—a wholly ridiculous price, and unjustifiable under any conditions, except for the desire to prohibit the public from purchasing the best that a farmer can produce. It will not maintain for one moment that all milk produced on the ordinary farm is satisfactory—far from it—but surely the aim should be to find a market for the best and to encourage its production by giving the producer a fair deal, while allowing those who are convinced that pasteurization does have some effect in the long run to purchase the class of milk which they are willing and anxious to use—I am, etc,

Rowallan, Kilmarnock, April 12

ROWALLAN

SIR,—Dr Lionel J Picton refers to my letter in the *Journal* of March 26 (p 704) as "a refreshing breeze in the stale atmosphere of the milk spoliators." May I return the compliment by saying that his letter (April 9, p 817) reminded me of the meeting of Stanley and Livingston in Darkest Africa. I am also grateful for his reference to the work of E C V Mattick and J Golding, which I had missed. Nevertheless, the experiment he quotes refers to sterilized milk which had been held for an hour at a temperature of 210° to 212° F. Our opponents may point out that pasteurized milk is held at a temperature between 145° and 150° F for half an hour. A third experiment of Mattick and Golding (*Lancet* 1931, 1, 666) shows the effect of pasteurized as distinct from sterilized milk on the fertility of rats.

Eighteen buck rats were divided into three groups of six. In addition to a diet common to all, group A had whole raw milk, Group B had pasteurized milk, and Group C had sterilized milk. Eighteen does were likewise divided into three groups and fed like the bucks. On reaching maturity the rats in the corresponding groups were cross-mated on the same day. None of the does in Group C became pregnant. All does fed either on raw milk or on pasteurized milk did become pregnant. The raw milk group produced forty-seven offspring, of which forty-one were born alive; the pasteurized milk group produced forty-two, of which only twenty-two were born alive. Its fertility be the capacity to produce healthy offspring then on this experiment, pasteurization reduced fertility by over 52 per cent. It may well be that none of the known vitamins is so exclusively specific in its action as is generally supposed, that in whole raw milk there is a vitamin balance, and that the upsetting of this balance by pasteurization has an adverse effect on fertility. More experiments are urgently needed, and with depopulation in the offing the rats which Dr Picton pities may help to save a sinking ship—I am, etc,

London, W8 April 11

HALLIDAY SUTHERLAND

### Posture and Painful Feet

SIR,—The reading of the report of the discussion on "Painful Feet" in the *Journal* of April 2 (p 748) leaves one with feelings of despair for those who are suffering, and all those who will be allowed to suffer from this painful condition if their only hope of relief is in the ministrations of the chiropodist with his pads or in operations by the orthopaedic surgeon. Neither can produce a feeling of hope of ever understanding the cause or its prevention and cure, to talk about 'evolution or regression' or to "blame the shoemaker" does not give us the kind of shoes we desire to have.

In every case of 'painful feet' it will be found that the patient's posture is bad as the result of physical



and functioning of the whole body including the feet—the pain in the feet being the most obvious result to the patient but by no means the only one. In the discussion no speaker mentioned this constantly acting cause and naturally no reference was made to how it was to be removed. That the condition can be relieved by many different procedures is well known but so long as patients have to wear supports and other adventitious aids they cannot be said to be cured while they are still left with their bad use and bad posture against which the whole body as well as their poor feet are struggling, whereas when the only treatment given is a general (not specific) re-education in the use of the self, for the correction of the postural defects not only does the patient recover from his painful feet but he experiences a great physical as well as mental sense of well-being. The cases may differ widely in the character and degree of the bad use and malfunctioning and the resulting postural defects but the method of re-education is the same because the primary cause is the same.

To the profession this theory of bad use with bad functioning leading to postural defects is new so that the idea of correcting postural defects with their accompanying disabilities whatever they are by re-educating the patient in a better use of himself is also new not to say revolutionary. But the results in the sphere of prevention are only equalled by its practical results in the sphere of alleviation when defects and disabilities have arisen.

To explain the theory and give the anatomical and physiological data on which it rests would be beyond the scope of this letter. Let it suffice to say that the key-note of all use and functioning lies in the relative position of the head to the spine at the atlanto occipital joint and our capacity to use and direct it in a direction which can best be described as forward and upward instead of backward and downward as it is found to be in every case of bad use and functioning with accompanying postural defects such as will be found to exist in every case of painful feet—I am, etc.

Bethill April 9

A. MURDOCH

### Facial Wounds

SIR—With regard to the method of adapting the thin edge of the apex of the upper flap of an oblique cut Mr Julian Taylor in his article on facial wounds (*Journal* April 9, p. 792) advocates a practice which has stood the test of time. When the oblique cut has penetrated the deep tissues difficulty arises and the under flap which has a tendency to curl in needs anchoring. This I effect by means of a removable continuous silkworm gut suture. Poin's in wound healing which most writers do not sufficiently deal with are the questions of time and support. I doubt whether facial cuts are any better treated to day than they were in the past. I am quite certain that the simpler the measures employed the better for all concerned. All endeavours to elaborate a quite unnecessary plastic technique should be discouraged.

The majority of surgeons recommend that their surface stitches be removed in three days. They say that three days is sufficient for union and after any longer period suture marks remain. Here I disagree. Because the epidermis is in contact it does not follow that the sub-strata are in contact. That scar tissue forms eventually—as a thin white line which may be raised level or sunken—can only be accounted for by the fact that the deeper tissues unsupported have retracted and the space has been filled with granulation and later scar tissue. General practitioners who employ plaster in either narrow

strips or broad bands to adjust facial cuts often produce results surpassing the most expensive efforts of the plastic specialists. Strapping is the alternative to suturing and if the answers very well there is a modification of the method which may appeal to man.

For facial cuts I suggest the use of that cheap and transparent cellulose product which encloses the cellulose fast kipper and can be sterilized by boiling. I may be obtained in large sheets and with a suitable plaster and adhesive plaster at each end the wound can be drawn together the accuracy of the contact being visible all the time. If preferred a trace of vaseline can be applied to the surface apposed to the wound.

In discussing the suture of muscle and deeper tissue Mr Taylor refers to unnecessary buried sutures in a field of doubtful cleanliness. I do not bury sutures in these cases because the degree of cleanliness is often an unknown quantity and a frequent cause of trouble. My own procedure is to employ a long continuous suture of fine silkworm gut suture leaving the ends protruding so that they can be withdrawn in ten days time. I pierce the flesh with a household needle through which the silkworm gut can be threaded rather than triangular pointed needles the round needle pushes aside—all others cut.

A last point is whether the skin wound heals better under a scab or moist surface. The wound does not produce a scab as a protection but merely because it cannot evacuate its discharge. A moist or oiled surface allows for this—I am, etc.

London April 12

J. L. A. MARD

### Whooping-cough Treated by Ether

SIR—Fifteen years ago I had to treat a severe case of whooping-cough and after a preliminary failure with the usual measures I gave the child daily injections of ether with remarkable results. I may add that the patient though the remedy worse than the disease. My brother Dr Edward Milton treated several of his patients on the same lines with equally good results but unfortunately had two mishaps with broken hypodermic needles one of which had to be removed by operation. In spite of this the mother of that particular child begged him for the treatment as it was so markedly beneficial. In two accidents led me to experiment with ether generally and the results have been so good that I have never used any other form of treatment. My brother tells me that in the case of babies whooping-cough can be easily controlled he still gives daily intramuscular injections of 5 minims of ether and that so infrequently a weeks treatment practically cures the condition.

With ether given orally I find that in the great majority of cases provided there are no complications such as bronchitis or bronchopneumonia present when beginning treatment the disease is subdued in three weeks. For a day or two there may not be any marked change in whooping cough has a certain momentum which can be immediately checked but the attack may return so rapid and continuous the paroxysms becoming less in frequency and severity until the cough altogether. In most cases I find an entire absence of physical deterioration appetite and bodily vigour return almost immediately. Occasionally I notice that the cough is more or less bubbly during the treatment but I do regard this as it never causes distress and does no harm. In two of my cases I found the earliest successful treatment of children already had diffuse bronchitis and were running



capped by insufficient food, warmth, etc., owing to the fact that their father was out of work. I had to send them into hospital, and I believe that one of them died.

Ether is unpleasant, but children will take it readily if it is dispensed with a pleasant vehicle. I usually employ a preparation called 'Mist tam co rub infans,' and also add tincture of quillara as I think it helps to emulsify the ether and delay its separation. The dose of ether is from 2 to 4 minims and I order it to be given every two hours. In my public assistance work I have had to use a vehicle that any and every chemist stocks, and I have found that syrup simplex gives equally good results and children take it willingly. In the case of very young children I keep to the smaller dose, but in others I increase it slowly to 4 minims. I warn parents to keep the mixture in a cool spot, the bottle tightly corked, and to avoid proximity to a naked light or radiator when pouring out a dose.

I commend this treatment as being effective, inexpensive, and pleasant. The ingredients are to hand in every dispensary and the prescription in its simplest form consists of ether 2 minims, tincture of quillara, 1 minim, syrup simplex, 30 minims, with water to 60 minims. This represents a single dose, to be taken every two hours—1 i.m. etc.,

Iltham SE 9 April 7

WILLIAM T. MILTON

### Pneumonitis

SIR—Considering the present evidence, surely it would be better to regard the cases of 'pneumonitis' as atypical forms of pneumonia. What is lobar pneumonia but a form of 'pneumonitis'? Until one of these patients dies and furnishes a specific pathological picture the term 'pneumonitis' will remain a vague theoretical designation of very little value. Dr C. Hardwick (*Journal*, April 9 p. 815) says, "It is surely time we ceased classifying under the term 'pneumonia' illnesses differing widely in their course and final outcome." First, the cases described are not so widely different from pneumonia, secondly every physician has seen cases differing widely in

course and final outcome' which were undoubtedly cases of pneumonia. It is the underlying pathology which is of importance in such a classification. An apparent pneumonic reaction has been observed near an area of bronchiectasis. In a short paragraph Dr A. Morton Gill (March 5 p. 504) describes this condition as a secondary form of 'pneumonitis'. However, he appears to have omitted a lipiodol examination in any of his primary cases and has thus failed to exclude a bronchiectatic factor in these cases. The term 'pneumonitis,' as used in the current literature appears to be an unnecessary and misleading addition to the already cumbersome vocabulary of medicine—I am, etc.,

Homerton E 9 April 12

R. B. HEISCH

### Fracture of the Neck of the Femur

SIR—Mr T. P. McMurray (*Journal* February 12, p. 330) states that the success of his operation of oblique osteotomy is due to the use of the same principle as is employed in the Whitman and Smith-Petersen manoeuvres—namely the forcing of the two fractured surfaces closely together. I would suggest that if figure 2 in his article is not merely a diagram but represents the actual state of affairs there may be another explanation. This figure shows the ends thrown out from the surface of the lower fragment of the shaft to be actually merging with the callus between the fractured ends of the neck. May not

the explanation of union be that the fracture of the neck has been stimulated to callus formation by the pressure in its immediate neighbourhood of an area of new bone formation, or even that osteoblasts from this area have actually penetrated between the fragments? If this explanation were true it would mean that the upper surface of the lower fragment was acting as a bone graft, and as a bone graft with the unique property of being able to supply the callus required.

Bone grafting in the treatment of fractures of the neck of the femur has been widely practised, but apparently it has not been successful enough and so has not become a standard operation. The great fault of solid bone grafts for fractures is that it is too much to expect that the fractured bone should deal with a huge graft when it has already shown that it is unable to unite itself. The fact that grafts often unite, however, would seem to point to the fact that the fresh bone has a stimulating effect. With the idea of increasing this stimulating effect and of making the graft a less inert piece of bone, I recently suggested in a letter to the *Medical Journal of Australia* (November 27, 1937) that the graft should be cut but not completely separated from its host. After an interval during which it was hoped that the graft would be colonized with bone-forming cells—and which was roughly guessed to be between ten and fourteen days—the graft was to be shifted. This suggestion might apply to solid bone grafts for the neck of the femur. Bone grafting of the neck of the femur, however, is not easy, and if this principle is to be applied some simpler method would have to be used. In the letter already referred to I suggested in regard to fractures of the neck of the femur that the following procedure be carried out:

A trapdoor is made in the subcutaneous wall of the thigh. The spongy bone beneath is gently broken and left in situ. After a suitable interval for colonizing a wide bore needle is passed down so that its point lies between two fragments of the neck of the femur and its position is checked radiologically. The trap is again lifted and with a powerful syringe the bone beneath is sucked up and then injected through the needle into the space between the femoral fragments. It was also suggested that this technique could be applied to multiple subcutaneous drilling (Buck).

Since writing this letter an article by Mr Thomas King of Melbourne has changed my ideas as to the technique of grafting in these cases. The article is on 'The red spongiosa bone transplant for ununited fractures' (*Medical Journal of Australia* March 19, 1938). The important point presented is that the bone for grafting is taken from the red spongiosa of the great trochanter. It is sawed out and when in position is gently hammered to make a packing paste. King, as a result of his study of McMurray's experiments and of his own cases, is convinced not only that the greater part of the transplant lives but that it contains some unknown osteogenic stimulating substance. He reports seven successful cases, in two of which previous bone grafting by ordinary methods had failed. I now think that the material for grafting should be taken from the red spongiosa of the great trochanter. Mr King considers that the fresh spongiosa contains an abundance of bone-stimulating material, it would hardly be logical to transplant fresh material to an area already containing a quantity of spongiosa. I think it is anything in this suggestion, that the bone grafted already contains a quantity of bone-forming cells. It is to be remembered that it must survive in a relatively avascular area and for this reason I think it is necessary, after cutting the trap in the thigh, to break up the underlying bone and then to

for an interval during which it will be colonized by osteoblasts. At the height of this regenerative activity but before callus has formed it is transplanted to its new area, where it is hoped it will not only continue to grow and rapidly form callus but it will stimulate the broken surfaces to a similar activity.

With regard to the technique of transferring the spongiosa the needle could be put straight down through the soft tissues into the fractured interval with the leg in outward rotation or else a hole could be bored up through the trochanter and neck to the fracture site and the needle inserted through this. Before insertion the spongiosa would probably have to be gently hammered into a pistil and the syringe would probably have to be constructed on the principle of a grease gun. After gritting the leg would have to be supported by a plaster cast as described by Mr McMurray or in the case of old and feeble patients by a Hamilton Russell apparatus—I am etc

Launceston Tismanni March 26 C CRAIG  
MD MS FRACS

### Chronic Litritis

SIR,—In my paper on chronic litritis (*Journal* February 26 p 448) I wished to stress the part played by the hand syringe in the production of this condition. It would be a matter for regret, therefore if Dr Sydney M Laird's difference with me as to the mechanism of this result (March 12 p 594 and April 9 p 516) should obscure our agreement as to the causal relation of the hand syringe. With all respect for the great authority of Georges Luys I am not convinced by the quotations given in Dr Laird's letter the fact that irrigations and instillations are not effective in the treatment of chronic litritis does not prove that they do not penetrate into the glands—there is the alternative possibility that even having done so they are not effective. The argument that diuresis must lead to increased intra uterine pressure is not self evident and having regard to the physiology of micturition I doubt if any marked rise in pressure does occur. Dr Laird's experimental test of the relative pressures produced by the hand syringe and the douche apparatus is striking, but I am not sufficiently versed in physics to be able to reconcile it with the principle of the hydraulic press. The grease gun used in lubricating motor cars is a hand syringe and it certainly produces very high pressures. Does Dr Laird think a douche would be as effective for removing curcum from the ear or producing infiltration anaesthesia as a hand syringe?—I am, etc,

Salford April 10 R C WEBSTER

### The Dosage of Tuberculin

SIR—It is my duty to call attention to a mistake regarding the dosage of tuberculin in the 1920 edition of *The Principles and Practice of Medicine* by Sir William Osler and Dr Thomas McCrae (p 160) repeated (as I discovered only yesterday) in the eleventh edition (1930). These are the words in the edition of 1930 (p 162)

If into a healthy person 0.25 cc of original tuberculin injected there is a slight fever with a feeling of uneasiness which passes off in from twelve to twenty four hours. It is in individual with a focus of tuberculo is dose of 0.25 cc of tuberculin are injected subcutaneously there is a reactive focal reaction about the tuberculous lesion and a constitutional reaction (fever general pains etc). This process known as the tuberculin reaction is not often used now for diagnosis.

In the twelfth edition (1935) this passage is substantially the same but it ends. This tuberculin reaction is not used now for diagnosis.

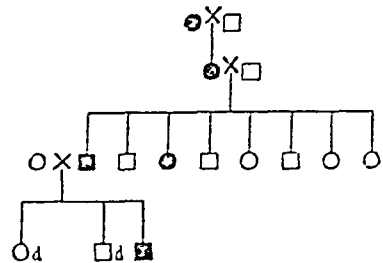
In my own experience dated from 1891 I have used tuberculin for diagnosis and since 1892 I have consistently given doses not of 0.015 cc m T A or T A F but one fiftieth part of this amount increasing the diagnostic dose cautiously and never going beyond 0.01 cc m T A or T A F. At my Tuberculin Clinic we are using these test doses in doubtful cases of tuberculosis in hundreds of cases every year with eminent success and no semblance of danger. But if we employed the diagnostic doses given in Osler and McCrae's textbook we should soon have to close our clinic. The proper use of tuberculin in diagnosis can be learnt in a few weeks but the use of tuberculin in treatment needs the experience of many years. The need for experience and great caution in the therapeutic use of tuberculin is emphasized in the 1930 and 1935 editions of Osler and McCrae—I am etc

W CAMAC WILKINSON MD  
FRCP

London W1 April 9

### Blue Eyes in Natives of Ceylon

SIR—When in Kandy Ceylon recently I happened across a guide to the temple who had deep blue eyes combined with full dark skin colour and jet black wavy hair. This gave him such a peculiar appearance that I asked about his blue eyes. There was no indication of racial crossing in his features and he maintained that he was of pure Singhalese descent Kandyan caste. Several of his ancestors and relatives had shown the same blue eyes combined with the usual dark colour of the skin. His son had blue eyes also his mother and her mother as well as one of his sisters all his other relatives having brown eyes. Careful questioning elicited the facts which are shown in the following pedigree where  $\square$  = blue and  $\square$  = brown eyes.



Unfortunately as his family lived some distance away I was unable to examine any of them. His own eyes were a clear dark blue without any visible brown pigment. This pedigree suggests a dominant blue which may have arisen as an independent mutation in Ceylon. My informant stated that he knows cases of blue eyes in two other families unrelated to his own. This interpretation seems the most likely because if the blue is recessive brown eyed consorts in each of the three generations must have been heterozygous for blue. That is not impossible but it would imply that heterozygotes resemble the blue eyed widespread in the population. Blue eyes are evidently a real rarity the vast majority of the population having brown eyes. From observation of the colour in Kandy it was found that most of the people had a dark brown (black) intense colour but a few had a paler medium brown eyes. I may be that the blue eyes are due to an intensifying factor which is absent from the brown eyes.

The fact that blue eyes occur in a population with black skin indicates that the factor for blue eye-colour is a mutation independent of the factors for skin-colour although the two loci may be genetically linked. In a study of crosses between Ojibway Indians and Europeans in Northern Canada,<sup>1</sup> certain individuals of mixed descent were found to have medium skin colour and blue eyes with only a little brown pigment. From these and other observations it was concluded that in these crosses certain factors for eye colour were either independent of certain factors for skin colour or genetically linked with them. From the present case in Ceylon, it may be concluded that a mutation affecting eye colour alone has probably arisen in a race having dark skin-colour—I am, etc.,

Bureau of Human Heredity  
115 Gower Street W.C.1

R. RUGGLES GATES

### Multiplicity of Special Diplomas

SIR—Dr F. Hernaman-Johnson seems to be a little inconsistent when in the *Journal* of April 9 (p. 814) he expresses his agreement with "H. M. S." general thesis (March 26 p. 704) and then takes such pains to prove the desirability of having two examinations in radiology, one for the diploma and the other for the fellowship. Moreover he appears to be in error when he states that the diploma may be taken within a year of graduation, as the regulations I think, say that no registered medical practitioner may enter for the diploma course unless he has been qualified at least two years. Admittedly the present diploma is of little value but whose fault is this? The blame must be laid at the door of those who are now awarding themselves foundation fellowships. It is they who have already held the highest offices in the gift of their radiological colleagues who are responsible for the low standard of the diploma examination, and all they propose to do now is to create another examination. The reasons given for doing this are puerile. What would one think of the Royal College of Surgeons if they held two examinations of differing standards for their fellowship—one for the "rabbits," who are doomed to practise in the smaller centres throughout the country and another for the "tigers," who will be privileged to practise in London or the large provincial towns? Surely the solution is perfectly simple. All that need be done is either to abolish the diploma and retain the fellowship or to raise the standard of the diploma to that of the fellowship and then drop the fellowship. There certainly is no advantage in retaining both examinations. I know that many are in agreement with this view—I am, etc.

London W.1 April 11

F. G. NICHOLAS

### Blood Sedimentation Rate

SIR—In the *Journal* of April 2 (p. 722) I read with great interest Dr E. Scott's paper on the rate of sedimentation of red blood cells as a clinical test in general practice. I have used Linzenmeier's method of estimating the blood sedimentation rate in the diagnosis and prognosis of several diseases. The test was employed in cases of phlebitis complicating varicose veins or pregnancy. The rate was found to be raised in cases of septic origin and normal in simple thrombotic cases. This finding conformed to R. F. Payne's classification (*Journal* May 2 1937 p. 577). He considers that there are two main types of phlebitis in varicose veins: (1) a septic bacterial

phlebitis characterized by a rapidly spreading septic thrombosis, and (2) a purely thrombotic process of non-bacterial origin, secondary to changes in the damaged endothelium. Cases of phlebitis coming within an intermediate group are common in general practice. In such cases particularly I found the estimation of the blood sedimentation rate helpful. If the rate was normal an elastoplast bandage was applied to the limb and the patient allowed to walk about. If the rate was accelerated a bandage was also applied to the limb, but the patient was kept in bed until the sedimentation rate was at or near normal. One woman, who refused to remain in bed in spite of a comparatively high rate, developed pulmonary infarction due to an embolus, and died. The test was used before beginning injection treatment of varicose veins in order to exclude the presence of sepsis, particularly where there was a history of recent phlebitis.

In pernicious anaemia the diminution in the number of red cells causes an increase in the blood sedimentation rate which returns to within normal limits as the blood condition improves with treatment. Reichel (1935, *Klin. Woch.* 14, 1679) considers decrease of the rate more important in the diagnosis of a remission than the reticulocyte crisis, for the latter may be overlooked unless numerous counts are made, and occasionally a crisis may occur without being followed by a remission. The following data are from one of my cases of pernicious anaemia.

Erythrocytes	Hæmoglobin	Colour Index	Blood Sedimentation Rate
1,400,000	40%	1.4	22 mm
3,210,000	65%	1.0	15 mm
4,820,000	90%	0.9	4 mm

The test was found to be helpful in the diagnosis of articular and cardiac rheumatism, and, in my opinion, was more sensitive in assessing the degree of infection than were the temperature and pulse rate. The blood sedimentation rate was accelerated in all active cases and returned to normal after the acute or subacute symptoms had subsided. Thirty-six cases of fibrositis and sciatica were examined and each gave a normal rate. This finding is important in that it assists one to differentiate true rheumatic infection, possibly manifested only by a mild febrile disorder or by 'growing pains' in children, from inflammation of the white fibrous tissue, which is less serious. It is of interest to note that the rate was normal in three cases of acute chorea, a condition said to be a manifestation of an active rheumatic process.

During an investigation of 108 cases of chronic chest diseases I used this test at frequent intervals on each patient. The following is a summary of the results. If the blood sedimentation rate was raised in active pulmonary tuberculosis but remained normal when the infection was quiescent or of a low grade, the rate was either normal or subnormal in bronchial asthma, chronic bronchitis, bronchiectasis and pneumoconiosis, but was raised in the presence of secondary infection. Unfortunately the test did not help in differentiating between active phlebitis and secondary infection.

In conclusion I wish to mention several diseases in which the blood sedimentation rate was usually found to be subnormal. These included allergic diseases (eczema, hay fever, bronchial asthma), whooping cough, chronic bronchitis with much emphysema or fibrosis, congestive heart failure and jaundice. Acceleration of the sedimentation rate—for example in rheumatic carditis—may be affected by influences which retard the rate, as congestive heart failure, therefore proper interpretation of the results is essential—I am, etc.

Shotts, Lanarkshire April 10 J. A. MOORE HALL, M.D.

<sup>1</sup> A. L. Scott, *Journal of American Crosses in Canada*, *J. Roy. Soc. Med.* 53, 511-522, 1935.

### Peripheral Nerve Pain of Vertebral Origin

SIR—You have twice been so good as to discuss in the *Journal* work of mine concerned with diseases of the vertebral column (1936 2 1202 1938 1 374). On the first occasion I was impressed with the competent and objective review you gave of the work which I did in collaboration with Dr Turner. I am all the more surprised to find that the annotation on peripheral nerve pain of vertebral origin quotes one of my articles in such a way as to make it almost impossible for the reader to grasp my real meaning and has also failed to verify the points raised.

Two instances will illustrate my meaning. First the writer very rightly expresses his intense dislike of the term "discogenetic disease" which I have been using more recently. Most of us (including myself) would agree with him but I do not notice that he has suggested an alternative. It would doubtless be more correct to say narrowing of intervertebral foramina due both to anterior subluxation of inferior articular processes and to reactive exostoses at the posterior margins of the vertebral bodies as a result of degenerative thinning of intervertebral disks. The author failed to point out that I used the term discogenetic not merely for the sake of brevity but mainly to define a common disease which originating in the disks leads to a distinct clinical syndrome with pathognomonic anatomical lesions not to be confused with arthritis and spondylitis.

Secondly it is suggested that I have given credit which should naturally go to clinical medicine to roentgenological investigation. The somewhat vague invocation of the great clinicians of the past (who are not named) refers I take it to Strumpell, Pierre Marie and Bechterew. Had my previous article (*Ann intern Med* October 1936) been referred to it would have been seen that full recognition for originality of observation was given to these early investigators. Their names are nevertheless carried on stereotypically from textbook to textbook without any clear understanding of the contribution which they actually made. Professor Strumpell whom I had the privilege of knowing did not mention thinning of the intervertebral disks as a cause of disease in his lectures and publications. Pierre Marie specifically stated that the disks were not involved in the one case of spondylose rhizomelique on which necropsy was performed by A Leri. There remains Bechterew but his findings were disproved by H Turner who showed that the symptoms described were in reality due to syphilis of the nervous system. It is just too bad that Bechterew did not receive in his time such warning as has now been given me in your annotation—namely that in the presence of gross vertebral abnormalities nerve pain may result from some other cause. Incidentally I emphasized that gross vertebral abnormalities are less likely to induce neuritis than slight changes heretofore not demonstrable. It should be added in this connexion that none of these three clinicians tried to establish a definite and constant correlation between spinal disease and nerve pain. It was the rigidity of the spine in which they were primarily interested.

Before publishing my article I made a very careful study of the literature of the nineteenth century. Pathologists (Wenzel, 1824; Rokitsky, 1844; Bencke, 1896) did mention thinning of the disks but they did not describe any clinical symptoms as being associated with this condition. Only the surgeon Kocher (1896) in recording one single observation suggested that radiculitis as a result of destruction of a disk might be conceivable (*wohl denkbar*). May I therefore draw the attention

of your associate to a statement made very recently by A E Barclay of Oxford (to whom in the far future reviews will probably refer as one of the great clinicians of the past). To accept the authority of tradition is a most comfortable way of passing through life but it is not the way of progress—I am etc.

A OPPENHEIMER M.D.

Associate Professor of Roentgenology  
Chairman of the Department

American University of Beirut  
Lebanon March 2.

There is we think no real difference of opinion between us and Dr Oppenheimer as to the importance of nerve symptoms of vertebral origin. Objection was raised to the term discogenetic disease because the symptoms of nerve irritation from compression in the intervertebral foramen may proceed from other causes than atrophy of the disk whether that be traumatic or merely a senile change. Dr Oppenheimer will find a full discussion of the subject in the first volume (1931) of the *Reports on Chronic Rheumatism of the British Committee on Rheumatism* (p 128). We agree with Dr Oppenheimer that the names of Pierre Marie, Strumpell and Bechterew are repeated from textbook to textbook often without any evidence that their work is clearly understood or criticism which is especially justified in the case of Bechterew. But we had in mind rather the English clinicians such as Wilks, Hilton Fagge and Gowers. Lastly may we assure Dr Oppenheimer that his article was appreciated and suggest that criticism is a higher compliment than flattery.—ED. B.M.J.

### Control of Sulphanilamide Therapy

SIR—You have twice been so good as to discuss in the paper on the treatment of gonorrhoea with oral sulphanilamide (*Journal* November 6 1937 p 905) I would like to suggest that a differential white cell count should be undertaken as a routine when treating patients with sulphanilamide.

I treated recently a young sailor who had an uncomplicated acute gonococcal infection. All the precautions mentioned in Dr Cockkin's article were taken. For the first six days he took orally each day 4 grammes of tetracycline. On each of the next six days 12 grammes of penicillin were taken. In addition he had irrigations with 1 in 400 potassium permanganate three times a day on the first 10 days then once a day to four days. In two days the discharge was mucoid and free from gonococci and after one further day the discharge cleared up completely. After two months the test of cure was still negative (urethroscopy and complement fixation test is done). Differential white cell counts in this case were as follows:

	During Treatment			At Treatment	
	WBC	WBC	WBC	WBC	WBC
Total number of white cells	6,600	7,000	7,000	7,000	7,000
Polymorphonuclears	5	5	5	5	5
Trans. cells	3	1	0	0	0
Lymphocytes	23	20	5	20	0
Mononuclear	—	—	1	—	—
Eosinophils	6	—	5	—	—
Basophils	0.5	0	0	0	0.5

The change in the count on the twelfth day—absence of transitionals and decrease of polymorphonuclears—made the stop the treatment at that stage.

From these examinations I concluded that though the return to a normal blood count (normal for the Tropics)

was rapid in agranulocytosis might have developed in this case. The patient did his normal work and had no complaints and only a mild degree of cyanosis. This case leads me to suggest that white cell counts in patients under treatment with sulphamylamide might well be undertaken as a routine so that some indication may be given of possible toxic effects before rather than after the event.—I am, etc.

Batavia Dutch East Indies April 5

W J HOHMANN

### Treatment of Lung Abscess

SIR—In the discussion at the Medical Society of London reported in the *Journal* of April 9 (p. 803), on lung abscess no mention is made of prontosil as a remedy. A patient developed an abscess in the lower lobe of the right lung after tonsillectomy. The temperature was 104° F. and there was severe pain at the site of the abscess and cough with profuse evil smelling expectoration. After four days the temperature was normal the pain had disappeared, and expectoration was slight and not malodorous. Prontosil album, 15 grains three times a day was continued for about a week then gradually reduced, and finally discontinued after about three weeks. Slight cough with occasionally a little inspissated mucus persists but the patient feels, eats, and sleeps normally, and is putting on weight.—I am, etc.

Co Donegal April 14

C E R GARDINER

### Chemotherapy of Virus Diseases

SIR—We have read with considerable interest the letters of Drs G. M. Findlay and F. O. MacCallum, and Drs A. B. McIntyre and R. F. Montgomerie in the *Journal* of April 16 (p. 875) on the subject of prontosil and allied drugs in virus infections.

Recently we have carried out tests to determine the effect of prontosil on experimental poliomyelitis in monkeys. Two series of experiments were performed. In the first *M. rhesus* monkeys were injected with prontosil during the incubation period. In the second the drug was administered after the onset of paresis. The drug did not appear to us to have more than a slight effect upon the course of the disease. Prophylactically it failed to prevent the development of paralysis. Therapeutically it failed to prevent a fatal result.

We have also investigated the action of prontosil on infectious myxomatosis of rabbits (due to *Virus myxomatosis* Sanarelli). The drug was injected before the rabbits were infected with the virus during the incubation period and after the onset of the disease. The results were negative throughout.—We are, etc.

A J RHODES

Bacteriology Department University  
of Edinburgh April 16

C E VAN ROOYEN

### Short-term Medical Commissions in the Army

SIR—In the report of the proceedings of the Parliamentary Medical Committee in the *Journal* of April 9 (p. 821) General MacArthur was misquoted as saying that a number of the first batch of short-service officers under the Warfield Fisher scheme have received permanent commissions in the R.A.M.C. Actually no such commissions have been given and the number that will be given has not been decided.—I am, etc.

FRANCIS ERMINGHAM

### Corporal Punishment

SIR—To me and probably to others who are officially called upon to administer justice the letter of Mr Victor Bonney is of much interest (*Journal* April 2, p. 757). He wisely leaves the form of punishment for wrong doing to the justices. When the laws of a community are violated and crime has been committed the wrong doer is liable to punishment, for the laws are a body of enactments or rules recognized to be binding upon the members, and infringement of which is harmful to the welfare of society and detrimental to its interests. The law breaker must be deterred, and in order to do this he is rebuked or admonished. He may be deprived of liberty, he may receive a deferred sentence, or he may be fined, but sentimentalism objects to corporal punishment. Formerly he was dealt with by the infliction of pain, deemed to be equivalent to the pain of the original offence—*lex talionis*, an eye for an eye, a tooth for a tooth—which was described as retributive punishment or revenge. In the course of many centuries our penal codes have reversed all this, but punishment of the wrong doer must be imposed in the interests of the community.

The code of honour among schoolboys to day insists upon pain as the most forceful and efficient deterrent. The erring and wayward playmate must be punished and the honour of the school vindicated. Fear of pain has a definite disciplinary value. It is Nature's warning, and a penalty is imposed for any violation of Nature's laws. I cannot realize the difference between the deterrent effect of fear in civil and criminal acts (*Journal*, April 9, p. 817) for a hurt to the individual—when carried to its logical issue—is an injury to the State, which is composed of individuals.—I am, etc.,

London W 8 April 10

ROBERT ARMSTRONG JONES

### Professor Freud

SIR—To reassure the many friends of Professor Freud in this country who might well get an alarmist idea of his condition from the description Commander Locker Lampson gave of it in the House of Commons on April 12 I should like to say that it is an exaggeration to speak of Professor Freud "as a dying man who has been deprived of liberty." Having visited him not many days ago I can testify that he was in fairly good health for his age and still at work. As for his being deprived of liberty, he is under no police detention or surveillance, though he would, of course, like other Jews, have to fulfil various formalities if he wished to leave the country.—I am, etc.

London W 1 April 13

ERNEST JONES

### The Services

#### DEATHS IN THE SERVICES

Lieutenant Colonel HENRY JOHN HUGH SYMONS M.C. I.M.S. died at Indore Central India on April 1 aged 48. He was born on October 14 1889 the elder son of Dr John Symonds of Penzance was educated at King's College Hospital and he held the post of casualty officer and took the M.R.C.S. L.R.C.P. in 1916. He took a temporary commission as lieutenant in the Royal Army Medical Corps on August 1 1916 and became captain after a year's service. On November 1 1920 he was appointed to the Indian Medical Service being ranked as captain from August 31 1917. He attained the rank of lieutenant colonel on February 12 1937. He served in the war of 1914-18 and gained the M.C. Cross on January 1 1918. He was serving in the P. Department in India.

## Obituary

### THE LATE DR LOCKHART LIVINGSTON

Dr W A Bruce Young writes from Winchester

I saw Dr Lockhart Livingston a few days before he died and with others of his colleagues, deeply regret to know he has left us. He did not seem to have ever got over the loss of his wife a few years ago though he seemed pretty cheerful when I saw him in his room in the nursing home a fortnight ago. He was one of the fast-diminishing number of those to whom many of us engaged in public health work are so much indebted for almost pioneer work—old country practitioners who combined with their heavy day and night work the often thankless task of inculcating ideas of elementary hygiene in those for whom they worked. Dr Livingston was honoured and respected by all who knew him whether lay or professional as one who happily combined those qualities so often found in our country doctors—sympathy and care for the welfare of their patients together with a liberal and open minded interest in things professional. He was the tried and trusted Representative of the Winchester Division for very many years and I have reason for knowing that their interests and those of the B.M.A. as a whole were always held very dear by him. He did us good and faithful service.

Dr RALPH CLARKE BARTLETT who died in Southampton on March 10 had been medical officer of health for Romsey, Hants until his retirement from practice five years ago. He was born at Brighthelm, Devon and received his medical education at University College Hospital, London. In 1891 he obtained the diplomas M.R.C.S. L.R.C.P. and was later obstetrical assistant at University College Hospital. He then practised in Australia for some years holding the post of honorary medical officer to Cowra District Hospital, New South Wales. He returned to England about forty years ago and took over a practice in Romsey. He was appointed a Justice of the Peace for the Borough, and was medical officer of health. He was a fine athlete and organized lawn tennis tournaments. He was a member of the Southampton Medical Association and was highly esteemed by his colleagues and large circle of patients in South Hampshire. The funeral service at Romsey Abbey on March 12 was attended by many representatives of local interests and activities. Dr Bartlett became a member of the British Medical Association in 1919. He is survived by his widow, two sons and one daughter.

Dr NADIR HORMAZ SHAW GANDHI died at the North Stafford Royal Infirmary on March 30. Descendant of an old Parsi family, he was born fifty-nine years ago at Neemuch in Central India and was educated at Jodhpore and Allahabad where he took his M.A. with honours and gold medal in chemistry while still in his eighteenth year. Securing the Sir D. J. Tata scholarship he came to England to compete for the Indian Civil Service. He entered Caius College, Cambridge and graduated B.A. in the Natural Sciences Tripos of 1902 but just failed to secure a place in the I.C.S. greatly to his disappointment. He then took up medicine, joined the London Hospital and took the English Conjoint diplomas in 1906. After practising in London for some time he went to Hanley and Bucknall near Stoke. There after some years of the dry-bread stage of general practice success at last came to him and by hard work, unstinted devotion to his duties, charm of manner and generous nature he built up a very large practice. For several years he held

the post of M.O.H. to the Stoke Rural Council and was a member of the British Medical Association for nearly thirty years. A year ago sorrow came to him in the sudden loss of his wife and he met his own end with courage. Preceding the cremation at Secport the funeral service was conducted at the Bucknall Parish Church which was thronged by large numbers of his patients. In the words of the vicar: "He was a man who helped people at times when they most needed help and that well might be his epitaph."

Dr WILLIAM CONWAY GENT who died suddenly on April 1 at Southbourne, Bournemouth, aged 66, was educated at Magdalen College School and then went on to study medicine at Bristol and Edinburgh qualifying L.R.C.P. and L.R.C.S.Ed. and L.R.F.P.S.Glasg. in 1894. Dr Gent joined the British Medical Association in 1894. In his younger days he was a keen rider to hounds and an enthusiastic golfer. Later he had been living in retirement at Southbourne. He was married twice and leaves a widow and one son. Surgeon Lieutenant-Commander J. C. Gent R.N.

We regret to record the death on April 2 at Hove of Dr ARCHIBALD DINGWALL, aged 75 years. He was born at Auchterless in 1863 and received his medical education at Aberdeen University where he took the degrees of M.A., M.D. and C.M. He practised at Fraserburgh later in Wales and at Clapham Park, London, finally retiring to Hove. He was gazetted Captain R.A.M.C. during the great war serving in the Isle of Thorns area. He was especially interested in ambulance work and in work among the boy scouts. Dr Dingwall was a member of the British Medical Association for nearly fifty years. He was also a Mason. His contributions to medical literature were few. He wrote an article in the *British Medical Journal* in 1912 on "Gastro-intestinal Haemorrhage in a Newborn Infant" and it is interesting to note that he followed with interest and assistance the career of the child referred to who is now a medical graduate of Edinburgh University. Dr Dingwall was of a singularly retiring disposition, loving and loved by all with whom he came in contact. He leaves a widow and two daughters. The funeral was private and attended only by members of the family and a few old medical friends. Among the latter was one from the local Division of the B.M.A. in affectionate memory of an honoured colleague.

The death took place on April 4 in Edinburgh of Dr ANNE MERCER WATSON, who was one of the earliest women to enter the medical profession in Scotland. Dr Watson practised for many years in Aberdeen and had lived at 12 Webster Coates Avenue, Edinburgh, since her retirement. She was born at Dundee in 1862 and attended a medical course at University College, Dundee, and the Medical College for Women in Edinburgh, where she took the triple qualification in 1899. After periods of residence in the Royal Infirmary at Dundee and in the Victoria Hospital for Chest Diseases at Edinburgh she set up practice in Aberdeen where she was in partnership with Dr Laura Stewart Sandeman and was visiting medical officer of the Morningfield Hospital. During the war Dr Watson acted as an auxiliary of the R.A.M.C. and was prominently identified with the recruitment of the Edinburgh section of the W.A.A.C. She had been a member of the British Medical Association since 1900 and when the Association met at Aberdeen in 1914 she acted as secretary of the Section of Medical Science.

Dr FRANK BENJAMIN LEWIS who died on April 10 at his home in London Road, St. Leonards-on-Sea, was born in Surrey on April 29, 1867, the son of Thomas Lewis and studied medicine at the London Hospital. In 1892 he qualified with the licence of the Society of Apothecaries of London and in the same year took the L.R.C.P. and L.R.C.S.Ed. and L.R.F.P.S.Glasg. Dr Lewis was for

in many years medical officer of health under the Hastings Rural District Council public vaccinator and surgeon to the Buchanan Hospital, he was also a Justice of the Peace for Sussex. He joined the British Medical Association in 1893 and served as Representative of the Hastings Division at the Annual Representative Meeting in 1919.

The death occurred on February 6 of the Danish radiologist JENS JUUL at the early age of 41. He had already made a distinguished career for himself and had recently been put in charge of the radium station in Copenhagen after having served several years apprenticeship in the radiological departments of various Danish hospitals. He was particularly interested in the treatment of cancer of the mouth, throat, and oesophagus, and had elaborated a radiological technique which now bears his name in Denmark.

Dr J. V. HULIKRANIZ who died on February 14 at the age of 75 was lecturing when an attack of coronary thrombosis proved suddenly fatal. He was Professor of Anatomy in the University of Uppsala from 1899 to 1930 and he published many studies, among which his investigations of the movements of the diaphragm deserve special notice. His anthropological studies were also of a high order.

The following well-known foreign medical men have recently died: Dr OTTO NÄGELI professor of internal medicine and director of the Medical Clinic at Zurich, and an authority on diseases of the blood, aged 67; Dr HERMANN WALTER professor of surgery and orthopaedics at the Wilhelm University at Münster, aged 45; Dr HANS ALLENBURGER extraordinary professor of neurology and head of the physiological department of the Neurological Research Institute Breslau, aged 36; Dr MAURICE GÉRARD professor of clinical urology at Lille; Dr ENRIQUE BASTOS of Lisbon, an eminent Portuguese urologist; Professor MAXIMILIAN ROSE of Vilno, author of important work on the structure of the brain; Professor GEORG DEYCHIL PASCHA, formerly director of the Gulhane Hospital at Constantinople and an authority on tuberculosis and leprosy; Professor FRIEDRICH VON KRTGER formerly director of the department of physiological chemistry of the Physiological Institute of Rostock; Professor FRITZ KAYSER an eminent military surgeon of Cologne, aged 71; Professor GAETANO SAMPIETRO director of the Giromont laboratory at Rome, aged 62; Professor GUSTAVE DELAY dean of the Lausanne Medical Faculty from 1932 to 1934; Dr ETIENNE BARRAL honorary professor at the Lyons Faculty of Medicine and Pharmacy and corresponding member of the Académie de Médecine; Dr JOSEPH ARROU an eminent Paris surgeon, aged 77; and Dr DOMENICO TADDEI director of the surgical clinic at Florence and joint editor with Dr Guido Izzi of *Rivista Internazionale di Clinica e Terapia*, aged 63.

At the last quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men with Mr V. Warren Low, president, in the chair, the annual report and financial statement for 1937 to be presented at the annual general meeting on May 25 was submitted and approved. During the past year £4,702 was distributed in grants to widows and orphans. There was a surplus of income over expenditure of £112 due partly to the inability of the society owing to the increase in the number of widows in receipt of grants to make Christmas presents to them. This year the society celebrated its 170th anniversary of its foundation and it is suggested that a festival dinner should be held on October 27. Here it only seemed to necessitous widows and orphans of deceased members. Membership is open to any registered medical man who at the time of his election is residing within the limits of the County of London. Full particulars may be obtained from the secretary at 11 Chandos Street, Cavendish Square, W.1.

## Medical Notes in Parliament

In the House of Lords on April 12 the Lords' amendments to the Infanticide Bill were reported. On April 13 the Bill was read the third time and passed.

On the same day the Royal Assent was given to the Dogs Amendment Act, the Trade Marks Act, and the Rating and Valuation (Postponement of Valuations) Bill.

The Increase of Rent and Mortgage Interest Restrictions Bill was read a third time in the House of Commons on April 13.

The Road Haulage Wages Bill, "to make provision with respect to the remuneration of persons employed in connexion with the mechanical transport of goods by road" was presented to the Commons by Mr Ernest Brown on April 13, and read a first time.

Mr Ernest Brown announced on April 14 that he had received the report of the Committee on Holidays with Pay. The report was unanimous, and he hoped to publish it soon after the House resumed on April 26.

Sir John Simon has appointed a committee, under the chairmanship of Mr C. T. Le Quesne, K.C., 'to examine and report on the complaints which are made as to the position of unmarried women under the Contributory Pensions Acts, and on the practical questions which would arise if the age at which old age pensions under those Acts are payable to unmarried women were lowered'.

The House of Commons will reassemble on April 26, when Sir John Simon will open the Budget.

### Foot-and-Mouth Disease Outbreaks

In the House of Lords on April 12 Lord NUNBURNHOLME called attention to the recent outbreaks of foot and mouth disease, and asked if the Government had considered taking other measures to limit transport and access to any of the infected areas.

The Earl of FEVERSHAM said it was disappointing that, after the outbreak of the disease in the South Eastern Counties last October had been wiped out, this fresh series of outbreaks should have begun. So far as the Ministry of Agriculture could see, the outbreaks which began on March 25 had no connexion with the last epidemic. Several different types of the disease existed, but there were indications that the present epidemic had no concern with the type of the disease of last autumn and winter. At any rate, the disease in its present form appeared to take a longer time to show its presence in the animals. Another difference was that in the last epidemic a series of outbreaks appeared simultaneously in many parts of the country. The disease then arrived without warning and without evidence of definite centres from which it spread. This led the Ministry to connect that epidemic with the migration of birds from the Continent which was going on at that time.

In the present case, although the outbreaks had occurred in widely separated places, the evidence led them to believe that infection was picked up at certain definite centres, certain important markets in the Midlands which had together distributed stock over the greater part of the country. That meant that there was a longer period of warning in order to check any further distribution of the disease by movement of animals and to obtain a breathing space in which they could track down every single animal that might have been exposed to infection. The Ministry decided that they must impose a standstill order on the whole of England with the exception of the far north and the far west.

Since the standstill order was imposed on April 4 four new centres of disease had appeared. The facts so far available indicated that the actual spread of infection would not prove so serious as at first was anticipated. It within the next few days this view was confirmed and the Ministry were satisfied that the spread of the disease had been checked. They anticipated that a substantial reduction of the controlled area would be possible even if it was impossible entirely to withdraw the order covering those parts closest to the infected areas.

The Ministry were aware that in some countries on the Continent more severe restrictions had been imposed. The disease was still going on in Germany and recently the Ministry had had information to show that it was getting worse. From March 1 to March 15 there were 25,000 outbreaks in Germany almost twice as many as in February and over eighty times as many as we had in the whole of the financial year 1937-8. On the Continent the slaughter policy which we could adopt because we lived on an island was not practicable and infection was not wiped out as it was here.

Some of the measures advocated by Lord Nunburnholme might not be quite as effective as was suggested and might even make the position worse. They might close down their parish life but they could not close down the life of their birds ground game rodents or vermin. The Government preferred to rely on the existing restrictions and on the slaughter policy which strangled the disease at its birth rather than on measures the inconvenience of which would outweigh any possible advantage which might be derived from them.

VICOUNT DAWSON OF PENN asked where the evidence that birds were associated with this infection was accumulating and broadly what it amounted to and whether there was any particular bird which was thought to be guilty in this respect.

The Earl of FEVERSHAM said it was thought that the outbreak in the autumn and winter which started in East Anglia and eventually found its way to the West of England was connected with migratory birds which first landed on the East Coast and in the course of their usual flight went west. The research committee which had been set up to deal with foot and mouth disease had had much evidence submitted to it of that kind, and it was thought that in particular starlings might have been the means of carrying the virus. Up to the present he had no particular information which led him to think that this evidence supplied during the winter carried any conclusive proof. There was no evidence up to the present to show that the spread of the disease was due to migratory birds more than to the movement of any ruminating animal. The danger of the disease at the moment lay in one fact—that a large number of sheep—infected stock—were sold in Banbury Market and went in the normal course of marketing operations to all parts of England except Durham Northumberland Westmorland Cumberland Devon and Cornwall.

### Public Telephones and Tuberculous Infection

MR R. GIBSON asked the Postmaster General on April 11 if experiments had been made by officials of his department to discover whether tubercle germs were present in the mouth pieces of public telephones which were cleaned and those which were not cleaned respectively every morning. Major TAYLOR replied that investigations of the kind in question had been repeatedly undertaken in this country and in the United States by independent bacteriologists at the instance of public health and other authorities. They were unanimous in concluding that the risk of tuberculous infection from the use of the telephone was negligible. This conclusion was verified by the Post Office Medical Department by means of separate research.

### Medical Volunteers for A.R.P. Services

On April 12 the Prime Minister was asked by a Member what had been the response to the call for medical and nursing volunteers for the various air raid precaution services. Mr

CHAMBERLAIN replied that while figures were not available for the whole country recruiting for first aid work was satisfactory except in a few areas.

MR BULL asked on April 14 in what manner the services of doctors were being enlisted for duty in connexion with air raids and whether those who had offered their services for this work had been allocated to specific districts. Mr LLOYD replied that doctors would be required in connexion with air raid precautions primarily for supplementing hospital staff. The Home Secretary was consulting the Minister of Health on the whole question of hospital provision. In the meantime the scheme for the training of doctors in anti gas measures was proceeding steadily. Mr SANDYS asked whether it was proposed to send a proportion of hospital patients from the more vulnerable areas to other parts of the country and if so what arrangements had been made in the case of London. Mr LLOYD replied that this was one of the matters in connexion with hospitals about which the Home Secretary was in consultation with the Minister of Health. He recalled the statement that the survey of London would be completed in a few weeks.

### Voluntary Hospitals and A.R.P.

On April 12 Mr LOUIS SMITH asked the Home Secretary whether his attention had been called to the fact that when would fall on voluntary hospitals if they took as they were expected to do the fullest measures of air raid precautions to protect their patients and staff whether he would make inquiries as to the views of hospital managements generally on this important issue and whether he would then consider the grant to the hospitals of State assistance to ensure the necessary protection. Mr GEOFFREY LLOYD replied and said that voluntary hospitals like other institutions were expected to take such measures as were reasonable in the circumstances for the protection of their patients and staff. There would however be some hospitals which would be used as casualty clearing stations under a local authority's scheme approved by the Home Secretary. In such cases the local authority could contribute to any special expenditure involved in their use and such expenditure if approved would in proper cases rank for grant under the Acts.

Colonel NATHAN asked when the hospitals which were to be used as casualty stations would be told that that was so. He also asked with regard to other hospitals whether it was intended that the funds subscribed by the charitable public for the cure of disease and helping the afflicted should be used for the protection of premises against air raids. Mr LLOYD replied that a good many hospitals would undoubtedly fall under the class which he had described. The Ministry of Health was at present engaged in a survey of the hospital accommodation of the country from the air raid precautions point of view.

Colonel NATHAN asked if Mr Lloyd was not aware that the great voluntary hospitals of London were at present without any information at all of what was expected of them in the event of air raids and that their efforts to obtain information from the Home Office or else here had been fruitless.

MR LLOYD: I understand that the survey of London will be completed in a few weeks.

### School Accommodation for Defectives

MR ELLIOT replying to Mr KIRKWOOD on April 12 said it was proposed to accommodate physically and mentally deficient children in the same building in the College Street School Dumbarton. This arrangement was in accordance with terms of paragraph 26 of the Department's Circular No. 10 dated September 1, 1937. Arrangements would be made to keep the two classes of children separate in all respects—class tuition meals and recreation.

MR MUIF asked if Mr Elliot was aware that under a condition of times would not be tolerated in England and if he would endeavour to bring Scotland up to the standard of England. Mr ELLIOT replied that Mr MUIF was under a misapprehension. It was the common practice in England and



Wales and Scotland to provide on the same site, and in many cases under the same roof a school for mentally defective children as well as physically defective children. Replying to Mr Westwood Mr Elliot said he thought that this practice was desirable in the interests of education and of the children. It was recommended in the circular issued by the Department to the education authorities.

### Insulin Treatment of Schizophrenia

Sir KINGSLEY WOOD issued Mr Rhys Davies on April 13 that he would endeavour to place in the library of the House a copy of the report of the international conference on the insulin treatment of schizophrenia. At least twelve public mental hospitals and six private institutions in this country were applying insulin treatment. Mr RHYS DAVIES asked whether steps were being taken to train a sufficient number of medical men and mental nurses in the technique of this treatment, whether the treatment was in vogue in any private mental hospitals and if so what were the results? Sir KINGSLEY replied that it was not practicable within the limits of an oral answer to deal with results of treatment and training in the technique.

### Ante natal Clinics of Local Authorities

Mr JOEL on April 12 asked the Minister of Health how many towns of over 20,000 people were without ante-natal clinics and what action he was taking in each of these cases to induce the local authorities to take remedial measures. Mr BERNAYS said that out of 230 towns with over 20,000 people, the local authorities of which were themselves welfare authorities for this purpose only eight were without ante-natal clinics. In each of these cases either suitable alternative provision was available or ante-natal clinics were about to be established. In the case of seventy-seven towns of over 20,000 people which were included in the areas of county councils as welfare authorities the information was not readily available, but he would obtain the information Mr Joel desired.

Mr LEACH asked if the Minister would undertake to publish the names of the authorities which had been so negligent.

Mr BERNAYS: As they are about to provide ante-natal clinics I do not think that would be desirable.

### Health of Ex-service Men

On April 14 on the motion that the House of Commons adjourn over Easter till April 26 Mr F. B. SIMPSON opened a debate on the provision and administration of pensions, with particular reference to disabled ex-service men. He said that of 442,317 persons receiving disablement pensions at the end of 1937 64 per cent received 100 per cent pensions, 24.2 per cent received 30 to 40 per cent pensions, and 45 per cent received pensions of 20 to 30 per cent. The British Legion had gone into the problem of the prematurely aged ex-service man. The Legion was convinced that the health of a number of ex-service men had broken down as a result of the rigours of war service although it was impossible to substantiate by medical sequence a direct connexion with such service. Laymen were naturally convinced that there was a relation between the loss of one eye in the war and the subsequent loss of the other, but Mr Simpson cited a case where the medical experts said there was no connexion.

Mr BELLINGER asked for an inquiry.

Mr KELLY drew attention to the number of ex-service men who were patients in mental hospitals. These men were mental ill because of their service. The country would not then any money required for treatment or research which might afford some hope for these men.

Sir HENRY MORRIS JONES said men who knew about medical science were discouraged on bringing cases to the Ministry because of the difficulty in getting a medical review of their case. He had come to the conclusion that it was almost impossible to get a review of a case although he knew this case was a case of considerable importance. He asked the Minister

of Pensions to set up an inquiry into the medical aspects of these cases. Medical science had changed in the last twenty years. There was, for example, a different point of view as regards the heart and chest. Could not the Minister set up a medical committee to review aspects of the medical complaints? On surgical cases a more definite line could be taken when the wound was seen.

Mr RAMSBOTHAM said the subject of war pensions had been discussed before Christmas. The further debate of that day had raised no fresh facts for him to answer. He was prohibited from granting entitlement to a pension unless he had a medical certificate. To ask him to indulge in more laudable was to press him to ask his medical advisers for medical certificates which might not represent the honest view of the cases. The House would never ask him to do that. He agreed that the pensioner should have the benefit of the doubt. In the past twelve months he had no such complaints as that made by Sir Henry Morris Jones. He would be delighted to confer with Sir Henry, who must know that it was a system of independent medical experts. There were men of the highest repute in the medical profession, selected from a panel of the Royal College of Surgeons and the Royal College of Physicians. Mr Ramsbotham added that he made constant use of them. The average age of ex-service men today was about 50 and men of that age were subject to ailments resulting from the wear and tear of civil life. For that reason the Ministry now got many complaints of heart trouble, rheumatism, and chest trouble which were in exactly the same proportions among people in civil occupations. Every man suffering from disabilities which he thought due to war service was given by the Ministry of Pensions every opportunity to establish his case. The Ministry made researches with the approved societies, with chemists, shops, and with employers for evidence that the complaint had a continuous history. In many cases those links could not be discovered, and then it must be the case that a medical adviser could not say the present disability was the result of an injury or wound suffered in the war.

The House passed to discussion of other subjects and then adjourned for the Easter Recess.

### Problems of Milk Supply and Consumption

Wing Commander JAMES asked Sir KINGSLEY WOOD on April 14 whether, having regard to the divergence of opinion upon matters of fact expressed by various authorities upon bovine tuberculosis, pasteurization, and other matters affecting the supply and consumption of milk, he would appoint a committee to investigate and to report upon these problems. Sir KINGSLEY replied that the facts with regard to bovine tuberculosis and pasteurization in relation to the milk supply were sufficiently well established by inquiries such as that of the Committee of the Economic Advisory Council on Cattle Diseases.

Captain HILGERS: Is the Minister going to do anything to discourage biased propaganda on the question of pasteurization by the medical authorities?

Sir KINGSLEY WOOD: That is a different matter.

### Additional Factory Inspectors

In view of the passing of the Factories Act of last year and of other developments a scheme has been worked out which will have the effect of increasing the strength of the factory inspectorate by sixty-two or about 23 per cent over a period of three years. The scheme includes the appointment of an additional deputy chief inspector, and an additional superintending inspector to take charge of a new district which is being created in the Midlands, and the addition of three medical, one electrical and seven engineering inspectors. This announcement was made by Mr Lloyd on April 14.

Psychological Treatment of Prisoners—Sir R. LLOYD asked the Home Secretary who appointed the special committee of investigation into the psychological treatment of prisoners.



## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended April 9, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths and of Deaths recorded under each infectious disease, are for (a) The 125 great towns (122 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	41	9 2	11	1	—	30	7 —	14 5	2	—		
Diphtheria Deaths	1,351 44	162 7	179 4	74 3	25 1	942 31	114 9	188 4	57 7	33 1	1,011	147
Dysentery Deaths	87	20	59 1	—	—	18	1	7 2	—	—		
Encephalitis lethargica, acute Deaths	9	—	—	—	—	4	— 3	— 2	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	17 —	2 —	2 —	4 —	2 —	21 2	1 —	4 —	2 —	3 —	28	—
Erysipelas Deaths		—	63 1	6	4		1	72 4	8	3		
Infective enteritis or diarrhoea under 2 years Deaths	50	14	6	1	2	54	15	8	4	4		
Measles Deaths	56	15	1044 23	—	30* 3	14	—	231 1	2	1		
Ophthalmia neonatorum Deaths	103	9	37	—	—	92	7	31	—	1		
Pneumonia (influenza) § Deaths (from Influenza)	1086 56	93 8	8 3	7 —	2 2	1464 112	117 19	16 5	1 3	7 2	1,410	147
Pneumonia primary Deaths		26	167	14 13	7		24	235	15 29	17		
Polio encephalitis acute Deaths	2	—	—	—	—	—	—	—	—	—		
Poliomylitis acute Deaths	5	—	—	—	—	1	—	1	—	—		
Puerperal fever Deaths	5†	5 1‡	9	3	—	53	2 1‡	15	2	—		
Puerperal pyrexia Deaths	194	17	16	—	1	124	20	17	—	1		
Relapsing fever Deaths	—	—	—	—	—	1	—	—	—	—		
Scarlet fever Deaths	1990 5	191 —	348 2	74 1	60 —	1643 6	185 —	337 2	99 2	25 —	2,101	249
Small pox Deaths	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping cough Deaths	20	3	42 2	2	4 1	32	11	926 26	3	11		
Deaths (0-1 year) Infant mortality rate (per 1000 live births)	352 59	65 53	89	29	23	514 85	75 62	86	41	21		
Deaths (excluding stillbirths) Annual death rate (per 1000 persons living)	4545 112	960 113	609 124	177 120	150 133	5697 141	1116 139	673 138	248 169	176 168		
Live births Annual rate per 1000 persons living	6552 169	1261 159	935 190	294 199	245 220	7422 184	1383 172	986 202	391 267	280 268		
Live births per 1000 live births (including stillborn)	255 40	44 34				258 34	35 27					

Deaths from puerperal sepsis  
Include primary puerperal sepsis for England and Wales, London (administrative county) and Northern Ireland

## EPIDEMIOLOGICAL NOTES

## Enteric Fever

During the week under review 2 cases of enteric fever were notified in Cardiff these belong to an outbreak of paratyphoid fever in which at the time of going to press there have been 7 cases 4 in children and 3 in adults. So far the cause of the outbreak has not been ascertained.

## Diphtheria and Scarlet Fever

In England and Wales the decline in the incidence of diphtheria and scarlet fever continues both diseases are still more prevalent than they were last year but whereas the incidence of diphtheria is higher than in the previous nine years that of scarlet fever is lower. On the other hand the London figures for both diseases show a slight increase over those for the previous week as in England and Wales diphtheria is more prevalent and scarlet fever less prevalent than in the last nine years. In Scotland, Eire, and Northern Ireland increases are recorded during the week, with the exception of diphtheria in the last-named country, in which 25 cases were notified compared with 38 in the previous week.

## Measles and Whooping-cough

In the 125 Great Towns in England and Wales there were 36 deaths from measles, compared with 38 in the previous week, of these 15 occurred in London 4 in Manchester and 3 each in Barnsley, Reading and Salford. The prediction made last week that measles is on the wane in London is confirmed by the figures for the week under review 1,895 cases were reported from the L.C.C. elementary schools compared with 2,095 in the previous week, and the average daily admissions to the L.C.C. fever hospitals dropped from 92 to 78. The number of cases of measles under treatment in these hospitals on Friday, April 8 was 2,241 compared with 2,339 on April 1. On the same date there were in the L.C.C. hospitals 1,160 (1,128) cases of diphtheria 843 (838) cases of scarlet fever and 291 (312) cases of whooping cough. The figures in parentheses refer to the numbers recorded in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notified were for the week ended April 9 833 (1,113) distributed as follows: Battersea 128 (144) Bermondsey 88 (76) Finsbury 27 (30) Fulham 41 (77) Greenwich 99 (136) Hampstead 55 (47) Lambeth 188 (264) St. Pancras 110 (123) Shoreditch 51 (33) Southwark 115 (124) Stepney 51 (37). The figures in parentheses denote the numbers in the previous week. In Scotland 1,044 cases of measles were reported compared with 1,421 in the previous week the figures for Glasgow were 549 (692) for Dundee 179 (224) Aberdeen 81 (246) and Paisley 42 (29). During the week under review there were in the principal towns in Scotland 23 deaths from measles compared with 19 in the previous week of these 16 occurred in Glasgow 5 in Dundee 1 in Edinburgh and 1 in Ayr. In Northern Ireland there were 30 cases of measles (all in Belfast) compared with 80 in the previous week and 3 deaths (all in Belfast) a decrease of 5 on the previous week. There were no deaths from measles in Dublin in the previous week there were 2.

Compared with last week there were fewer deaths from whooping cough in England and Wales. London, Eire and Scotland while in Northern Ireland the same figure 1 was recorded. Whooping cough mortality was much lower in England and Wales and in Scotland than in the corresponding week last year.

The Ministry of Health announces that the Committee of Inquiry into the Anti Tuberculosis Service in Wales and Monmouth will resume its sittings in the City Hall Cardiff on Monday next April 25 at 11 a.m.

## Medical News

The King has granted Mr Cecil Rowntree F.R.C.S. authority to wear the Order of Officer of the Order of Leopold conferred upon him by the King of the Belgians and the Order of Chevalier of the Legion of Honour conferred by the President of the French Republic.

A meeting of the Chelsea Clinical Society will be held at the Hotel Rembrandt, Thurloe Place, S.W. on Tuesday April 26 at 8.30 p.m. when Dr L. I. M. Castleden will open a discussion on 'The Uses of Dyes in Medicine'. The meeting will be preceded by dinner at 7.30 p.m.

Professor Henry Cohen will deliver the annual oration before the London Jewish Hospital Medical Society at Sussex Place N.W. on Sunday May 1 at 8.30 p.m. His subject is 'A Century Ago—A Medical Retrospect'. The chair will be taken by the president Professor Samson Wright. Admission is by ticket only obtainable from the honorary general secretary Dr Max Sorsby, London Jewish Hospital, Stepney Green E.1.

The annual meeting of the British Association for the Advancement of Science will be held this year at Cambridge from August 17 to 24 under the presidency of Lord Rayleigh F.R.S. The following are the section presidents: Section A Mathematical and Physical Sciences Dr C. G. Darwin F.R.S. B Chemistry Professor C. S. Gibson F.R.S. C Geology Professor H. H. Swinerton D.Sc. D Zoology Dr S. W. Kemp F.R.S. E Geography Professor T. G. Smith Taylor D.Sc. F Economics Mr R. F. Harrod G Engineering Professor R. V. Southwell F.R.S. H Anthropology Professor V. Gordon Childe D.Sc. I Psychology Dr R. H. Thouless K Botany Professor W. Stiles F.R.S. L Education Mr John Sargent M Agriculture Professor R. G. Stapledon.

Owing to the prolongation of the war in Spain the fifth congress of the Latin Medical Press which was to have been held in Lisbon during the Easter holidays has been postponed until next autumn when it will be held at Lisbon from September 29 to October 2 under the presidency of Professor Reynaldos dos Santos. Further information can be obtained from the general secretary Professor Armando Narciso Restauradores 48 Lisbon or Dr Pierre 52 Avenue de Breteuil Paris VIe.

In our advertisement columns this week the Corporation of London invites applications for the office of Medical Officer of Health for the Port of London. The commencing salary is £1,500 per annum rising to £2,000 per annum.

An award of the Dr Jessie Macgregor Prize in Medical Science will be made in July next to the applicant who presents the best record of original work in the science of medicine. Such work may be published or unpublished but must not have been published earlier than three years prior to July 1938. The value of the prize is about £20 and is open to medical women who are graduates in medicine of the University of Edinburgh or who have taken the triple qualification and who before becoming qualified have studied medicine for at least one year in Edinburgh. The successful applicant shall within six months following the award deliver a lecture to the medical profession in Edinburgh on the subject of the work for which the prize has been awarded. Such lecture to be entitled 'The Dr Jessie Macgregor Lecture'. Applications marked 'Dr Jessie Macgregor Prize' must reach the Convener of Trustees Royal College of Physicians Edinburgh 2 not later than June 30.

Two Sir Milom Rees Scholarships for one or two medical practitioners of £100 each to Port Rees Preparatory School Broadstairs have been awarded to P. Burrows son of Dr H. Burrows and to P. King son of Dr P. A. H. King.

The Robert Jones Gold Medal and Prize of £20 of the British Orthopaedic Association for 1937 has been awarded to Mr H. Jackson Burrows for his essay on 'Coxa plana'.

Dr George B Bitten of Dulwich a pioneer radiologist, and Mrs Bitten received a presentation from their medical and other friends at a reception on the occasion of their golden wedding on April 9

The National Safety First Association held its annual industrial safety conference at New College Oxford on April 8, 9 and 10. The subjects discussed were the safety education of the new employee, the Factories Act 1937, modern practice for fixed machine guards, and works safety propaganda. The complete proceedings including reports of discussions will be published shortly from the offices Terminal House 52, Grosvenor Gardens SW1.

Dr Richard Pfeiffer for many years professor of hygiene at Breslau and discoverer of the influenza bacillus in 1892 celebrated his eightieth birthday on March 27.

A new French 30,000 ton ocean liner which is to run between France and the Argentine next year, has been named *Pasteur* by Mme Pasteur Vallery-Radot, wife of the scientist's grandson.

## Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, BMA HOUSE, TAVISTOCK SQUARE, W.C.1.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone, unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Secretary, BMA House, Tavistock Square, W.C.1, on receipt of proofs. Authors overseas should indicate on MSS if reprints are required; if proofs are not sent abroad.

All communications with reference to ADVERTISEMENTS should be addressed to the Advertisement Manager. Orders for copies of the *Journal* and communications with reference to subscriptions should be addressed to the Secretary, BMA House, Tavistock Square, W.C.1.

The TELEPHONE NUMBER of the British Medical Association and the *British Medical Journal* is EUSTON 2111.

The TELEGRAPHIC ADDRESSES are:  
EDITOR OF THE BRITISH MEDICAL JOURNAL: Autology, Westcent, London.

SECRETARY: Mediscera, Westcent, London.

The address of the BMA Scottish Office is 7 Drumsheugh Gardens, Edinburgh (telegrams: Associate, Edinburgh), telephone 24361 (Edinburgh), and of the Office of the Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street, Dublin (telegrams: Bacillus, Dublin), telephone 62550 (Dublin).

## QUESTIONS AND ANSWERS

### "Typhoid Mary"

Dr J. D. ROBERTSON would be glad to know of any account of this celebrated carrier published after the description of her case by Major George A. Soper in the *Military Surgeon* 1919, 15, 115.

### The Elder Twin

E. H. writes: "Can any reader help me to find the correct descriptive word for the elder of twins? I have searched in many available books of reference and have inquired in various directions, but unsuccessfully."

### An Internal Sanitary Pad

WOMAN DOCTOR writes in reply to G.P. (*Journal* April 16, p. 840): "Although not a gynaecologist, my observations on the internal sanitary pad may be of use to G.P. I have found them very unsatisfactory in that they cause a constant feeling of fullness and stimulation in the vagina. This is particularly noticeable in the case of the nullipara with a narrow vagina. For obvious reasons these internal pads cannot be used by a virgin as insertion would be extremely difficult, if not impossible. They also tend to cause irritation as the pressure on the rectum seems to be too great for complete relaxation. They may be used for a short time if some particular case makes it specially desirable."

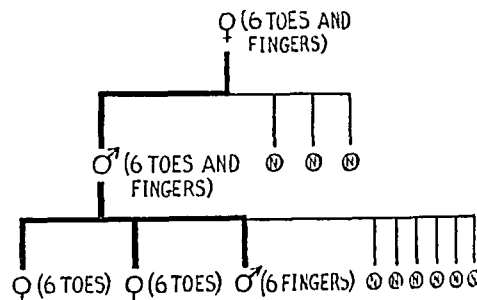
## LETTERS, NOTES, ETC

### Destruction of Bugs

Dr N. PINES (London E.1) writes: "May I mention how bugs were destroyed, nearly always successfully, in pre-war Russia? Walls were invariably stripped and whitewashed with CaCl<sub>2</sub>, all cracks in them being previously washed out with kerosene and stopped with some material after that. The cracks in the floors were also washed out with kerosene and stopped after that with some material. Furniture and fittings were removed, taken to pieces if possible, liberally washed with kerosene and afterwards with boiling water and soap. Beddings and garments were disinfected in the ordinary way by formalin vapour. Bugs are very elusive and not only the bedrooms but the whole of the premises must be carefully examined for their traces, and in cases of doubt treated in a similar way."

### Polydactylism

Dr S. HARTILL (East Cowes) writes: "The following is an interesting example of supernumerary toes and fingers."



The diagram, in which N represents normal offspring, indicates quite clearly the incidence of this condition in three generations.

### Treatment of Pneumonia

Dr H. W. HALES (London W.1) writes: "I have only just seen Dr Nott's letter in the *Journal* of January 22 (p. 203). I should like to endorse several of his statements. In my experience limited to some seventy odd cases, colonic lavage with potassium permanganate is the most valuable treatment ever introduced for pneumonia. I am sure that the chief factor in pneumonia is intestinal toxæmia, and that the chief cause of death from this complaint is this cause acting on the heart. On four occasions I have reproduced pneumonia during a course of detoxication by potassium permanganate colonic lavage, pyretic treatment, and reduced diet in patients who have had the disease on two or three occasions previously. In each case the illness only lasted twenty-four hours or so, but the signs in every instance were typical. Knowing that this statement might reasonably be questioned by the profession, I asked certain professional colleagues of mine to see the patients in question. I expressed entire agreement with my views, and was not surprised at seeing the patients sitting up in bed breathlessly with half the lung solid and no sign of toxæmia. This pneumonic reaction also seems to indicate the true origin of the disease. One further point. The patients treated by Nott's method contain chloride in the blood, chlorides remain normal, and the patients throughout the disease. I feel that the chloride deficit of pneumonia and the sweating deficiency of the crisis are produced by an intestinal toxæmia on the blood chlorides and upsetting the skin."

### Medical Golf

The spring meeting of the Scottish Medical Golfing Society was held at Bramshott Golf Club on April 10, with the following results—*Medal Round*: Dr A. F. Adams 94 less 14 = 80, and Dr Mather Thomson 90 less 10 = 80, tied for first place. *Foursomes*: 1st Dr A. S. Paterson, Dr E. L. Bartleman 1 down, 2nd Dr D. Macdonald, Dr R. K. Trail 3 down, Dr A. J. Buchan and Dr Findlay 3 down.

Evans, Sons, Lescher, and Webb Ltd. have received a grant from their Biological Institute at Runnymede for the *Evans Journal*.

## POSTGRADUATE NEWS

The Fellowship of Medicine announces the following course of postgraduate medicine at Maudsley Hospital April 25 to May 28, proctology at Gordon Hospital May 2 to 6, dermatology at St John's Hospital May 2 to 28, thoracic surgery at Brompton Hospital May 16 to 20, plastic surgery at various hospitals May 11 and 12, gynaecology at Chelsea Hospital May 23 to June 3. Courses in preparation for the M.R.C.P. examination in July will be as follows: clinical and pathological at National Temperance Hospital Tuesdays and Thursdays 8 p.m. May 31 to June 16, chest diseases at Brompton Hospital Tuesdays and Fridays 5.15 p.m. May 10 to June 24, heart and lung diseases at London Chest Hospital Wednesdays and Fridays 6 p.m. June 1 to 24, neurology at West End Hospital June 13 to 25, pulmonary tuberculosis at Preston Hall June 25. Week-end courses occupying the whole of a Saturday and Sunday will be given as follows: children's diseases at Infants Hospital April 10 and May 1, chest diseases at Brompton Hospital May 7 and 8, general surgery at Princess Beatrice Hospital May 14 and 15, physical medicine at St John Clinic and Institute of Physical Medicine May 21 and 22, obstetrics at City of London Maternity Hospital June 11 and 12, radiology at Royal Cancer Hospital June 18 and 19. The Fellowship of Medicine's dinner-dance will take place at Claridge's Hotel on May 19. All members of the medical profession both at home and from overseas will be welcome. Tickets can be obtained from the Fellowship of Medicine, 1 Wimpole Street W.1 or from any member of the ladies' committee.

The Joint Tuberculosis Council announces that Dr. Peter W. Edwards, medical superintendent of the Cheshire Joint Sanatorium, is prepared to continue his series of short intensive postgraduate courses of a practical nature on modern methods of therapy in tuberculosis of the respiratory system with special reference to collapse therapy. In the sanatorium there is abundant material for the demonstration of artificial pneumothorax and allied procedures. Methods of sanatorium administration will also be demonstrated. Dr. Edwards is prepared to hold courses from May 2 to 4, June 27 to 29, and September 26 to 28. The fee for a course is £2.75 which includes lunch and tea at the sanatorium. All inquiries should be addressed to Dr. William Brand, honorary secretary for postgraduate courses, Joint Tuberculosis Council, 8 Christ Church Place, Epsom, Surrey.

A course of lectures on pathological research in its relation to medicine will be given in the lecture theatre of the bacteriological department of the Institute of Pathology and Research, St. Mary's Hospital W, on Tuesdays at 5 p.m. from April 26 to June 14 inclusive. The lectures are open to all members of the medical profession and to all students in medical schools without fee. Details will be published in the postgraduate diary column of the *Supplement* week by week.

## WEEKLY POSTGRADUATE DIARY

BRITISH POSTGRADUATE MEDICAL SCHOOL, Ducane Road W.—Daily, Medical Clinics, Surgical Clinics and Operations, Obstetrical and Gynaecological Clinics and Operations, Mon 2.30 p.m., Sir Edmund Spence, Diseases of Small and Large Intestine, Wed 12 noon, Clinical and Pathological Conference (Medical), 3 p.m., Clinical and Pathological Conference (Surgical), 4 p.m., Dr. C. H. Andr, Viruses, Thurs 2.15 p.m., Dr. Dunlop, Demonstration, 3.30 p.m., Mr. Victor Bonney, Malignant Neoplasms of Uterus, Fri 2 p.m., Clinical and Pathological Conference (Obstetrics and Gynaecology).

FELLOWSHIP OF MEDICINE AND POSTGRADUATE MEDICAL ASSOCIATION, 1 Wimpole Street W.—*Maudsley Hospital*, Denmark Hill, S.E., Course in Psychological Medicine, *Infants Hospital*, Vincent Square S.W., Sat and Sun, Course in Children's Diseases.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road W.C.—Daily, Course in Anatomy and Physiology.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale W.—Thurs 3 p.m., Dr. Blake Pritchard, Clinical Demonstration.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street W.C.—Thurs 2 p.m., Mr. H. C. Apperley, The Milk Teeth, 3 p.m., Dr. Alan Moncrieff, Causes and Diagnosis of Enlarged Cervical Glands, Out-patient Clinics, mornings 10 a.m. to 12 noon, Ward Visits, afternoons 2 p.m. to 5.30 p.m.

INSTITUTE OF BRITISH SURGICAL TECHNICIANS—At Woburn Hotel, Welbeck Street W, Fri 8 p.m., Mr. W. H. Ogilvie, Uses of Instruments in Surgical Technique.

INSTITUTE OF PATHOLOGY AND RESEARCH, St. Mary's Hospital W.—Tues 5 p.m., Dr. Donald Hunter, Observations on the Toxic Action of Certain Compounds of Lead, Arsenic and Mercury.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westminster, S.W.—Tues 5.30 p.m., Dr. Paul Wood, Pericarditis.

ST. JOHN CLINIC AND INSTITUTE OF PHYSICAL MEDICINE, Royal Free, S.W.—Fri 4.0 p.m., Dr. G. T. Caldwell, Radiology in Physical Medicine.

MANCHESTER ROYAL INFIRMARY—Fri 4.15 p.m., Dr. W. J. Brockbar, Clinical Demonstration.

## DIARY OF SOCIETIES AND LECTURES

## ROYAL SOCIETY OF MEDICINE

Section of Otolaryngology—Mon 8 p.m., Paper by Mr. S. Wilson, Charles Developmental Movements of the Teeth, Clinical Communication by Mr. G. T. Hansen, Otitis Fibrosa—Lecture, Macleod's Simulating Osteogenic Sarcoma.

Section of Medicine—Tues 5 p.m. (Cases at 4 p.m.), Central Meeting, Middlesex Hospital, Cases will be shown.

Section of Epidemiology and Social Medicine—Wed 8.15 p.m., Paper by Dr. W. A. Duley, School Life and Afternoon of a Handicapped Child.

Section of Urology—Stockholm, Thurs and Fri, Annual General Meeting, Election of Officers and Council for 1955.

BRITISH PSYCHOLOGICAL SOCIETY, MEDICAL SECTION—At Tavistock Clinic, Mallet Place W.C.—Wed 5.0 p.m., Dr. H. G. Balfour, Psychological Demonstration of the Drawings of a Schizophrenic Artist.

CAMBRIDGE MEDICAL SOCIETY—At Adderbury, Hospital, Cambridge, Fri 5.30 p.m., Dr. J. D. Simpson, Corcoran.

CHELSEA CLINICAL SOCIETY—At Hotel Rembrandt, Trafalgar Place S.W.—Thurs 8.15 p.m., Dr. L. I. M. Castleden, Uses of Doses in Medicine, Preceded by dinner at 7.30 p.m.

MEDICO-LEGAL SOCIETY—At 16 Portland Place W.—Thurs 8.0 p.m., Mr. William Lacey, Medico-Legal Aspects of the Matrimonial Causes Act 1937.

ROYAL INSTITUTION, 21 Albermarle Street W.—Fri 9 p.m., Dr. R. N. Salaman, F.R.S., The Origin of the Pouch and its Influence on Man's Early Settlement in South America.

ST. JOHN'S HOSPITAL, DERMATOLOGICAL SOCIETY, L 10 St. John's W.C.—Wed 4.0 p.m., Clinical Cases, 5 p.m., Dr. J. H. T. Davies, Minor Surgery of the Skin with Special Reference to Boppy.

## VACANCIES

All advertisements should be addressed to the  
Advertisement Manager and NOT to the Editor.

## RESIDENT POSTS

ACCREDITED VICTORIA HOSPITAL—H.S. Salary £17 p.a.

ALTRINCHAM GENERAL HOSPITAL—(1) Senior H.S. £115 p.a. (2) Junior H.S. £100 p.a. and £110 p.a. respectively.

BANGOR, CERNARVONSHIRE AND ANGLESEY INFIRMARY—J.H.S. (male) Salary £10 p.a.

BARNLEY, BECKETT HOSPITAL AND DISPENSARY—CO (male) Salary £22.0 p.a.

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BIRMINGHAM AND MIDLAND EYE HOSPITAL—H.S. Salary £10 p.a.

BIRMINGHAM CITY—MO (female) for Carwell Hall Baby Hospital in Maternity and Child Welfare Department, Salary £250 p.a.

BIRMINGHAM GENERAL HOSPITAL—(1) H.S. to Gynaecological Department, (2) H.S. to Throat and Ear Department, Salary £70 p.a. each.

BURTON, COSHAM MEMORIAL HOSPITAL, Loughborough—J.M.O. (male) Salary £100 p.a.

DEVONPORT, PRINCE OF WALES'S HOSPITAL—J.H.S. Salary £10 p.a.

DIDLEY GUEST HOSPITAL—(1) Surgical Officer, Salary £150 p.a. to £200 p.a. according to experience, (2) H.S. Salary £100 p.a. to £150 p.a. according to experience, (3) J.M.O. Salary £100 p.a.

DUNDEE MENTAL HOSPITAL, Westgate—J.A.M.O. (male) Salary £100 p.a.

ELING, KING EDWARD MEMORIAL HOSPITAL—H.S. (male) Salary £10 p.a.

EDINBURGH, ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL—Assistant Obstetric Registrar (female), Salary £100 p.a.

HALIFAX, ROYAL HALIFAX INFIRMARY—Second H.S. (male) married, Salary £175 p.a.

HARTLEPOOL HOSPITAL—H.S. Salary £10 p.a.

HASTINGS, ROYAL EAST SUSSEX HOSPITAL—J.H.S. (male) Salary £10 p.a.

HENLEY HEMPSTEAD, WEST HERTS HOSPITAL—J.M.O. (male) Salary £100 p.a.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Assistant P. (2) Two Medical Assistants and Clinical Pathologist.

logists (3) Assistant Surgical Officer (4) H.S. Unmarried Salaries £200 p.a. £125 p.a. £100 p.a. and £50 p.a. respectively

HUDDERSFIELD ROYAL INFIRMARY—(1) H.S. (2) H.S. for Abnormal Maternity Department (3) H.S. for Eye Ear Nose and Throat Departments Males Salaries £150 p.a. each

LEEDS KING GEORGE HOSPITAL—Assistant C.O. and H.S. (male) to Special Departments Salary £100 p.a.

LIVERPOOL STIRLING DISTRICT MENTAL HOSPITAL—J.A.M.O. (male) Salary £300 p.a.

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LICHFIELD CITY—M.O. (male) for City General Hospital Salary £300 p.a.

LONDON COUNTY COUNCIL—A.M.O.s (Grade II) for (a) Princess Mary's Convalescent Home Cliftonville Margate (b) St. Alge's Hospital Vinburgh Hill Greenwich S.E. (c) St. Francis Hospital East Dulwich S.E. (d) St. George in the East Hospital, Raine Street Wapping E. and (e) St. Luke's Hospital Sydney Street S.W. (a) is a female appointment only Unmarried Salaries £250 p.a. each

LONDON LOCK HOSPITAL Harrow Road W.—M.O. (male) Salary £175 p.a.

LOWESTOFT AND NORTH SUFFOLK HOSPITAL—J.H.S. (male) Salary £120 p.a.

MANCHESTER CITY—A.M.O. for Withington Hospital Salary £200 p.a.

MIDDLESEX COUNTY COUNCIL—Whole time Casualty M.O. for West Middlesex County Hospital Isleworth Salary £350 p.a.

NEWBURY ROYAL GWENT HOSPITAL—(1) H.S. to Fracture and Orthopaedic Department (2) C.O. Salaries £135 p.a. each

NORTHAMPTON MANFIELD ORTHOPAEDIC HOSPITAL—M.O. (male) Salary £200 p.a.

NORTHWOOD MOUNT VERNON HOSPITAL—H.S. Salary £150 p.a.

NOTTINGHAM CITY—Assistant Surgical Officers for City Hospital Salaries £250 p.a. each

NOTTINGHAM GENERAL HOSPITAL—C.O. (male) Salary £150 p.a.

OXFORD WINGFIELD MORRIS ORTHOPAEDIC HOSPITAL Headington H.S. (male) Salary £100 £120 p.a. according to experience

PADDINGTON GREEN CHILDREN'S HOSPITAL (INC.) W.—H.S. (male, unmarried) Salary £150 p.a.

PRISTON ROYAL INFIRMARY—C.O. Salary £150 p.a.

ROCHDALE INFIRMARY AND DISPENSARY—Second H.S. (male) Salary £150 p.a.

ROTHERHAM HOSPITAL—H.P. (male) Salary £180 p.a.

ROYAL FREE HOSPITAL Gray's Inn Road W.C.—Senior M.O. (male) Salary £150 p.a.

RUEBY HOSPITAL OF ST. CROSS—M.O. (male) Salary £100 £150 p.a.

SALISBURY GENERAL INFIRMARY—H.P. (male, unmarried) Salary £125 p.a.

SHEFFIELD CITY—A.M.O. (Grade I) (male) for City General Hospital Salary £350 £25 £450 p.a.

SHROPSHIRE GENERAL INFIRMARY—Senior H.S. Salary £175 p.a.

ST. ALGE'S INFIRMARY—H.S. (male, unmarried) Salary £150 p.a.

STOKES TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY—Anaesthetist Salary £150 p.a.

STOKES TRENT CITY—M.O. (male unmarried) for Stinfield Sinatonium Salary £250 p.a.

STROUD GENERAL HOSPITAL—M.O. Salary £160 p.a.

SUNDERLAND ROYAL INFIRMARY—J.H.S. (male) Salary £120 p.a.

SWANLEY HOSPITAL CONVALESCENT HOME Parkwood—M.O. (female) Salary £200 p.a.

WEIR HOSPITAL Grove Road Bilham S.W.—J.M.O. (male, unmarried) Salary £150 p.a.

WORCESTER ROYAL INFIRMARY—J.H.S. Salary £120 p.a.

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MAIDENHEAD HOSPITAL—Hon. S. for Ear Nose and Throat Department

MANCHESTER ROYAL INFIRMARY—Chief Assistant to a Surgical Unit Salary £250 p.a.

OXFORD RADCLIFFE INFIRMARY—Surgical Registrar Salary £400 p.a.

SOUTH EASTERN HOSPITAL FOR CHILDREN Sydenham S.E.—Hon. Assistant S.

### UNCLASSIFIED

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BIRMINGHAM CITY AND COUNTY—Two Whole time Assistant M.O.s (one male and one female) Salaries £200 £50 £700 p.a. each

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GLoucester CORPORATION—Assistant M.O.H. (male) Salary £500 p.a.

HULL ROYAL INFIRMARY—Assistant M.O.H. and Assistant School M.O. Salaries £200 £25 £750 p.a.

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LEEDS AND LEICESTER COUNTY BOROUGH—Assistant M.O.H. (female) Salary £200 p.a.

LEEDS AND LEICESTER COUNTY DISTRICT GENERAL HOSPITAL—Part time M.O. Salary £200 p.a.

LEEDS AND LEICESTER COUNTY DISTRICT GENERAL HOSPITAL—(1) Part time Surgical Registrar (2) Part time Medical Registrar Males Honorariums £225 p.a. and £175 p.a. respectively

LONDON CORPORATION Guildhall, E.C.—M.O.H. for Port of London Salary £1 500 £2 000 p.a.

LONDON COUNTY COUNCIL—A.M.O.s for mental health services Salaries £470 £25 £570 p.a. each (Female applicants to be unmarried)

MANCHESTER ROYAL EYE HOSPITAL—Out patient M.O. Salary £200 p.a.

MANCHESTER ROYAL INFIRMARY—Director of Clinical Laboratory Salary £800 p.a.

MIDDLESEX COUNTY COUNCIL—(1) Whole time Assistant District Officer (male) Salary £500 £25 £700 p.a. (2) Visiting Dermatologist for Redhill County Hospital, Edgware Pcc £3 15 p.a. session

MIDDLESEX HOSPITAL W.—Obstetric and Gynaecological Registrar Salary £300 p.a.

NEWCASTLE-UPON-TYNE ROYAL VICTORIA INFIRMARY—Whole time Registrar to Orthopaedic Department Salary £150 p.a.

NEWCASTLE-UPON-TYNE UNIVERSITY OF DURHAM AND ROYAL VICTORIA INFIRMARY—Professorship of Pathology, tenable at King's College, Newcastle upon Tyne, and Pathologist to Royal Victoria Infirmary Newcastle Salary £1 100

PADDINGTON GREEN CHILDREN'S HOSPITAL (INC.) W.—Two Clinical Assistants to Medical Out patients

QUEEN MARY'S HOSPITAL FOR THE EAST END Stratford, E.—Hon. Assistant S. with charge of out patients

ROYAL LONDON OPHTHALMIC HOSPITAL City Road, L.C.—Out patient officer Salary £100 p.a.

ST. BARTHOLOMEW'S HOSPITAL E.C.—Part time Chief Assistant for X-ray Diagnostic Department

STOKES TRENT CITY—Whole time M.O. (male) of Venereal Diseases Centre Salary £750 £937 10s p.a.

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WIMBOROUGH—(1) Whole time Assistant M.O.H. Salary £500 £25 £700 p.a. (2) Part time Assistant M.O. Remuneration £1 11s 6d per session

WEST LONDON HOSPITAL Hammersmith Road W.—Chief Assistant to Department for Chronic Rheumatic Diseases Honorarium £100 p.a.

CERTIFYING FACTORY SURGEONS—The following vacant appointments are announced Llandrindod Wells (Radnorshire) Billingham (Lincolnshire) Haddenham (Cambridgeshire) West Calder (Midlothian) Applications to the Chief Inspector of Factories Home Office, Whitehall, S.W.1, by April 26

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 57 58 59 60 61 64 and 65 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 62 and 63

### APPOINTMENTS

MACKEITH S.A., MRCS L.R.C.P., D.P.M. Honorary Consulting Physician in Charge of the Department of Psychological Medicine, Warneford General Hospital Leamington Spa

CERTIFYING FACTORY SURGEONS—A.S. Beer M.B. F.R.C.S.L.D. for the Thame District (Oxfordshire), G.S. Christie M.B. Ch.B. for the Fordoun District (Kincardine), J.C. Christie M.B. D.P.H. for the Perth District (Perthshire), J.H. Christie M.B. B.Ch. for the Abingdon District (Berkshire), J.P. Christie L.R.C.P. and S. for the Kelvedon District (Essex), W.F. Christie M.R.C.S. L.R.C.P. for the Reynoldsford District (Gloucestershire), J.T. Murphy, M.B., B.Ch., for the Culston District (Devonshire)

LONDON COUNTY COUNCIL—The following appointments have been made at the hospitals indicated in parentheses Deputy Medical Superintendent Grade I J. Jemson, F.R.C.S. (St. Alge's) Deputy Medical Superintendent Grade II A.N. Jones, F.R.C.S. (St. Pancras) Assistant Medical Officers Grade I C.W.C. Karran M.B. (Park) A.B. Christie M.B. Ch.B. D.P.H. (Eastern) H.W. Hall M.B., Ch.B., D.P.H. (Brixton) H.L. Settle M.B. Ch.B. (Grove)

### BIRTHS, MARRIAGES, AND DEATHS

The charge for insertion, announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

#### BIRTH

BENTON—On April 11 at City Hospital Nottingham Dr. Sidney B. Benton a daughter

#### MARRIAGE

WARRIN—Bruce—April 12 at Bingley John Fairbairn M.B. Ch.B. D.P.H. Leeds of Tadcaster to Kathleen S. Warrin M.B. Ch.B. D.P.H. Leeds of Bingley at Ryddington 271 Preston New Road Bingley

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 330 Agranulocytosis due to Pyramidon

A GUES (*These Paris* 1937, No 793) who records three illustrative cases in women aged 27, 29 and 30 respectively states that though pyramidon may give rise to agranulocytosis this sequel is relatively rare especially in France, where considerable use is made of the drug. The clinical picture so produced in no way differs from agranulocytosis due to other causes. The prognosis however is less severe than in the primary form. Of 128 cases of agranulocytosis due to pyramidon collected by Plum seventy or 54 per cent., were fatal, while among thirty three cases of primary agranulocytosis reviewed by Gues there were twenty deaths—a mortality of 60 per cent. The pathogenesis is still obscure. The sequel appears to occur only in special subjects who for some unknown reason are particularly sensitive to pyramidon, and may be regarded as a sort of anaphylactic reaction. Prolonged administration of large doses of pyramidon should therefore be avoided when a predisposition to anaphylaxis may be suspected.

### 331 Pulmonary Stenosis

C LIAN and J-J WELTI (*Arch Mal Cœur* December 1937, p 946) describe an auscultatory phenomenon which they say may be observed in about 10 per cent of cases of congenital pulmonary stenosis. It consists of a short, clear clapping sound at the beginning of systole. This is superimposed on the second half of the first sound which is thus reduplicated. The maximum intensity of this sound is at the inner end of the second and third left intercostal spaces. It is sometimes possible to palpate a vibration corresponding to this sound. The sound is not widely propagated, and is lessened or abolished by inspiration. It may sometimes appear as a marked intensification of the first sound in the pulmonary area since the ear cannot clearly distinguish the dull initial part of the first sound preceding the clapping sound. It is suggested that the phenomenon is due to the increased tension of the dome formed by the adherent segments of the pulmonary valve in the early part of systole. It has also been heard in cases of pulmonary arteritis in which condition it may be due to increased tension of the diseased walls of the artery. Six cases are described in which this sound was an important sign. Electrocardiograms show that the clapping sound coincides with the latter half of the first sound and precedes immediately the systolic bruit from which it is not separated by any interval of silence.

### 332 Tuberculosis in Medical Students

J HOLM and P HELWEG LARSEN (*Ugeskr Laeg* February 3 1938 p 116) give an account of a three year study of medical students in Denmark which began in the spring of 1934. The examination which was ostensibly voluntary but in practice more or less obligatory began with Mantoux's intracutaneous tuberculin test, repeated when necessary till a dose of 1 mg of international standard tuberculin was attained. The negative reactors were not for the moment further examined whereas the positive reactors were radiologically examined. The Mantoux testings were so spaced that the student would have to submit to them six times during the six and a half years of the curriculum. Of the 1608 students examined 1,192 were found from the outset to be positive reactors. The proportion of positive reactors rose from 69 per cent among junior students to 95 per cent among the most senior students. In the 1,192 originally positive reactors were twelve students who already knew that they had contracted pulmonary tuberculosis. Among the remaining 1180 there were

1161 with radiologically normal lungs. There were nineteen who seemed to be perfectly well but whose lungs showed radiological evidence of tuberculosis. Of the 1161 Mantoux positive students with radiologically normal lungs twenty had a history of tuberculosis of the pleura, knee, peritoneum etc. During the three year observation period none of the 1161 Mantoux positive students with radiologically normal lungs developed pulmonary tuberculosis whereas among the 416 originally Mantoux negative students there were as many as nineteen who had evidence of pulmonary tuberculosis after Mantoux's reaction had become positive. Twenty seven original Mantoux negative students were given intracutaneous injections of BCG which rendered them Mantoux positive; none of them developed pulmonary tuberculosis. The authors conclude that the student most likely to contract pulmonary tuberculosis during the medical curriculum is the originally negative tuberculin reactor.

### 333 Ascorbic Acid and Gelatin

G IZAR and G CAZZONE (*Riv med* January 8 1938 p 5) state that systematic investigations carried out at the medical clinic at Messina University have shown that subcutaneous injections and the administration by mouth of laevo ascorbic acid cause a fall in the blood sugar in both normal and diabetic subjects this fall reaching its maximum about an hour after the injection of vitamin C and being followed by a progressive rise up to the original level in the next three hours or so. Further investigations proved that gelatin in a 2 per cent sterile solution and glycerin in a 40 per cent sterile solution added to equal quantities of a solution of ascorbic acid considerably increased this hypoglycaemic action and made it persist for a longer period.

## Surgery

### 334 Haematemesis of Splenic Origin

G CHIORAZZO (*Riv med* January 15 1938 p 46) states that patients with chronic splenomegaly are relatively often liable to severe haemorrhages which are usually manifested by haematemesis owing to the high position of the bleeding point in the alimentary tract. The splenic tumour is of a congestive or fibro-congestive type either secondary to a mechanical obstruction to the discharge of blood into the spleen (thrombophlebitis occlusa or compression of the splenic vein) or primary and independent of any changes in the portal circulation. There are two characteristic features—namely the severity of the haemorrhage and the suddenness of its appearance. The patients are usually young persons who have been suffering for some time even years from anaemia and loss of flesh vague pains in the left hypochondrium frequent dyspepsia and not uncommonly irregular fever. On examination a large hard mass is found in the left half of the abdomen suggesting a splenic tumour. Treatment can only be surgical and consists in either splenectomy or ligation of the splenic artery which the author prefers as being a less severe operation.

### 335 Direct Extension for Spinal Injuries

R SÆLER (*J Chir Brux* December 1937 p 661) discusses the treatment of dislocation and fracture of the cervical vertebrae and suggests a method of treatment which was tried in two cases both well reported. It consists in the direct application of traction through the skull. Two different methods are described in which traction is applied through a steel wire inserted into open trephined in the parietal bone on either side. In the



second method traction is made by means of a stirrup devised by Schmerz this procedure is simpler and safer, it was also found that it caused less discomfort to the patient than any other method of treatment. In one case extension by this means was carried out for nearly a month without any inconvenience after the first few days. Direct traction is recommended even in the presence of a fracture of the lower jaw a lesion which is often associated with cervical injuries. By this means reduction is quickly brought about a factor which is of importance in cases of medullary compression. The patient can be moved without the extension being interfered with. This method of treatment is contraindicated when a wound is present in the parietal region or when there is infection of the scalp. It is suggested that direct traction might also be of value in other lesions of the spinal column, such as osteomyelitis or Pott's disease.

### 336 Surgical Treatment of Acute Mastitis

J. KREIS (*Gynec. et Obstet.* December, 1937, p. 499) emphasizes the unsatisfactory results of the surgical treatment of acute mastitis by means of large radial incisions. Convalescence is long the wound heals by granulation, and the cosmetic result leaves much to be desired. Acute mastitis is often seen with multiple abscesses in different stages of development. A method of treatment which has proved successful is by means of a para-areolar circular incision round the edge of the pigmented area of the areola. The incision is made through the skin until pus is reached. The cavity is then enlarged by inserting a pair of forceps, and these are opened as they are withdrawn and a rubber drain is inserted. The abscess forms a triangle the apex of which is beneath the nipple. If the abscess lies towards either the axilla or the sternum the incision is made on the side affected. Sometimes an incision on both sides is necessary. In the lower half of the breast a para-areolar incision is made with a counter-incision below for drainage. This counter-incision must always be in the breast itself and must follow the contour of the breast. Drainage is by means of perforated rubber tubing and should be of as short a duration as possible. Forty-three cases have been treated by this method with good results.

## Therapeutics

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### Agranulocytosis

L. BAUMANN (*Munch. med. Wschr.* February 11, 1938, p. 204) agrees with other workers that in the treatment of agranulocytosis few successes have followed the injection of nuclein preparations, liver extracts, turpentine, leucocyte suspensions or yellow marrow or treatment with x-rays. He states that transfusions of normal blood have never been effective but alludes to the very recent reports of Bok and of Deglinn of cures effected by the transfusion of blood from a patient suffering from myeloid leukemia. He reports a severe case of agranulocytosis, in a woman aged 59 who does not appear to have taken pyrimidon treated by two months intramuscular injections of increasing doses of an extract of calves red marrow. Clinical and hematological cure followed in spite of the initial gravity of the condition, as shown in spinal puncture by the absence of myeloblasts, promyelocytes or other neutrophil cells and by the negative oxidase reaction of the other cells present. The extract was equally effective after being made protein-free. A temporary improvement had occurred at an earlier stage at the daily oral administration of 150 to 200 grammes of calves red marrow. The success of injections of red marrow or of myeloid leukemic blood suggests that red marrow contains an anti-leucoplastic principle perhaps similar to the anti-anæmic principle of Castle,

if this is so, then it seems possible that leukemia may be regarded as a condition of hormonal origin.

338

### Polycythaemia Vera

M. R. MCALPINE and K. E. SMITH (*N.Y. State J. Med.* January 15, 1938, p. 101) report upon fourteen cases of polycythaemia vera treated with acetylphenylhydrazine. These cases are compared with a series of ten cases treated by them with phenylhydrazine and reported two years ago. The severity of the polycythaemia varies considerably, the highest red cell count being 11,700,000. Six patients were Jews, one was a Greek, and one an Armenian, two were plumbers and two painters. Three patients had peptic ulcers. The treatment given was 0.1 gramme of acetylphenylhydrazine for two or three days in the course of a week. This was repeated for several weeks and then the dose was increased gradually to 0.4 or 0.5 gramme. In only one case did jaundice occur, in two other cases there was a susceptibility to the drug. The results of treatment, which was controlled by weekly blood counts, showed that nine patients were improved, two did not improve, and three died. At the two necropsies performed no signs of poisoning were found. Two of the fatal cases showed also Ayer's disc. In the opinion of the authors acetylphenylhydrazine is superior to phenylhydrazine hydrochloride in the treatment of polycythaemia vera.

## Radiology

339

### Radiotherapy of Hemiplegia

P. LE GOLF (*J. Radiol. Électrol.* December, 1937, p. 511) recommends radiotherapy for the treatment of the sequelae of hemiplegia. X-rays have a beneficial effect not only on the primary lesion but also on the associated symptoms. The whole of the affected hemisphere is irradiated, the focal distance being not less than 40 cm. and the initial doses not more than 5 to 20 r at 120 to 150 kV, filtered through 0.3 to 0.5 mm. of copper. The dose is gradually increased to 100 r at each sitting. To eight treatments are given in each series of treatment, the series being repeated at gradually increasing intervals. There are no contraindications to the treatment which should be begun as soon as possible. The author reports a number of personal observations on a series of cases treated. In some of the cases reported the results are remarkably good.

340

### Fate of Thorium Dioxide

W. FREEMAN (*Arch. Neurol. Psychiat.* Chicago 1937) describes the effects of intraventricular injections of thorium dioxide on the ventricles and the subarachnoid space. His material was obtained from two biopsies, eight necropsies, and the time interval after injection varied from one hour to two months. As to the ventriculography thorium dioxide is a buffered colloidal solution stabilized by a protective colloid consisting of a solution of dextrin. If injected into a closed cavity protective colloid is dispersed and the thorium dioxide flocculates, forming plaques on the walls which remain for an indefinite period, but if the ventricular system is unobstructed the colloidal suspension is eliminated. In the choroid plexus an exudative inflammation is produced which is maximal twenty-four hours after injection and clears up within four days. It causes oedema, marked leucocytic infiltration and separation of the epithelium. A transitory inflammatory reaction is also produced in the ependyma and the meninges in non-obstructive cases. In the latter there is no plastic inflammation and no tendency for the meninges with blocking of the cerebrospinal pathways. In a case of obstructive hydrocephalus

was found, however four days after the injection extensive alteration in the ependyma and widespread exfoliation of the ependymal lining with masses of cellular exudate in which were leucocytes macrophages and a few lymphocytes mingled with both free and intracellular particles of thorium dioxide. Numerous minute focal haemorrhages were also present. In another case after two months the ependyma was not regenerated but in its place there was a bare fibrous glial lining with a thin sheet of histiocytes containing particles of thorium and occasionally histiocytic aggregates of larger size. Free man concludes that the possibility of a progressive inflammation with the formation of a granulomatous lesion is precluded by the inertness of thorium. The possibility of a late effect on the brain from the standpoint of radioactivity is also considered to be slight because normal cerebral tissue is not susceptible to radiant energy and the small quantities injected rapidly disappear. The ultimate fate of the thorium and its effects on the tissues in general are questions for future decision.

### 341 Genito-urinary Carcinomata

W TESCHENDORF (*Z Urol* 1938, 38 1 11) agrees with the majority of urologists that all operable urological conditions should be treated by operation even if they are amenable to x-ray therapy. He discusses the radiotherapeutic method of Seitz and Wintz, which on the whole proved disappointing in new growths of the urinary organs. The results greatly improved however after the introduction of the method of fractional dosage of which the author gives a brief outline. He describes in detail the application of the method slightly modified by himself in cancer of the kidneys and bladder. By this technique it was possible to apply to the tumour itself 3,200 to 4,000 r units within about three weeks and in weak patients within about four to five weeks. The author gives a statistical survey of the results of radiotherapy in cancer of the bladder prostate kidneys urethra and penis in a fair proportion of cases the treatment resulted in cure or in a long remission. He concludes by stressing the importance of close collaboration between the urologist and radiotherapist.

### 342 Visualizing the Left Auricle

B ENQUIN and J A AGUIRRE (*Rev argent Cardiol* September-October 1937 p 227) state that antero-posterior radiographs of patients with mitral stenosis taken from a short distance (90 cm) with hard rays and exposure times of from 1/10 to 3/10 second using a Potter-Bucky apparatus give a good view of the left auricle in some cases the auricle was only slightly dilated. Its shadow was clearly recognized in cases of pure mitral insufficiency. Two radiographs showed a triple contoured concentric shadow the third arch was determined by a spindle shaped shadow within the auricular image and was shown to be due to displacement of the oesophagus to the right.

### 343 Irradiation of Sympathetic Ganglia for Arthritis

DUHEM MORO and MONTMIGNAUT (*Presse med* January 29 1938 p 153) have treated a series of twenty five cases of arthritis of the hip joint by x rays applied to the second lumbar sympathetic ganglion. The skin landmark for this ganglion corresponds to a point situated 3 cm to the side of the spinous process of the second lumbar vertebra. Where the affection is unilateral the central ray is made to strike this point. The point of entry is 10 cm by 10 cm so that the first and second lumbar vertebrae are irradiated at the same time. It is immaterial whether the central ray is vertical to the frontal plane of the spine or inclined at 20 degrees towards the sagittal plane. In cases of bilateral arthritis the central ray is made to strike the spinous process of the second lumbar vertebra. Hard radiation of 180 to 200 kV is used,

filtered through 0.5 mm of copper and 2 mm of aluminium. The total distance is 40 cm. 120 r units are given at each sitting twice weekly for three weeks (total of 900 r units). In four of the twenty five cases treated an improvement was noticed after two to three treatments in six cases after four treatments in eight cases after six treatments and the remaining cases responded only fifteen days after the end of the course of treatment. It is yet too early to say whether the improvement will be lasting but in view of the relatively small doses the treatment could be repeated several times.

### 344 General Effects of X-Ray Therapy

P BLUMEL (*Beitr klin Chr* 1938 167, 7 1) has been able to prove by experiments on animals that small doses of x rays seem to immunize the body against the spread of a carcinoma while large doses accelerate the invasion. This is probably due to the fact that irradiation releases certain specific products which immunize in small doses but are toxic in large doses. The conclusions from animal experiments are not directly applicable to man. The reaction to irradiation in healthy animals subsequently inoculated with tumour cells must be different from the reaction to irradiation in a cancerous human patient. Certain general principles however are common to both. The immunizing effects of irradiation are of secondary importance in the treatment of radio sensitive growths. In such cases it is only of importance to avoid as much as possible a decrease of the patient's resistance to the growth. This can be achieved by the avoidance of large fields by tangential application of the rays by fractional dosage and similar measures. In tumours which are radio resistant the treatment should aim only at increasing the general resistance to invasion. This can be achieved in a number of ways—for example by prophylactic irradiation after operation for a carcinoma of the breast. Recently the author has tried the effect of small doses of x rays in cases of gastric carcinomata. By a judicious distribution of the doses it was possible to administer a fairly large total dose to the tumour itself the results so far have proved encouraging. The author's experiments have also confirmed the importance of general treatment of carcinomatous patients, the patient's resistance should be increased by all available means.

### 345 X-Ray Therapy of Enlarged Tonsils and Adenoids

P GIBERT (*J Radiol Electrol* January 1938 p 19) advocates x-ray therapy for enlarged tonsils and adenoids in children. He uses a moderately penetrating radiation filtered through 10 mm of aluminium or 0.5 mm of copper. The skin focus distance is 23 or 25 cm with large ports of entry extending from the zygomatic arch to the clavicle. He gives two bilateral applications of 160 r units to each field—rarely three or four applications—within two to three weeks. The lymphoid tissue is very radio sensitive and at the same time the x rays have a beneficial effect on the inflammatory condition. The method is particularly advisable in the very young where operation is feared because of possible complications. The treatment is harmless thanks to the small doses used and does not interfere with a subsequent surgical operation in cases where x-ray therapy fails. On the other hand x rays may effect a cure in cases of recurrence after operation.

### 346 Total Teleradiotherapy for Blood Diseases

G MARCHAL, L MALLET and A BELLIN (*Paris med* February 5 1938 p 113) report the results of total teleradiotherapy in the leukaemias in Hodgkin's disease and in polycythemia. According to the condition of the blood they used a skin focus distance of either 2.4 metres—mainly in Hodgkin's disease and in polycythemia—in which the red blood corpuscles are fairly resistant—or 2 metres in cases predisposed to anaemia—for example

in monocytic leukaemia. The doses were very small, usually 5 to 10 *r* units at each treatment, gradually increasing up to not more than 30 *r* units. Treatments were given twice weekly for two to ten weeks according to the reaction of the patient; the interval between each series of treatments also varied according to the patient's reaction. In two out of seven cases of chronic monocytic leukaemia the results of the treatment were brilliant, in the remaining five indifferent or transitory. A case of lymphoid leukaemia was favourably influenced and the patient was kept comfortable for four years. The results in five cases of myeloid leukaemia were on the whole satisfactory, sometimes exceptionally good. Of twenty-four cases of verified lymphogranulomatosis excellent results were obtained in more than half, in some of the cases however it was necessary to treat the large swellings with local irradiation. In two cases of polycythaemia the results were very satisfactory, amounting practically to a clinical cure.

### 347 Broncho-pulmonary Radiating Shadows

R. D'AMBROSIO and M. FERRARA (*Lotta c. Tuberc.*, October 1937, p. 935) discuss the radiological diagnosis of the pre-phthisical state (as described by Bezançon and Braun-Sergent and others) in which a latent pulmonary tuberculosis is characterized by (1) vague depreciation of general health, (2) indefinite pulmonary signs and symptoms including cough, bronchitis, asthma, dry pleurisy and slight haemoptysis, and (3) radiological signs which are not localized but consist chiefly in a diffuse accentuation of the normal broncho-pulmonary shadows and in the presence near the chest wall of abnormal linear prolongation of these shadows. In such a condition the pleuro-pulmonary vascular connective tissue network is said to be the site of latent discrete, "closed" tuberculous lesions, their spread being either centripetal or centrifugal along the rich network of accompanying lymphatics. A later result is a subpleural, peribulbar, and peribronchial formation of bands of sclerosis. The condition has been termed 'tramitis'. D'Ambrosio and Ferrara, in repeated examinations of 500 sanatorium patients including early and late cases, found only twelve in which satisfactory evidence of tramitis was present; they emphasize the importance of taking several radiographs at intervals. Evolution towards cure, fibrosis, or excision and cavitation was noted in different cases.

## Obstetrics and Gynaecology

### 348 Vaginal Stenosis

G. TSOLLOPOULOS and J. PLATZ (*Zbl. Gynak.*, February 5, 1938, p. 290) allude to special forms of vaginal stenosis, thought to be due to ovarian insufficiency which have been recently reported in the German literature. Novak, in 1925 and again in 1936, and Labhardt, independently in 1936, described a circular contraction just below the cervix at the level at which the border of the levator ani crosses the vaginal wall. This stenosis called by Labhardt *krampfsartige Vaginismus*, is not readily dilatable mechanically, causes severe dyspareunia, is accompanied by leucorrhoea and lower abdominal discomfort and though commoner about or after the climacteric is also seen in younger women and may cause dystocia. Halban, in 1937, described a similar condition in women aged from 42 to 52, the ring-shaped contraction, however, is found at the base of the hymen and was named *cirrhosis annularis subhymenalis*. The first condition was described as being due to ovarian hypofunction and by Labhardt as reacting to treatment by follicular hormone. The present authors record an example of the second condition, and also observed an excellent response to protracted treatment with large doses. They therefore consider it especially in young subjects (their patient was

a sterile woman aged 34), that this treatment should precede surgical intervention (splitting or, better, excision of the ring of contracted connective tissue) such as was recommended and successfully employed by Halban.

### 349

#### Eclampsia

R. T. MEURER JUN (*Nederl. Tijdschr. Geneesk.*, February 13, 1938, p. 736) states that the incidence of eclampsia at the Amsterdam Obstetrical College during the period 1900 to 1937 has declined from 1 in 423 to 1 in 1,073 pregnancies, chiefly as the result of the prophylactic measures taken, and especially the improved antenatal care. He maintains that the general adoption of these measures throughout the country would reduce the frequency of eclampsia to under 1 per 1,000. The risk of eclampsia is much greater in primiparae than in multiparae.

## Pathology

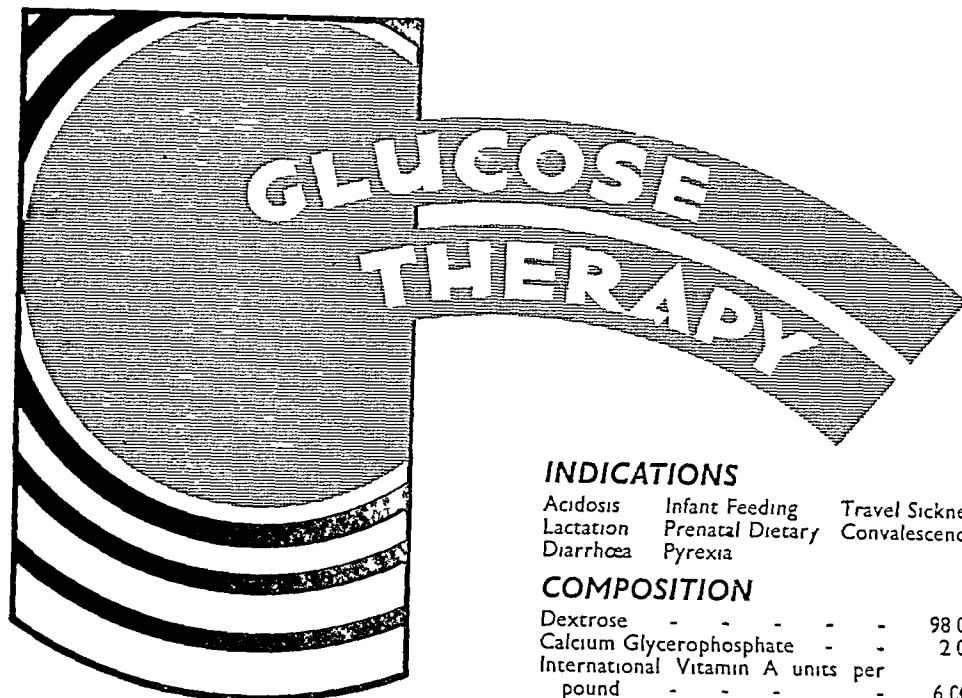
### 350 Errors of Interpretation of Sedimentation Rates

P. BLICKMANN (*Dtsch. med. Wschr.*, January 14, 1938, p. 83) has studied 515 patients who came under a national tuberculosis scheme. Common to all these cases were their afebrile course and the clinical improvement noted during the first four to six weeks of treatment. Among the 296 male patients were eighty-five whose sedimentation rates were higher than they had been four weeks earlier in spite of clinical improvement. Among the 219 female patients, fifty-eight presented the same phenomenon. Thus, in 27 per cent of the 515 patients the evidence of the sedimentation rate was at variance with the clinical evidence. The author believes that the sedimentation rate may be changed by many different factors such as drugs, baths, massage, radiological treatment, and diet. There are also certain sources of error in the technique of the test after the blood has been withdrawn. In a group of seventy-one cases in which most, if not all, such disturbing factors were eliminated he found only four cases in which a rise of the sedimentation rate could not be accounted for by the clinical evidence. It is thus possible to reduce the misleading findings from 27 to 6 per cent. With regard to errors in the technique of the test, he advises puncture of the skin only after it has been thoroughly dried so that the needle does not pass through any ether or alcohol, otherwise the disinfectant introduced into the sample of blood examined may affect the sedimentation rate. Another important point is to keep the sample of blood examined at a uniform temperature of 20° C.

### 351

#### Hyperadrenalism and Buerger's Disease

N. MAGGI and L. PARODI (*Arch. ital. Chir.*, 1937, 47, 5481) recall that a hyperadrenalism was suggested by Oppel in 1921 as a possible cause of Buerger's disease, and that favourable if transitory effects have followed excision of the suprarenal medulla or the suprarenal on one side. Maggi has previously reported that repeated subcutaneous implantations into guinea-pigs of suprarenal tissue causes hyperplasia and degeneration of the media in the small arteries together with intense intimal proliferation and desquamation; in the veins there are somewhat similar changes not infrequently going on to obstruction of the lumen. From the observation that such changes were less easily induced by implants in females than males he was led to test the effect of preliminary castration on the experimental arterial changes in male guinea-pigs. Castration alone had no effect, but if the castration was followed by implants of guinea-pigs' ovary the arterial changes following the suprarenal implantations were insignificant and venous alterations absent. This finding is regarded as confirming the value of therapeutic trial in Buerger's disease, of injection of ovarian extracts.



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### INDICATIONS

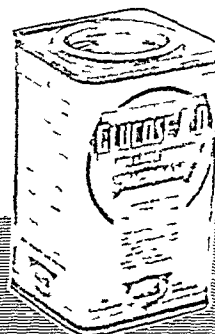
Acidosis	Infant Feeding	Travel Sickness
Lactation	Prenatal Dietary	Convalescence
Diarrhoea	Pyrexia	

### COMPOSITION

Dextrose	-	-	-	-	98 0 /
Calcium Glycerophosphate	-	-	-	-	2 0 /
International Vitamin A units per					
pound	-	-	-	-	6 000
International Vitamin D units per					
pound	-	-	-	-	2 000

# GLUCOSE

## A·D



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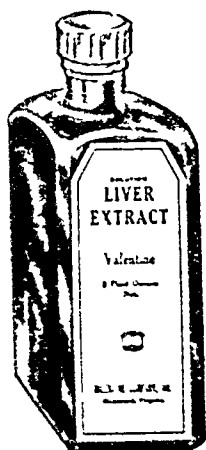
<i>B. Coli communis</i>	2.12
<i>B. tetani</i>	1.34
<i>B. anthracis</i> (spores)	2.66
<i>B. enteritidis</i>	2.12
<i>B. influenzae</i> (Pfeiffer)	2.65
<i>B. tuberculosis</i>	2.17

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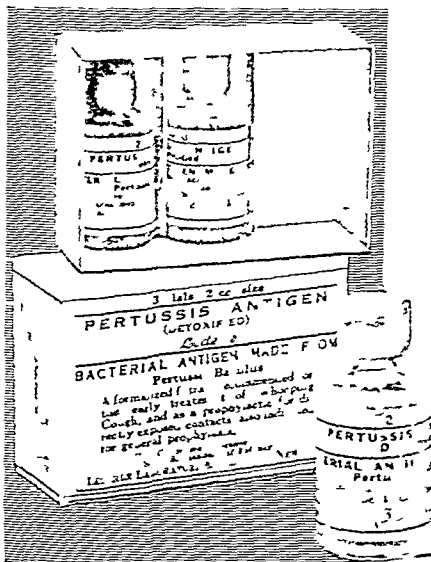
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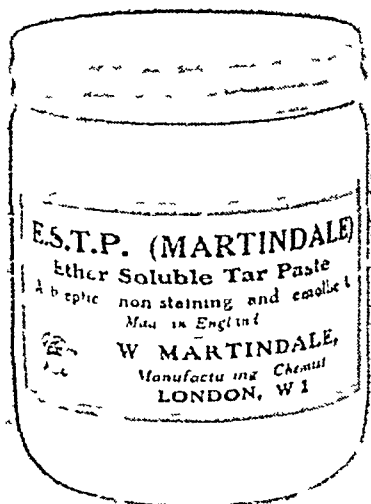
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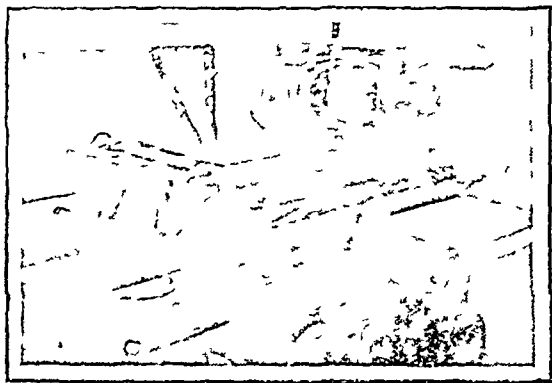
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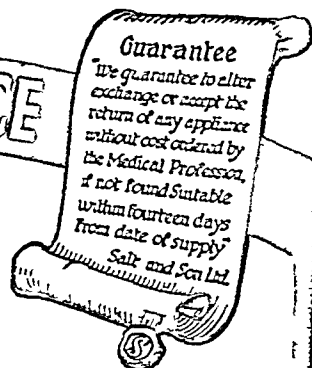
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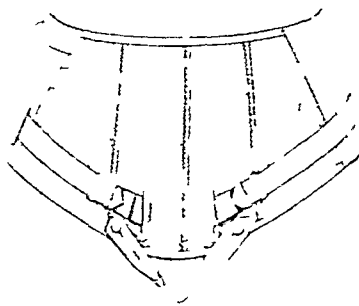
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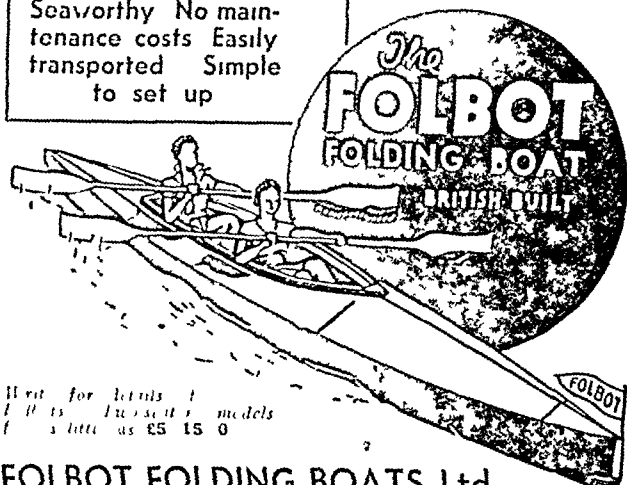
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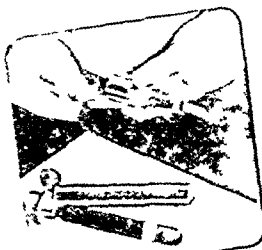
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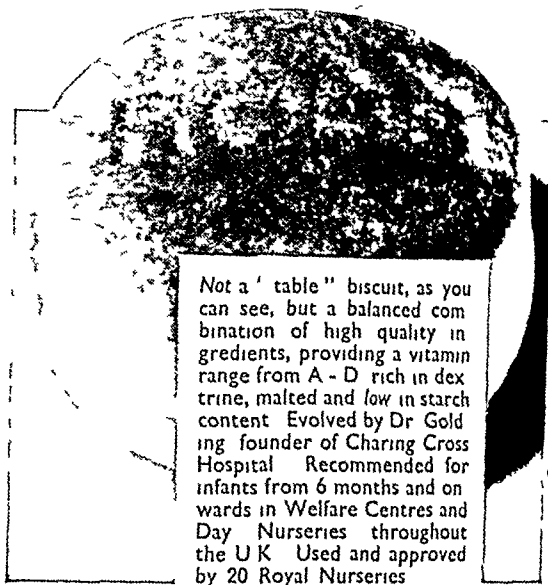
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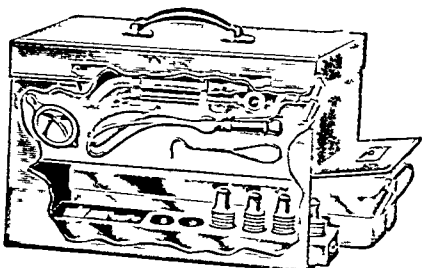
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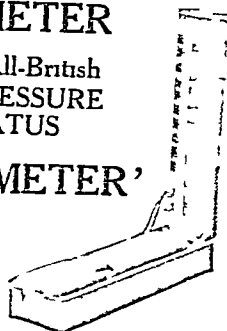
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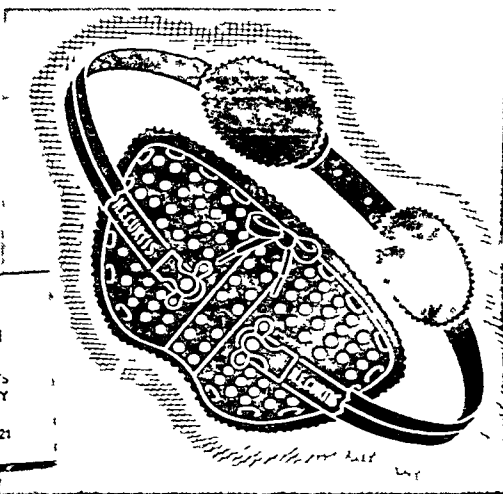
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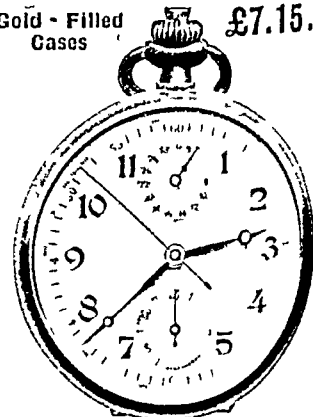
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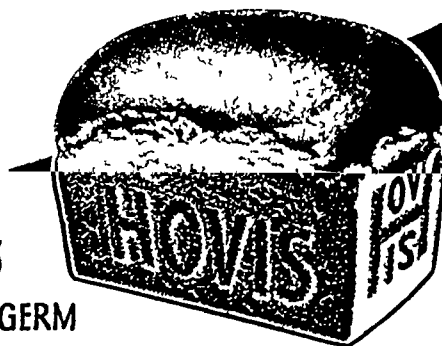
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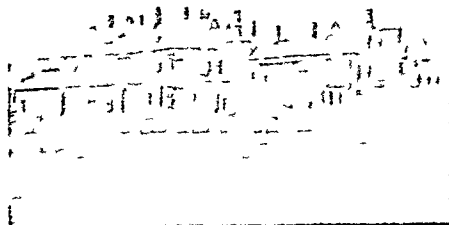
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Rendlesham Hall, which is open to receive patients is essentially a Sanatorium. Its daily life and routine are that of an ordinary comfortable holiday or health resort or of a large country house. Each patient has all the privileges of a guest consistent with the prescribed medical treatment.



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Rendlesham Hall has 45 bedrooms and about 450 acres of gardens and park. It has also a private nine-hole golf course, tennis and croquet lawns and bowling green.

*Illustrated booklet giving particulars as to terms etc. can be had on application to the*

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*Telegrams and Telephone: WICKHAM MARKET 210 (Toll Call from London)*

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*Address: The SECRETARY, Ruthin Castle, North Wales.*

*Telegrams: Castle Ruthin. Telephone: Ruthin 66.*

# CAMBERWELL HOUSE, 33, Peckham Road, London, S E 5

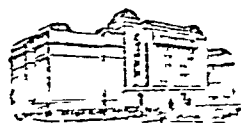
*Telegrams: PSYCHIC, LONDON.*  
FOR THE TREATMENT OF MENTAL DISORDERS  
Also completely detached villas for mild cases with private suites if desired. Voluntary patients received. Two acres of ground. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash, Rackets, Recreation Hall with Billiard Room, and 10 indoor amusements including Wireless and other Concerts, Occupational Therapy, Callisthenics and Dancing Classes, and Actino-therapy. Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Optician's Dispensary. Chapel. Senior Physician DR. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting. Coroner's Court. An illustrated prospectus giving fees, which are very moderate, may be obtained upon application to the Secretary.  
The Convalescent Branch is HOVE VILLA, BRIGHTON and is 200 feet above sea level.

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Patients only received under the supervision of their own Medical Practitioner.  
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Terms very moderate

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Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

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Including Alcoholism and other Addictions  
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FUNCTIONAL NERVOUS DISORDERS MEDICAL  
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A country residence with extensive gardens on the outskirts of the City of Bath established by the Mental Treatment Act Committee of the Corporation for the care and treatment of a limited number of women (Voluntary and Temporary patients only) suffering from Emotional Nervous Disorders.

The Nursing Home is fully staffed with educated nurses and is equipped for Hydrotherapy and Plombieres Treatment.

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 14 miles from Northampton  
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 Both sexes are accommodated  
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 Under the same merit  
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 So best of

# The MUNDESLEY SANATORIUM

The central building makes the Mundesley Sanatorium the best equipped building in England for the cure of Tuberculosis. All the bedrooms have hot and cold running water electric light and wireless headphones. The public rooms are spacious and comfortable.

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THE SANATORIUM MUNDESLEY  
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For Terms apply to the Resident Medical Superintendent—

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First opened in 1898 and rebuilt in 1925. On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W. sheltered from North and East, elevation 860 feet. Pure bracing air. Special Treatment by Artificial Pneumothorax (X-ray controlled). Tuberculous and Ultra violet Rays are available when necessary without extra charge. X-ray plant. Fully equipped Dental Department. Electric light. Radios hot and cold basins and Wireless in all rooms. Up-to-date main drainage.

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LIVING PATIENTS RECEIVED  
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5 to 8 guineas per week at the Hospital 3 to 4 guineas per week at the Sanatorium  
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APRIL 26th		SUBJECT
DONALD HUNTER M.D. FRCP (Physician London Hospital)	Observations on the Toxicology of certain compounds of Lead, Arsenic and Mercury (With Cinema Film)	
MAY 3rd		
Sir THOMAS LEWIS CBE MD FRCP FRS (Physician University College Hospital)	Some Observations upon Ischaemic Paralysis of Nerves in Man	
MAY 10th		
R. A. YOUNG CBE MD FRCP (Consulting Physician Middlesex Hospital)	The Treatment of Pneumonia	
MAY 17th		
Prof. JOHN MELLANBY M.D. FRS (Prof. Physiology University Oxford)	Bile Salts as the dominant factor in Intestinal Secretions and Digestion	
MAY 24th		
Prof. MATTHEW J. STEWART M.B. Ch.B. FRCP (Prof. Pathology University of Leeds)	Some aspects of the Silicosis Problem	
MAY 31st		
Prof. B. A. McSWINEY Sc.D. B.Ch. MB (Prof. Physiology St. Thomas's Hospital Medical School)	Afferent Fibres from the Abdominal Viscera	
JUNE 7th		
Sir HENRY HALETT DALE CBE MD FRCP FRS (Director National Institute for Medical Research Hampstead)	Chemical Agents Transmitting Nervous Excitation	
JUNE 14th		
Sir JOHN FRASER K.C.V.O. MD FRCS (Plastic Prof. for Clinical Surgery University Edinburgh)	Surgery and Circulatory Disease	

These Lectures are open to all members of the Medical Profession and to all Students in Medical Schools without fee

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(Free to Registered Medical Practitioners and Students)

Lecturer	Subject	On the following dates at 4.30 p.m. 1938
Mr H. P. Winbury White	The present position with regard to the treatment of Prostatic Obstruction	May 4th (Wednesday)
Mr W. K. Irwin	The causes of frequency of micturition with special reference to diagnosis and treatment	May 11th (Wednesday)
Mr Kenneth Walker	Diseases of the Testicle and their Treatment	May 18th (Wednesday)
Dr R. J. Clausen	Spinal Anaesthesia	May 25th (Wednesday)
Mr Stanford Cade	Epileptoma of the Penis	June 1st (Wednesday)
Dr J. E. L.	The Vahlheim Zondek and Friedman tests and their interpretation in neoplastic and other diseases	June 8th (Wednesday)

Registered medical practitioners and students are invited to attend any branch of the work in which they are interested

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Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities afforded for securing Obstetrical Complications and Operative Midwifery (about one half of the total staff are being prepared for this). Over 2,000 patients are admitted to the Wards annually. A special Maternity Department there are over 20,000 attendances per annum. Clinical demonstrations and lectures by the Staff.

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Short Intensive Oral and Postal Revision Course in preparation for these qualifications

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April 25th	} Medicine Pathology
April 27th	
April 29th	Surgery
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The following Post Graduate Course is held in the above Department during the summer months

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September 12th to 23rd 1938 (12 days)

This Course is designed for those who are Medical Officers in Industry, Public Health Officers, Certifying Factory Surgeons and General Practitioners working in Industrial areas.

It will consist of lectures, clinical demonstrations and practical work.

Non-occupational Diseases in Industry, Ventilation, Lighting and Sanitation, Industrial Diseases, Lead Poisoning, Mercury Poisoning, Metabolic Poisoning, Organic Poisoning, the Dust Diseases, Industrial Examinations, Industrial Hygiene, Industrial Accidents, Fire, Safety Appliances and Rescue, Organisation of a Works Medical Service, Legal Problems, etc.

The fee for the above Course is £10. Further particulars and applications may be obtained from Dr H. E. FULFORD, Industrial Hygiene and Medicine, 1, Edward Street, Birmingham

A. H. LEANEY  
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COUNTY COUNCIL OF MIDDLESEX  
RESIDENT CASUALTY MEDICAL OFFICER

Application is invited for the post of  
RESIDENT CASUALTY MEDICAL OFFICER  
at the County Hospital, Acton, Middlesex.  
The holder of the post will be responsible for  
the medical treatment of all patients admitted  
to the hospital as casualties and for the  
management of the casualty department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with casualties and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

Applicants should send their qualifications and ex-  
perience to either with copies of not more than  
three recent testimonials must be received by the  
Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 17th 1938

COUNTY COUNCIL OF MIDDLESEX  
VISITING DERMATOLOGIST

Application is invited for the post of  
VISITING DERMATOLOGIST at the County  
Hospital, Acton, Middlesex. The holder of the  
post will be responsible for the medical treatment  
of all patients with skin diseases who are  
admitted to the hospital as casualties and for  
the management of the skin department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with skin diseases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

Applicants should send their qualifications and ex-  
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member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 17th 1938

COUNTY COUNCIL OF MIDDLESEX  
ASSISTANT DENTAL OFFICER

Applications are invited for the appointment of  
ASSISTANT DENTAL OFFICER at the County  
Hospital, Acton, Middlesex. The holder of the  
post will be responsible for the dental treatment  
of all patients admitted to the hospital as  
casualties and for the management of the dental  
department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with dental cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
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Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

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April 17th 1938

WEST RIDING OF YORKSHIRE MENTAL  
HOSPITALS BOARD

APPOINTMENT OF AN ASSISTANT  
MEDICAL OFFICER

WAKEFIELD MENTAL HOSPITAL

Application is invited for the appointment of  
AN ASSISTANT MEDICAL OFFICER at the Wakefield  
Mental Hospital. The holder of the post will be  
responsible for the medical treatment of all  
patients admitted to the hospital as casualties  
and for the management of the medical depart-  
ment.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with medical cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
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Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

MANCHESTER ROYAL INFIRMARY  
CHIEF ASSISTANT TO A SURGICAL UNIT  
(Non-Resident)

The Board of Management of the Manchester  
Royal Infirmary has decided to appoint a  
CHIEF ASSISTANT TO A SURGICAL UNIT (Non-Resident).  
The holder of the post will be responsible for the  
management of the surgical unit and for the  
medical treatment of all patients admitted to  
the unit as casualties and for the management  
of the surgical department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with surgical cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

Applicants should send their qualifications and ex-  
perience to either with copies of not more than  
three recent testimonials must be received by the  
Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 17th 1938

CAERNARVONSHIRE AND ANGLESEY  
INFIRMARY

JUNIOR HOUSE SURGEON

Application is invited for the appointment of  
A JUNIOR HOUSE SURGEON at the Caernarvonshire  
and Anglesey Infirmary. The holder of the post  
will be responsible for the medical treatment of  
all patients admitted to the infirmary as  
casualties and for the management of the medical  
department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with medical cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

CITY OF MANCHESTER  
WITHINGTON HOSPITAL (H.E.S.)  
(Resident Casualty Medical Officer)

Application is invited for the post of  
RESIDENT CASUALTY MEDICAL OFFICER at the  
Withington Hospital, Manchester. The holder of  
the post will be responsible for the medical  
treatment of all patients admitted to the  
hospital as casualties and for the management  
of the casualty department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with casualties and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

Applicants should send their qualifications and ex-  
perience to either with copies of not more than  
three recent testimonials must be received by the  
Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 17th 1938

CORPORATION OF GREENOCK  
ASSISTANT MEDICAL OFFICER OF  
HEALTH

Application is invited for the post of  
ASSISTANT MEDICAL OFFICER OF HEALTH at the  
Corporation of Greenock. The holder of the  
post will be responsible for the medical treatment  
of all patients admitted to the Corporation as  
casualties and for the management of the medical  
department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with medical cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

Applicants should send their qualifications and ex-  
perience to either with copies of not more than  
three recent testimonials must be received by the  
Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 17th 1938

CORPORATION OF LONDON  
MEDICAL OFFICER OF HEALTH  
PORT OF LONDON

Application is invited for the post of  
MEDICAL OFFICER OF HEALTH at the Port of  
London. The holder of the post will be  
responsible for the medical treatment of all  
patients admitted to the Port of London as  
casualties and for the management of the  
medical department.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with medical cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

Applicants should send their qualifications and ex-  
perience to either with copies of not more than  
three recent testimonials must be received by the  
Council not later than April 30th. Applications  
and forms are not provided. Enquiries must be  
addressed to the Casualty Medical Officer, West Middle-  
sex County Hospital, Acton, Middlesex. Relationship to any  
member or officer of the Council must be dis-  
closed in the application.  
Candidates directly or indirectly will be a dis-  
qualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 17th 1938

ROYAL GYNT HOSPITAL

CHIEF ASSISTANT TO A SURGICAL UNIT

Application is invited for the appointment of  
A CHIEF ASSISTANT TO A SURGICAL UNIT at the  
Royal Gynt Hospital. The holder of the post  
will be responsible for the management of the  
surgical unit and for the medical treatment of  
all patients admitted to the unit as casualties  
and for the management of the surgical depart-  
ment.  
Salary £20 per annum with board and lodging  
allowance of £100 per annum.  
The officer appointed will be required to deal  
with surgical cases and attend on the Hospital  
and to carry out such duties as may be allocated  
to him.

The appointment which does not at present  
carry any superannuation right will be subject  
to medical examination and for a period of six  
months in the first instance may be extended for  
an additional six months, and is terminable by  
one month's notice on either side.  
The officer appointed will be under the direction  
of the Medical Superintendent and will devote  
his whole time to official duties.

# BIRMINGHAM AND MIDLAND EYE HOSPITAL (114 Beds)

Applications are invited from duly qualified Medical Practitioners for the post of HOUSE SURGEON at the above Hospital which becomes vacant on April 30th next.

Salary £10 per annum (rising to £150 at the end of six months) satisfactory residence and £10 laundry etc.

The Resident Staff consist of a Resident Surgical Officer and a House Surgeon.

Applications with testimonials and evidence of recent work should be forwarded immediately to the undersigned.

Church Street, Birmingham. J. W. PARCEL, General Superintendent.

# HUDDESFIELD ROYAL INFIRMARY (114 Beds)

MALE HOUSE SURGEON required to commence on May 1st 1938.

Salary £10 per annum with board residence and laundry.

Appointment for six months subject to renewal at the discretion of the Board of Management. The Hospital is officially recognized for the surgical practice required of non-members before admission to the Royal Fellowship Examination of the Royal College of Surgeons of England.

Applications with copies of three recent testimonials should be addressed to the undersigned immediately.

H. J. JOHNSON, Gen. Supt. and Secretary.

# HUDDESFIELD ROYAL INFIRMARY (31 Beds)

MALE HOUSE SURGEON required to be attached to the Maternity Department. Duties which include the administration of cases, to commence on May 1st 1938. Salary will be at the rate of £150 per annum with board residence and laundry.

Appointment for six months subject to renewal for a similar period.

Applications with copies of three recent testimonials should be addressed to the undersigned immediately.

H. J. JOHNSON, Gen. Supt. and Secretary.

# HUDDESFIELD ROYAL INFIRMARY (31 Beds)

MALE HOUSE SURGEON required to be attached to the Eye, Ear, Nose and Throat Department. Duties which include the administration of cases, to commence on May 1st 1938. Salary will be at the rate of £150 per annum with board residence and laundry.

Appointment for six months subject to renewal for a similar period.

Applications with copies of three recent testimonials should be addressed to the undersigned immediately.

H. J. JOHNSON, Gen. Supt. and Secretary.

# GENERAL HOSPITAL NOTTINGHAM (152 Beds)

A RESIDENT CASUALTY OFFICER (Male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry.

Candidates are desired to send applications, stating age, qualification and experience, together with copies of testimonials to the undersigned not later than Saturday, May 7th.

Director, General Hospital, Nottingham, June 1st 1938.

PETER M. MCCOLL, House Governor and Secretary.

# MANTLEFIELD ORTHOPAEDIC HOSPITAL (115 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). Salary £100 per annum with board residence and laundry. Candidates should be qualified in the Royal Medical and Surgical Departments of a General Hospital.

Applications should be sent to the undersigned not later than Saturday, May 7th.

Director, General Hospital, Nottingham, June 1st 1938.

H. G. LEWIS, Secretary.

# DUNDEE HOSPITAL WESTGREEN (115 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). Salary £100 per annum with board residence and laundry. Candidates should be qualified in the Royal Medical and Surgical Departments of a General Hospital.

Applications should be sent to the undersigned not later than Saturday, May 7th.

Director, General Hospital, Nottingham, June 1st 1938.

H. G. LEWIS, Secretary.

# PRINCE OF WALES HOSPITAL Devonport (Formerly the Royal Albert Hospital Devonport) (64 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £120 per annum with board residence and laundry.

Duties to commence forthwith. Appointment is for six months and is subject to renewal or promotion to the senior position when this post becomes vacant. Applicants must be registered under the Medical Acts.

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned immediately.

ARTHUR R. CASH, General Supt. and Secretary, Prince of Wales Hospital, Greenbank Road, Plymouth.

# ROYAL VICTORIA INFIRMARY Newcastle upon Tyne (785 Beds)

Applications are invited for the post of Whole time REGISTRAR to the Orthopaedic Department (open appointment). Candidates must be registered in Medicine and Surgery. The appointment will be for one year commencing May 9th 1938 and may be further renewed on conditions. The rate of remuneration is £150 per annum.

Regulations governing the appointment must be obtained from the undersigned and applications with copies of not more than three recent testimonials should be received by first post on Thursday April 28th 1938.

S. DUNSTAN, House Governor and Secretary.

# ROCHDALE INFIRMARY AND DISPENSARY (110 Beds Three Residents)

The Board of Management invite applications from gentlemen for the appointment of SECOND HOUSE SURGEON. The salary attached to the appointment is at the rate of £150 per annum including board residence and laundry.

Applications stating age, nationality, etc. together with copies of three recent testimonials to be sent to the Secretary, House Surgeon. Conditions of the appointment may be had on application to the Secretary.

W. WYNNE, Secretary, Infirmary Office, Rochdale, Lancs.

# STROUD GENERAL HOSPITAL Stroud, Glos.

RESIDENT MEDICAL OFFICER required. Candidates must be fully qualified and registered. Six months appointment duties to commence as soon as possible. Salary £160 per annum with board and laundry. Applications stating age, nationality, etc. together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

C. IORD SPENCER, Secretary.

# ROYAL EAST SUSSEX HOSPITAL Hastings

Applications are invited for the post of JUNIOR HOUSE SURGEON (female) vacant May 21st next. The appointment is for the period of six months. Salary at the rate of £150 per annum with board and residence. Candidates must be duly registered medical practitioners.

Applications with copies of recent testimonials to be addressed to the Secretary.

WILFRID G. KEMSLEY, Secretary.

# MANCHESTER ROYAL EYE HOSPITAL

OUTPATIENT MEDICAL OFFICER required at once. Salary £200 per annum morning work only. Applicants must be fully qualified Medical Practitioners and must also have a good knowledge of refraction work. Particulars of appointment can be obtained on request.

Applications with copies of recent testimonials to reach the undersigned as early as possible.

H. R. NORTH, Gen. Supt. and Secretary.

# SHIRLING DISTRICT MENTAL HOSPITAL LARBERT

JUNIOR ASSISTANT MEDICAL OFFICER required. Salary commencing at £100 per annum with board residence and laundry. Appointment is for six months and is subject to renewal or promotion to the senior position when this post becomes vacant. Applicants must be registered under the Medical Acts.

Applications should be sent to the undersigned not later than Saturday, May 7th.

# ROTHERHAM HOSPITAL

WOMAN HOUSE PHYSICIAN (male) qualified in Medicine and Surgery. Salary £100 per annum with board residence and laundry. Appointment is for six months and is subject to renewal or promotion to the senior position when this post becomes vacant. Applicants must be registered under the Medical Acts.

Applications should be sent to the undersigned not later than Saturday, May 7th.

Director, General Hospital, Nottingham, June 1st 1938.

# THE HOSPITAL OF ST CROSS RUDDY (120 Beds)

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (R.M.O.).

Salary to commence at the rate of £100 per annum for the first three months, £150 per annum for the second three months and at the rate of £150 per annum for subsequent months. Board washing etc. provided.

Six months appointment and eligible for a period of service for further extension of six months.

Candidates must be prepared to commence duty immediately.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.s.

Applications stating age, nationality and details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W. COCKBURN, Superintendent and Secretary.

# THE GUEST HOSPITAL DUDLEY (General Hospital 139 Beds)

The Resident Staff consist of a Resident Surgical Officer and two House Surgeons.

Applications are invited from registered Medical Practitioners for the post of RESIDENT SURGICAL OFFICER (male). Duties to commence May 22nd 1938. Salary at the rate of £250-£300 per annum according to experience. Candidates must have had experience in general surgery and preference will be given to those holding the qualification of F.R.C.S. or M.S.

Applications stating age, qualifications and experience, accompanied by copies of testimonials to be sent to the undersigned.

H. RAYMOND HURST, House Governor and Secretary.

# THE GUEST HOSPITAL DUDLEY (General Hospital 139 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

HOUSE SURGEON (male) required for salary at the rate of £100-£130 according to experience with furnished apartments, board and laundry. Candidates must be fully qualified and registered.

Application stating age, qualifications and experience, accompanied by copies of testimonials to be sent to the undersigned.

H. RAYMOND HURST, House Governor and Secretary.

# THE GENERAL INFIRMARY AT LEBURY (673 Beds)

RESIDENT SURGICAL OFFICER required. Salary £149 per annum with board residence, laundry and registered. Candidates must be qualified in the Royal Medical and Surgical Departments of a General Hospital.

The appointment is for twelve months and eligibility for re-election.

Applications together with copies of three testimonials should be sent to the undersigned as soon as possible.

S. CLAYTON FRYERS, House Governor and Secretary.

# THE GENERAL INFIRMARY AT LEBURY (673 Beds)

Wanted immediately RESIDENT OPHTHALMIC OFFICER. Salary £149 per annum with board residence and laundry. The appointment is for twelve months subject to renewal.

Candidates must be fully qualified and registered and have held a Resident Surgical Officer post.

Applications with copies of testimonials to be received by the undersigned as soon as possible.

S. CLAYTON FRYERS, House Governor and Secretary.

# THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL

The Committee are prepared to pay a FINE PATHOLOGIST a salary of £100 per annum with board residence and laundry. The appointment is for twelve months and is subject to renewal.

Candidates must be fully qualified and registered and have held a Resident Surgical Officer post.

Applications with copies of testimonials to be received by the undersigned as soon as possible.

S. CLAYTON FRYERS, House Governor and Secretary.

# THE HAPPELLOO (120 Beds)

Applications are invited for the post of HOUSE SURGEON. Salary £100 per annum with board residence and laundry. Appointment is for six months and is subject to renewal or promotion to the senior position when this post becomes vacant. Applicants must be registered under the Medical Acts.

Applications should be sent to the undersigned not later than Saturday, May 7th.

Director, General Hospital, Nottingham, June 1st 1938.



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## ASSISTANCIES

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**WANTED IMMEDIATELY—INDOOR AND OUTDOOR ASSISTANTS** for town and country practices with and without view to partnership. Good salaries offered. State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester 2

**WANTED IMMEDIATELY INDOOR ASSISTANT** near Cardiff £350 all found. Apply with references age and experience (if any)—Address No 5227 B.M.A. House Tavistock Square W.C.1

**WANTED ON OR ABOUT MAY 1st** unmarried male outdoor ASSISTANT for industrial practice in South Wales. Must have full car driver's licence. Scot preferred. Salary £350 p.a. with furnished rooms and attendance. Usual bond—Apply with references age and experience (if any)—Address No 5116 B.M.A. House Tavistock Square W.C.1

**WANTED FOR MAY 1st MALE ASSISTANT** single for mixed town and country practice. Salary £350 p.a. all found—Address No 5201 B.M.A. House Tavistock Square W.C.1

**WANTED AT AN EARLY DATE ASSISTANT** for large mixed general practice. Salary approximately £400 indoor £500 outdoor inclusive of commissions car allowance etc. House free and possible bonus—Address No 5203 B.M.A. House Tavistock Square W.C.1

**WANTED (MAY) ASSISTANT FOR** practice in residential town in North of England. Practice includes town and country. Indoor. House or flat may be available in return. Salary £350 car etc. found—Address No 5206 B.M.A. House Tavistock Square W.C.1

**WANTED LADY ASSISTANT WITH** higher qualification in residential town near London. Salary outdoor £500 including car allowance. Partnership if suitable—Address No 5223 B.M.A. House Tavistock Square W.C.1

**WANTED ENGLISH OR SCOTTISH MALE ASSISTANT** in country town in Midlands. Salary £400 to £450 outdoor according to experience. Car provided. Work light and ample time for reading—Address, No 5101 B.M.A. House Tavistock Square W.C.1

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**WANTED ASSISTANT INDOOR EXPERIENCE** not essential to help in large partner ship. North London. £300. Car allowance £50. Must be young. State age religion etc—Address No 5234 B.M.A. House Tavistock Square W.C.1

**WANTED OUTDOOR ASSISTANT (MALE)** near Cardiff. Salary £400 per annum. Some experience necessary. Usual Bond—Address No 5222 B.M.A. House Tavistock Square W.C.1

**WANTED ASSISTANT ENGLISH OR SCOTTISH** Protestant single man for North Country mixed practice. Salary £400 p.a. to maintain own car. Good outdoor lodging provided free—Address No 5005 B.M.A. House Tavistock Square W.C.1

**WANTED AN ASSISTANT WITH VIEW TO** partnership for a first-class practice in South Africa near Cape Town. £40 per month for first year £60 second year. Car and home allowance £15 month then third share after that with a half share later as arranged. A Christian and references essential. Good scope for surgery—Bar J. SMITH 7 High Street Broadstairs

**WANTED OUTDOOR ASSISTANTSHIP BY** Irish M.D. married. At present in R.M.O. post. Four months GP experience. Free May 16th. Qualified chemist. Own car if necessary—Address No 5109 B.M.A. House Tavistock Square W.C.1

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**TEMPORARY PART TIME ASSISTANT REQUIRED** West Hampstead. Recently qualified man preferred. Ample time for reading. Salary fully all essential particulars—Address No 5115 B.M.A. House Tavistock Square W.C.1

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## APPOINTMENTS—Contd

### THE STAFFORDSHIRE GENERAL INFIRMARY STAFFORD

**SENIOR HOUSE SURGEON** required to take up duties on May 1st. Salary £175 per annum. The appointment to be held for at least six months. The Hospital has 145 beds including 14 Private Wards, and there are 3 Residents.

Applications, stating age accompanied by copies of three recent testimonials (state qualifications and experience) should be sent to the undersigned forthwith.

Stafford A. E. COLLINS Secretary  
April 19th 1938

### BUCKLEY HOSPITAL AND DISPENSARY Burnley (153 Beds)

**CASUALTY OFFICER** (male) required. Must be 16th to deal with the injuries and fractures. Capability to perform emergency operations a requirement.

Salary £750 per annum together with board, residence and laundry.

Application, stating age, qualifications and experience (Ophthalmology desirable) accompanied by testimonials should be sent to the undersigned immediately.

### SOUTH EASTERN HOSPITAL FOR CHILDREN Sydenham S.E.26 (100 Beds)

Applications are invited for the post of HON. ASSISTANT SURGEON to the above Hospital. Applications, stating age and experience should be sent to the Hon. Secretary of the Medical Committee at the Hospital to be received on or before Tuesday May 3rd.

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## BOROUGH OF GUILDFORD

### APPOINTMENT OF CONSULTING OPSTETRIC SURGEON

Appointments are invited for the post of a qualified and experienced Opstetric Surgeon to the Guildford Medical Practice. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Guildford, by 15th May 1938.

GERALD H. R. WILSON,  
Medical Officer, Guildford. Town Clerk.

## THE ROYAL INFIRMARY, SUNDERLAND

### (10 Beds)

**JUNIOR HOUSE SURGEON** (male) required. Salary £10 per annum with board and laundry. Duties to commence on or before May 1st 1938. Application, with copies of testimonials, to be sent to the undersigned not later than April 15th 1938. The Infirmary is situated in a quiet residential area. The House Surgeon will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Sunderland, by 15th May 1938.

W. J. HUNTLEY,  
House Surgeon, Sunderland.

## THE STOCKPORT INFIRMARY

### (10 Beds)

Appointments are invited for the post of a **HOUSE SURGEON** (male) to be appointed by the Royal College of Surgeons in England. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Stockport, by 15th May 1938.

H. G. PRICE,  
Secretary, Superintendent.

## THE RADCLIFFE INFIRMARY, OXFORD

Applications are invited for the post of **SURGICAL REGISTRAR** who will commence a soon as possible after May 1st. The appointment will be for one year. The holder to be eligible for re-election at the end of that period. Salary at the rate of £400 per annum, non-resident. Application, with copies of testimonials, to be forwarded to the undersigned not later than Saturday April 15th 1938.

A. G. E. SANCTUARY,  
Administrator.

## VICTORIA HOSPITAL, ACCRINGTON

The Governing Body of this Hospital invites applications for the post of **HOUSE SURGEON**. Candidates must be fully qualified and registered. Number of beds 10. Salary £175 per annum with board and lodging. Conditions of appointment and particulars of duties may be obtained from the undersigned to whom applications, with copies only of testimonials, should be sent immediately.

Victoria Hospital, Accrington. J. KENYON, Secretary.

## THE WEIR HOSPITAL

### Grove Road, Baltham, S.W. 11. (10 Beds)

**JUNIOR RESIDENT MEDICAL OFFICER** required. Must be fully qualified and fully registered. Salary £10 per annum with board and laundry. Application, with copies of testimonials, to be sent to the Secretary from whom further information may be obtained.

THE MOUNT VERNON HOSPITAL  
(For the Treatment of Cancer)

There are vacancies for a **HOUSE SURGEON**. Candidates must be fully qualified and registered. Salary £10 per annum with board and laundry. Application, with copies of testimonials, to be sent to the Secretary from whom further information may be obtained.

W. W. J. MORTON, Secretary.

## ROYAL INFIRMARY, PRESTON

Appointments are invited for the post of a **CASUALTY OFFICER**. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Preston, by 15th May 1938.

## ROYAL HALIFAX INFIRMARY

### (10 Beds)

Appointments are invited for the post of a **HOUSE SURGEON** (male) to be appointed by the Royal College of Surgeons in England. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Halifax, by 15th May 1938.

## NORTH STAFFORDSHIRE HOSPITAL

### INFIRMARY

#### St. Andrew's (10 Beds)

### RESIDENT ANAESTHETIST

Appointments are invited for the post of a **RESIDENT ANAESTHETIST**. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, North Staffordshire Infirmary, by 15th May 1938.

## PRINCE OF WALES'S HOSPITAL

### (10 Beds)

Appointments are invited for the post of a **HOUSE SURGEON** (male) to be appointed by the Royal College of Surgeons in England. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Prince of Wales's Hospital, by 15th May 1938.

## PRINCESS ALICE HOSPITAL

### (10 Beds)

### APPOINTMENT OF HONORARY ASSISTANT RADIOLOGIST

Appointments are invited for the post of a **HONORARY ASSISTANT RADIOLOGIST**. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Princess Alice Hospital, by 15th May 1938.

## MAIDENHEAD HOSPITAL

### Berkshire (10 Beds)

**HONORARY SURGEON** required. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Maidenhead Hospital, by 15th May 1938.

## WINGFIELD-MORRIS ORTHOPAEDIC HOSPITAL

### Hull

**HOUSE SURGEON** (male) required. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Wingfield-Morris Orthopaedic Hospital, by 15th May 1938.

## WORCESTER ROYAL INFIRMARY

Appointments are invited for the post of a **HOUSE SURGEON** (male) to be appointed by the Royal College of Surgeons in England. The successful candidate will be required to attend the practice full-time, but a few of two or three days a week would be acceptable. A person of high qualifications and a few years' experience would be preferred. Applications should be sent to the Medical Officer, Worcester Royal Infirmary, by 15th May 1938.



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## APPOINTMENTS TO BE MADE PREPARATORY TO THE OCCUPATION OF THE NEW HOSPITAL

A RESIDENT ASSISTANT PHYSICIAN who is to be the Senior Resident Officer is required. Duties to commence as soon as possible after May 4th. Salary £200 per annum.

This appointment is tenable in the first instance for one year but may be held for a period of two years subject to re-election.

The duties will include those of the former Medical Registrar.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital. Special experience in infectious diseases is desirable.

## TWO RESIDENT MEDICAL ASSISTANTS AND CLINICAL PATHOLOGISTS are required on June 1st 1938. Salary £125 per annum.

These appointments are tenable in the first instance for one year but may be held for a period of two years subject to re-election.

The morning duties will include those of an Out-patient Medical Registrar. The afternoons will be devoted to work in a section of the Pathological Department.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

## AN OUT-PATIENT MEDICAL OFFICER (part time and non-resident) is required on June 1st 1938. Salary £150 per annum.

This appointment is tenable in the first instance for one year but may be held for a period of two years subject to re-election.

The duties will include those of the former Out-patient Medical Registrar.

Candidates must possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

## AN ASSISTANT RESIDENT SURGICAL OFFICER is required. Duties to commence as soon as possible after May 4th.

The appointment is tenable for one year. Salary £100 per annum.

Duties will include attendance upon members of the Surgical Staff in the Out-patient Department, the performance of Out-patient Operations and deputing for the Resident Surgical Officer.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

## A HOUSE SURGEON is required. Duties to commence as soon as possible after May 4th.

This appointment is tenable for six months. Salary at the rate of £50 per annum.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

Candidates for the above appointments must attend at the Hospital to appear before the Joint Committee at 4.45 p.m. on Wednesday May 4th 1938.

Further particulars and forms of application which must be completed and returned by noon on Monday May 2nd 1938 are obtainable from the undersigned.

HERBERT F. RUTHERFORD  
April 1938 Secretary

## ROYAL LONDON OPHTHALMIC HOSPITAL (MOORFIELDS EYE HOSPITAL) City Road E.C.1

Applications are invited for the post of OUT-PATIENT OFFICER to attend on Wednesdays and Saturdays (mornings) each week. Candidates must be registered Medical Practitioners.

Salary at the rate of £100 per annum. The Out-patient Officer will be appointed for a period of one year and will be eligible for reappointment.

Copies of regulations can be obtained on application.

Applications with testimonials stating age and qualifications together with photograph must be received by the undersigned not later than May 2nd 1938.

A. J. M. TARRANT Secretary

## ST BARTHOLOMEW'S HOSPITAL PART TIME CHIEF ASSISTANT IN THE X-RAY DIAGNOSTIC DEPARTMENT

Applications are invited for the post of part time Chief Assistant in the X-ray Diagnostic Department. Candidates must be registered Medical Practitioners and possess a Diploma in Medical Radiology. The Officer appointed will be required to attend in the Department on four half-days a week.

Appointment will be made for a period to expire at the end of 1938 with eligibility for re-election.

Applications with testimonials (copies only) should be left with the undersigned not later than Saturday May 14th 1938.

C. C. CARUS-WILSON  
April 12th 1938 Acting Clerk to the Governors

## THE LONDON CHEST HOSPITAL Victoria Park L.2 (Bus Term and Rly Cambridge Heath L. & N.E. Railway)

### MEDICAL REGISTRAR (MALL) (PART TIME)

Applications are invited for the above post. The appointment will be for a period of one year with eligibility for re-election for a maximum period of three years.

Honorarium £175 per annum. Applications with copies of three testimonials should be sent to the undersigned from whom further particulars may be obtained on or before Tuesday May 3rd 1938.

THOMAS BROWN  
Secretary

## QUEEN MARY'S HOSPITAL FOR THE LAME L.15 Stratford L.15

### HONORARY ASSISTANT SURGEON

There is a vacancy on the Staff of this Hospital for an Honorary Assistant Surgeon (with charge of Out-patients).

Applications accompanied by copies of testimonials from male candidates only, who must be Fellows of the Royal College of Surgeons of England, should be sent to the undersigned not later than Wednesday April 27th 1938.

RAPHALL JACKSON Major  
Secretary

## ROYAL FREE HOSPITAL Gray's Inn Road WC1

Applications are invited from duly qualified medical men for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st 1938 and tenable for one year. Candidates must have had at least one year's Resident Hospital experience. Salary £150 per annum with board and residence.

Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 7th 1938.

RICHARD T. BARTLEY  
Secretary

## KING EDWARD MEMORIAL HOSPITAL Ealing (145 Beds)

Applications are invited for the post of HOUSE SURGEON (male) to act in the Eye, Gynaecological and Ear, Nose and Throat Departments. Six months appointment from May 1st 1938 with possibility of re-election for a further period. Salary £150 per annum with usual residential emoluments.

Applications stating age, experience and qualifications and accompanied by copies of two recent testimonials to be sent to the undersigned immediately.

R. A. MICKELWRIGHT  
House Governor

## KING EDWARD MEMORIAL HOSPITAL EALING W.13 (145 Beds)

Applications are invited for the following appointments—

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Particulars may be obtained from the undersigned.

R. A. MICKELWRIGHT  
House Governor

## PADDINGTON GREEN CHILDREN'S HOSPITAL (Incorporated) London W.2

### HOUSE SURGEON

This appointment will become vacant on May 1st 1938. Gentlemen (unmarried) are invited to send in their applications with copies of three testimonials to the undersigned as soon as possible. Salary at the rate of £150 per annum with board and residence. Candidates who have held a responsible resident hospital appointment are preferred. The appointment is for a period of six months.

JAMES A. HAMLIN Secretary

## PADDINGTON GREEN CHILDREN'S HOSPITAL (Incorporated) London W.2

Applications are invited from registered Medical Practitioners for the vacancies of two CLINICAL ASSISTANTS to Medical Out-patients Monday and Thursday mornings. Intending candidates should submit applications stating age and qualifications to the undersigned as soon as possible.

JAMES A. HAMLIN Secretary

## WEST LONDON HOSPITAL Hammersmith Road W.6 (239 Beds)

Applications are invited for the post of CHIEF ASSISTANT TO THE DEPARTMENT FOR CHRONIC RHEUMATIC DISEASES for a period of one year eligible for re-election. An honorarium at the rate of £100 a year is attached to the post. The duties will include attendance in the Out-patient Department on two half-days a week.

Candidates must be registered under the Medical Act and preference will be given to those possessing in MRCP or FRCS qualification. Previous experience in the treatment of rheumatism is an advantage.

Applications with copies only of testimonials should reach me not later than first post on Thursday May 12th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a meeting of the Medical Council at 4.30 p.m. on Friday May 20th and the House Committee Meeting at 5 p.m. the same day when the appointment will be made.

H. A. MADGE  
Secretary

## THE MIDDLESEX HOSPITAL W.1

Applications are invited for the post of OBSTETRIC AND GYNAECOLOGICAL REGISTRAR. The appointment will be for seven months from June 1st 1938 and the successful candidate will be eligible to apply for reappointment for two further consecutive years. Salary £300 per annum.

Further particulars may be obtained from the Secretary Superintendent to whom applications with copies of not more than three testimonials must be sent by May 14th 1938.

By Order of the Board  
S. R. C. PLIMSOLL  
Secretary Superintendent

## THE LONDON LOCK HOSPITAL 233 Harrow Road W.9

Applications are invited for a RESIDENT MEDICAL OFFICER (male) to ALL DEPARTMENTS. Candidates must be doubly qualified and duly registered. The appointment is for six months commencing June 1st salary at the rate of £175 p.a. with furnished rooms, full board and laundry. Preference will be given to candidates having previous obstetric experience. Applications enclosing copies (only) of three recent testimonials must be in the hands of the Secretary by first post on Friday April 29th and from whom any further particulars can be obtained.

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2. NORTH WEST MIDLANDS—Good Mixed PRACTICE wanted immediately. Receipts should be from £1,000 upwards with substantial Panel and good house. CAPITAL AVAILABLE.
3. REQUIRED—Good English Scotch and Irish LOCUMS also ASSISTANTS. Immediate posts to offer both Indoor and Outdoor.

## FOR DISPOSAL

1. NORTH MIDLANDS—Old-established industrial and middle-class PRACTICE. Receipt average £1,050 p.a. Panel 96. Excellent house all services.
2. GLOUCESTERSHIRE—Well established Private and Panel PRACTICE. Receipts a craze £1,000 p.a. Panel 1,000 with good scope to increase and good house.
3. STAFFS—Well established Mixed Private and Panel PRACTICE. Receipts average £1,000 over and Panel 1,100.
4. LANCAS—Well established industrial country PRACTICE. Receipts £2,000 p.a. Panel 570. Excellent scope to increase. Good house.
5. YORKS—Old-established mixed Private and Panel PRACTICE. Receipts £1,500 p.a. Panel 1,100. Good house to rent.

FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms. Full particulars on application.

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## PRACTICE WANTED

COUNTRY IN KENT SURREY OR SUSSEX HANTS etc. A. 0711 T. 0711 with scope. Arrive Capra

## FOR DISPOSAL

CO. DURHAM—AVERAGE 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

KENT WITHIN 20 MILES—ABOUT 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

NORTHERN COAST TOWN—AVERAGE 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

KENT COAST TOWN—FOR SHARE 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

HANTS—COAST TOWN—1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

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WEST YORKS—COUNTRY AVERAGE 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

LONDON S.W.—1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

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LONDON N.E.—AVERAGE 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

LONDON W.6—NON PANEL AVERAGE 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

S. DEVON—COUNTRY PRACTICE. 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

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LONDON S.W.—ABOUT 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

LONDON S.E.—ABOUT 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

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LONDON S.W.—ABOUT 1,100 p.a. Panel 1,000. Fees 2 6 up. 1 Apt. House and P. t. t. 66,000.

# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1880)

Tele Address  
Triform, Westcent—London

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TAVISTOCK SQUARE, W C 1

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical, Scholastic, and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent. Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

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In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill book debts, furniture drugs, fittings and other effects (excluding sales of any freehold or leasehold property, or of practices, effects etc outside Great Britain) is limited to a maximum fee of Fifty Pounds.

## FULL TERMS ON APPLICATION

### Practices and Partnerships for Disposal

### Full Particulars sent free

- 1 S MIDLANDS—PARTNERSHIP in good class Practice, nearly £5 000 p.a., in first rate town. Panel over 1 500. Applicant should be about 28/30 years of age and well qualified. One fourth share at two years purchase after Assistantship. Favourably known and strongly recommended by the Bureau.
- 2 LONDON, SE—PARTNERSHIP in Practice, nearly £4 300 p.a. in rapidly growing district. Panel about 3 000. Modern labour saving house (4 bedrooms), with professional accommodation, garage and good garden, to rent. Hospital. Premium one fourth share, £2,250.
- 3 GLOS—COUNTRY PRACTICE, about £1,400-£1,500 p.a., in Forest of Dean. Panel 1,500. House (5 bedrooms) large garage and garden for sale. Educational facilities. Premium, practice and house £3 800 cash.
- 4 MIDLANDS—PARTNERSHIP in Practice, averaging £2,880 p.a. in manufacturing town. Good appointments and panel 2,150. Suitable house obtainable. Premium two fifths or one half share two years purchase with succession to whole practice in about two years.
- 5 INLAND HEALTH RESORT—Old-established SPA PRACTICE about £1,450 p.a. Fees £2 2s and £1 1s. Good house in excellent position for sale. All kinds of sport. Premium one and a half years purchase.
- 6 ESSEX—THIRD PARTNER required in good middle class Practice about £7 000 p.a., in pleasant outlying district. Panel 700. House (6 bedrooms), garage and garden. Price £1,000. Excellent opportunity for one desiring surgery. Share worth £1,500 p.a. (guaranteed for two years) at two years purchase.
- 7 SURREY—PRACTICE, about £600 p.a., in growing country district on outskirts of market town. Panel 776. House (7 bedrooms), large garage and garden. Price £2 000. Good educational facilities. Scope. Premium two years' purchase.
- 8 EASTERN COUNTIES—PARTNERSHIP in lucrative Practice, £5 200 p.a., in market town. Panel over 4 000. Suitable house obtainable. Premium one fifth share two and a quarter years purchase.
- 9 S COAST—PRACTICE in health resort. Receipts, 1937, about £1,600. Panel 900. House (5 bed and dressing rooms) large garage and garden. Price £2 250. Good scope. Premium £3 750.
- 10 DEATH VACANCY—Prosperous Midland City—Old established PRACTICE, about £1,450. Panel about 600. Nice detached modern house in best residential part.
- 11 DEATH VACANCY—ANGLESEY COAST—PRACTICE about £900 p.a. (appointments and panel £435). House (6 bedrooms) with nice garden. Rent £60 p.a.
- 12 W OF ENGLAND—PRACTICE, nearly £1,200 p.a. in small favourite watering place. Panel 715. Detached house (5/6 bedrooms) garage and good garden. Rent £85 p.a. Scope. Premium two years purchase or nearest offer.
- 13 LONDON, E 5—Middle-class PRACTICE about £2 700 p.a. Panel 1 200. Price of surgery premises, £1,200. Private residence available if needed. Good scope for panel. Premium two years purchase.
- 14 UNIVERSITY TOWN—PRACTICE about £1 800. Panel over 2 500. House (about 7 bedrooms) for sale also surgery premises for sale. Scope. Premium one and three quarter years purchase.
- 15 COUNTY TOWN, about 50 miles from London—PARTNER required (under 30 years of age with F.R.C.S.

Eng. or Edin.), to do Ear, Nose and Throat work in addition to general practice and some general surgery. Share worth £1 000 p.a. at two years purchase. Possibility of hospital appointment later.

16 KENT—SEASIDE TOWN—PARTNERSHIP in mixed Practice, £3,650 p.a. Panel over 2 000. Excellent modern house for sale or rent. One third or one half share at two years purchase. Must be young, experienced and well qualified.

17 LONDON, SE 20—PRACTICE, about £1,730 p.a. in suburban district (appointments returning about £400 p.a.). Panel 966. Modernized house (13 rooms), garage and garden. Price £1 200. Premium £3,500.

18 NEW ZEALAND—S ISLAND—PRACTICE in prosperous coast town. Receipts average £1,450 p.a. (appointments about £450). Choice of house. Surgery rent 30s per week. Premium £1 250.

19 MIDDLESEX—PARTNERSHIP in steadily increasing middle class Practice about £4 000 p.a., in residential district. Panel 1 500/1 600. House available. Premium two ninths share (about £1 000 p.a.) two years purchase.

20 MIDLANDS—PRACTICE in growing residential district near good town. Receipts last year, £770. Panel about 100. Attractive modern easily run house (4 bedrooms). Price £3,500. Scope. Premium one and a half years purchase.

21 SW OF ENGLAND—FOURTH PARTNER required in mixed country town Practice nearly £6 800 p.a. Panel 4,600. Share worth about £1,100 p.a. at two years purchase. Partner must be young and have made special study of medicine. Preliminary Assistantship.

22 LONDON, W 9—PRACTICE doing between £900/£950 p.a. in residential part. Panel 50/60. Rent of maisonette (4 bedrooms, etc.) £200 p.a. Scope. Premium £1 250.

23 ESSEX COAST—PARTNERSHIP in well established Practice over £1,600 p.a., in growing district. Panel about 1,000. Detached house (3 bedrooms), with garage and garden. Price £1,450. Yachting sea fishing etc. Decided scope. Premium one half share £1 600.

24 W CROYDON—Cash and Panel PRACTICE. Receipts last year £680. Panel 400 and club. Rent of house £104 p.a. Premium £850, or very near offer.

25 LONDON, W—Middle-class PRACTICE, £600 p.a. in nice suburb. Panel 267. House (5 bedrooms). Price £1 300. Good scope. Premium one and a half years purchase.

26 SURREY—PRACTICE in new developing district doing at rate of nearly £700 p.a., appointment worth £50, and increasing. Panel 163. Well situated house (3 bedrooms and professional accommodation). Price about £1 650. Ample scope. Premium £400.

27 LONDON, N W 8—Branch PRACTICE. Receipts about £220. Premises in residential flats. Rent £150 p.a. Scope. Premium £300.

28 NEW ZEALAND—AUCKLAND PROVINCE—PRACTICE of £750 p.a. in dairy farming district. Seven roomed house with grounds of two acres. Premium house and practice £1 100.

29 HOME COUNTY—PARTNERSHIP in sound Practice, about £8 300 in progressive town. Panel 4 400. House (6 bedrooms) for sale. Premium one fourth share two years purchase. Smaller share considered. Purchaser should be able to do major surgery.

# British Medical Bureau

(The SCHOLASTIC CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 18 0)

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Triform We lcent-London

11 AVISLOCK HOUSE SOUTH  
11 AVISLOCK SQUARE, W C 1

Telephone L.L. 1111 1644  
1645

## Practices and Partnerships for Disposal (continued)

30 SURREY—Increasing middle and working-class PRACTICE doing about £1,000 in thickly populated suburban district Panel about \$00 Small house with garage Price £800 or rent £78 p.a. Scope Premium £2,500 to include fitting furniture drugs etc

31 WORCESTERSHIRE—Country PRACTICE £800 p.a. in very beautiful district Exceptionally attractive house (3/6 bedrooms) in about two acres grounds for sale Premium £1,000

32 SCOTLAND — FIFESHIRE — PRACTICE nearly £800 p.a. in small town Panel about \$00 House (6 bedrooms) garage and good sized garden Shooting to him etc available Premium house and practice £2,000

33 SOUTH AFRICA—Old established PRACTICE, averaging £3,000 p.a. near Capetown House to rent Cottage hospital Scope for surgery Premium £2,500 to include most up to date X-ray apparatus etc etc

34 MIDLANDS—PARTNERSHIP in Practice about £2,600 p.a. in small town Two-fifth share at two years purchase after short Assistantship

35 W OF ENGLAND—Old established middle-class PRACTICE in good town Receipts 1937 £1,000 Panel \$00 Visits 5/ to £1 1s plus medicine Very convenient detached non-busient house (7 bedrooms etc) to rent Premium one and a half years purchase or year offer

36 PRIVATE MENTAL HOME for both Sexes—Cash receipts average £3,900 p.a. Premium for licence and goodwill freehold property and furniture £7,000 Further details on request

37 S MIDLANDS—PARTNERSHIP in Practice nearly £2,400 p.a. in county town Panel about 2,000 House could be obtained Premium two-fifths share one and three quarters years purchase or year offer (Short Assistantship)

38 SURREY—PRACTICE doing about £900 in growing neighbourhood Panel 650 increasing Detached house (3 bedrooms) nice garden Rent 35/ weekly Net rent of branch 12/6 Premium £1,600 or offer

39 LONDON SE—Suburban PRACTICE Receipts 1937 £780 Panel 350 Detached house (7 bedrooms etc) small garden no garage Price leasehold £700 Scope Premium one and a half years purchase

40 LONDON SE—PRACTICE doing at rate of £770 p.a. in thickly populated district Panel 670 Small house (3 bedrooms) Rent £80 p.a. Branch surgery £-0 p.a. Premium £1,100 to include drugs etc

41 NE COAST—Old-established and easily worked middle and better working class PRACTICE over £1,150 p.a. in seaport town No panel Private residence for sale Good scope Premium £800 to include furnishings and fittings of consulting rooms etc

42 LONDON W9—PRACTICE doing about £1,600 Panel 1,700 Semi-detached house (4 bedrooms etc) no garage or garden to rent Premium £5,200

43 S OF ENGLAND—First-rate Residential Town—Good-class non dispensing PRACTICE about £1,000 p.a.

Consultations and visits 10/6 sometimes 7/ No midwifery Good house (6 bedrooms) in best part Price £1,000 Good scope Premium two years purchase Suitable to a physician

44 SURREY—PARTNERSHIP in rapidly growing middle-class Practice about £5,700 in residential neighbourhood Panel 750 House (5 bedrooms) garage and small garden Price £1,200 One fourth share at first at two years purchase

45 DEVON AND CORNWALL BORDER—Very old-established unopposed and steadily increasing PRACTICE £1,325 p.a. Panel £150 Visits 5/ to £1 0s plus medicine extra Very nice detached house (6 bedrooms 2 dining rooms etc) garage and garden about one acre with orchard for sale Ample scope for increase in fee each case of sale Reasonable premium accepted for quick sale

46 ESSEX COAST—PRACTICE about £625 p.a. Panel about 600 Nice detached house (5 bedrooms) in garage and garden for sale or rent Premium £1,000

47 W OF ENGLAND—PARTNERSHIP in non dispersing PRACTICE of £1,800 in first rate residential town Panel 2,000 Suitable flat available Premium four years share two years purchase

48 S OF ENGLAND—Well-established SANATORIUM for the Open Air Treatment Receipts p.a. £2,200 Premium £1,000 to include furniture etc Further details on application

49 N MIDLANDS—PARTNERSHIP in steadily increasing middle-class Practice averaging £2,000 p.a. in county town Panel £900 House with 5 bedrooms garage and good garden to rent One fifth or one fourth share at two years purchase

50 N WALES—PARTNERSHIP in Practice about £2,000 p.a. in residential district Panel 1,900 House to let (5 bedrooms) garage and garden Welsh not necessary but an asset Premium one half share to include remainder of lease £2,500

51 MIDLANDS—PRACTICE in good town easy access to London Earnings average £2,500 Panel £900 Large house with garage and garden Rent £10 p.a. Variety for a physician on staff of local hospital also capable of surgery and gynaecology Premium two years purchase

52 EAST ANGLIA—PARTNERSHIP in Practice over £5,000 in first rate country town Panel receipts £1,500 Incoming partner must have had surgical training and capable of filling post of Assistant Surgeon to County Hospital

53 SW ENGLAND—Ear Nose and Throat PRACTICE in large town Can receipts over £3,000 p.a. Fees £2 2s 6d Good house containing 11 rooms with garage and garden Price £2,000 Scope Premium £2,000 Purchaser must be experienced and possess the FRCS or D.L.O.

54 EASTERN COUNTIES—PARTNERSHIP in Practice over £5,000 p.a. in county town Panel receipts £1,000 Main surgery premises (5 bedrooms etc) garage and garden to rent Premium one fifth share at two years purchase Further details in seven years Short Notice on 6/6 p.

Purchasers can raise additional capital for the purchase of approved practices or Partnerships will be forwarded on application

RELIABLE LOCUMS AND ASSISTANTS ARE URGENTLY EQUIPED  
All communications to be addressed to The Manager

Manager  
W. AL SCOBIE

SCOTTISH BRANCH, 21, Alva Street, Edinburgh, 2

FOR DISPOSAL

A EDINBURGH—Old established PRACTICE Receipts averaging £1,022 Panel \$05 Suitable house Price £1,500 or might be let on lease Premium 2 years purchase  
B N OF SCOTLAND—Old established country PRACTICE in beautiful district Receipts average over £1,000 Excellent house to rent Premium £1,600

C EASY DISTANCE OF GLASGOW and EDINBURGH—PRACTICE near £1,000 p.a. House (6 bedrooms) garage and garden Premium £1,000 and house £2,000  
D EDINBURGH—Small PRACTICE Receipts approximately £400 Suitable house on main thoroughfare

For further details apply The Manager 21 Alva Street Edinburgh  
Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed

# BRITISH MEDICAL BUREAU

(The Scholastic, Clerical and Medical Association Ltd.)

(FOUNDED 1880)

## NORTHERN BRANCH

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Recommended with every confidence to the profession by the BRITISH MEDICAL ASSOCIATION as a thoroughly trustworthy medium for the transaction of all Medical Agency business

TRANSFER OF PRACTICES AND PARTNERSHIPS INTRODUCTION OF RELIABLE ASSISTANTS AND LOCUM TENENS at Short Notice VALUATION and INVESTIGATION OF PRACTICES, Etc

FOR DISPOSAL

Full particulars free on request

Practices and Partnerships wanted Large list of bona fide purchasers with ample capital available Enquiries invited from prospective vendors All information treated in strict confidence

MANCHESTER—Old established mixed class PRACTICE Cash receipts last year £1 222 Panel 800 Scope Good house 2 reception 5 bedrooms Rent £65 p a Premium—1½ years purchase—No 1009

NORTH WALES—Seaside Resort—Good class PRACTICE Cash receipts over £1 200 Panel 425 Welsh not essential Nice house with garage and garden to rent or purchase Good winter climate Premium—£1 700 or near offer—No 929

LANCS TOWN—Sound old established middle and better working class PRACTICE Cash receipts last year £2 620 Panel over 1 700 Good house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and small garden Rent £70 p a Premium—1½ years purchase—No 1090

CHESHIRE—Old established Country PRACTICE in delightful district offering scope Income last year £853 Panel 470 Good detached house 2 reception 4 bedrooms garage and nice garden with orchard To be rented Premium (for quick sale)—1½ years purchase—Vendor secured an appointment—No 1106

LANCS TOWN—OPHTHALMIC PRACTICE—NUCLEUS of about £160 p a Premium—best offer—No 01

YORKSHIRE—Old established PRACTICE in pleasant country town Cash receipts last year £1 050 Panel 300 (productive, £330 p a) Scope Excellent house 3 reception 6 bedrooms 3 Professional rooms garage and large garden Good sport and educational facilities Premium—Practice—£1 700—No 1102

NORTH EAST COAST—Old established mixed Panel and Private PRACTICE Cash receipts approximately £2 100 p a Panel 2 140 Appointment and Clubs £400 p a Good house 2 reception 3 bedrooms 3 Professional rooms garage and small garden Price £300 Premium—2½ years purchase—No 1094

LANCS TOWN—Old established mixed Panel and Private PRACTICE Cash receipts last year £1 070 Panel 1 300 Good detached house 2 reception rooms 4 bedrooms Professional rooms garage and garden Rent £60 p a Premium—1½ years purchase—No 1099

MIDLAND HEALTH RESORT—PARTNERSHIP (offer preliminary Assistantship) in very old established mixed class Practice Cash receipts last year £1 774 Panel 1 300 Fees 3/6 to 10/6 Incoming partner should be Protestant and may choose own residence Possibility of Hospital appointment Premium—7 24th share—2 years purchase Further share in three years—No 1069

NORTH WEST LANCS—Old established mixed Panel and Private PRACTICE in large town Cash receipts last year £1 040 Panel over 1 000 Good house pleasantly situated 2 reception, 5 bedrooms garage and small garden Premium—Practice—1½ years purchase—No 1105

ANGLESEY—DEATH VACANCY—Old established unopposed mixed Panel and Private PRACTICE in beautiful Seaside Village Cash receipts last year £1 044 including Panel income of £335 Excellent house on lease with ample accommodation garage and garden Rent £60 p a Premium—£1 000—No 1101

LIVERPOOL—Steadily increasing mixed class PRACTICE in suburbs Cash receipts last year £758 Panel 650 Excellent detached house 2 reception 6 bedrooms garage and garden Premium—Practice—best offer—No 1016

MR HUDDERSFIELD—Well established mixed-class PRACTICE near large town Average cash receipts £1 175 p a Panel 1 121 Good house 2 reception 4 bedrooms 3 Professional rooms garage and garden Rent £65 p a Premium—1½ years purchase or near offer—No 1085

SOUTH COAST—Old established middle class PRACTICE in first rate seaside resort Average cash receipts £1 200 p a Panel 640 Good house 2 reception 4 bedrooms mid rooms 3 Professional rooms garage and garden To rent—Premium—2½ years purchase—No 1058

YORKSHIRE (W R)—Very old established Mixed Panel and Private PRACTICE Cash receipts £1 200 p a Panel 900 Scope Good detached house 2 reception 4 bedrooms Professional rooms garage and garden Premium—1½ years purchase or near offer—No 1060

DERBYSHIRE—Increasing Private and Panel PRACTICE in well known spa Cash receipts approximately £700 Panel 200 Good ground floor flat Rent £50 p a Premium—best offer—No 1057

MANCHESTER—Well established mixed class PRACTICE Cash receipts £1 600 p a Panel 1 600 Good surgery premises to rent at £52 p a Purchaser can choose own residence Premium—1½ years purchase Vendor's terms—No 1079

EAST COAST—PARTNERSHIP (offer preliminary Assistantship) in well established better working class Practice in first seaport town Cash receipts £1 800 p a Panel 2 600 Choice of suitable house Premium—14 or 1½ years purchase—No 1076

SCOTLAND—HILSHIRE—Old established PRACTICE in small town Cash receipts £500 p a Panel 300 Good house 2 reception 4 bedrooms Professional rooms (separate entrance) electric light garage and good garden Freehold All kinds of sport Premium—Practice and house—£2 500—No 1095

AUSTRALIA—Unopposed Country PRACTICE in North West Victoria Income £1 450 p a Suitable house to rent Premium—25 of 100's cash takings for two years Furniture (household) £125 cash—No 1091

WORCESTERSHIRE—Very old established Country PRACTICE in beautiful district Cash receipts £500 p a Panel 400 and appointments £60 p a West opponent 5 miles Attractive house 3 reception 5 bedrooms electric light garage and large garden Good sport Premium—Practice—£1 900—No 1097

SHROPSHIRE—Old established unopposed Country PRACTICE Cash receipts last year £688 Panel 450 Modern house 2 reception 4 bedrooms garage and garden Rent £50 p a

Derbyshire—Old established mixed-class PRACTICE capable of great increase Cash receipts last year £640 Panel 437 Good house 2 reception 4 bedrooms garage and large garden Rent £60 p a Premium—best offer—No 1089

Derbyshire—Old established mixed-class PRACTICE near beautiful country and with easy reach of large town Average cash receipts £1 100 p a Panel 970 and transferable appointments £200 p a Scope Nice detached house Freehold—No 1083

MANCHESTER—Sound old established mixed Panel and Private PRACTICE in industrial district Cash receipts last year £2 200 Panel 2 250 Good house 2 reception room 4 bedrooms 2 Professional rooms small garden Rent £50 p a Premium—best offer—No 1084

NORTH EAST COAST—Middle class (non Panel) PRACTICE Cash receipts £1 100 p a Rent of surgery premises £26 p a Premium—£300—No 1018

NEAR BUNION—Old established PRACTICE capable of great increase Cash receipts last year £740 (increasing) Panel 362 Excellent house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and good garden Premium—Practice and house £1 700—No 999

MANCHESTER—Well established middle-class PRACTICE in pleasant suburb Cash receipts last year £1 225 Panel 760 Scope Nice detached house 5 bedrooms 1 reception rooms garage and large garden Premium—best offer—No 966

CENTRAL WALES—Very old established unopposed Country PRACTICE in present hands 15 years Average cash receipts over £2 000 p a Returns about £620 p a and appointment £265 p a Excellent house 2 reception 6 bedrooms 3 Professional rooms electric light garage for 2 cars and beautiful garden Price £1 500 Premium—Practice—£3 200—No 1068

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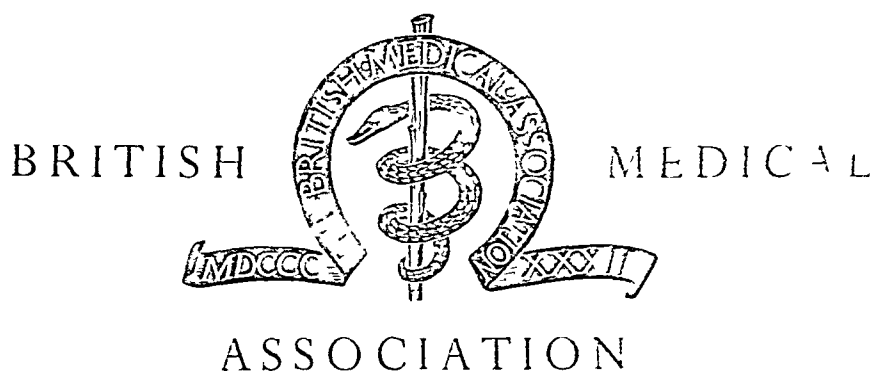
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JOURNAL OF THE



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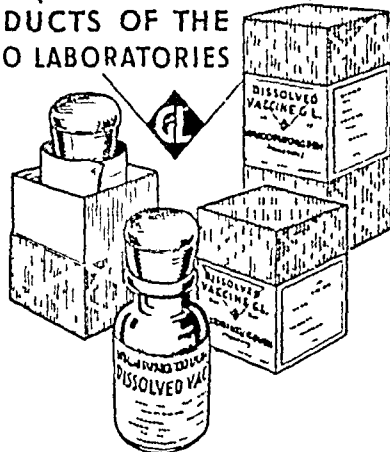
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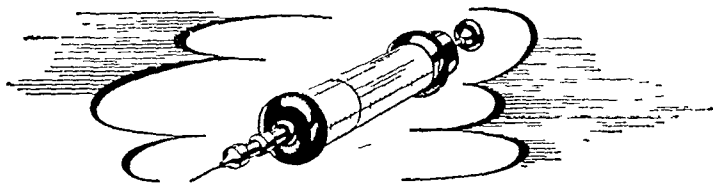
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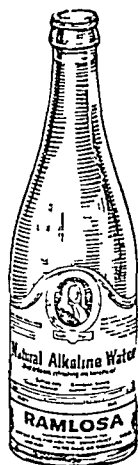


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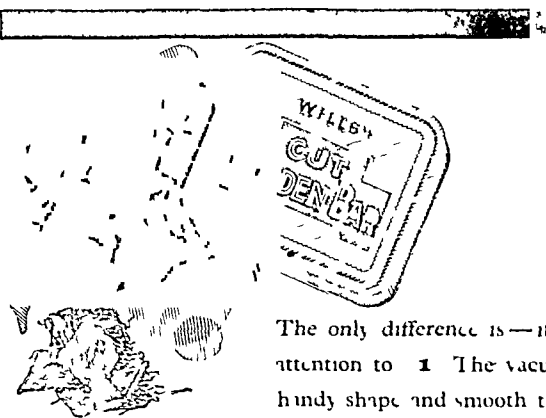
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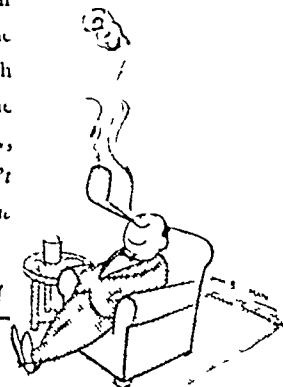




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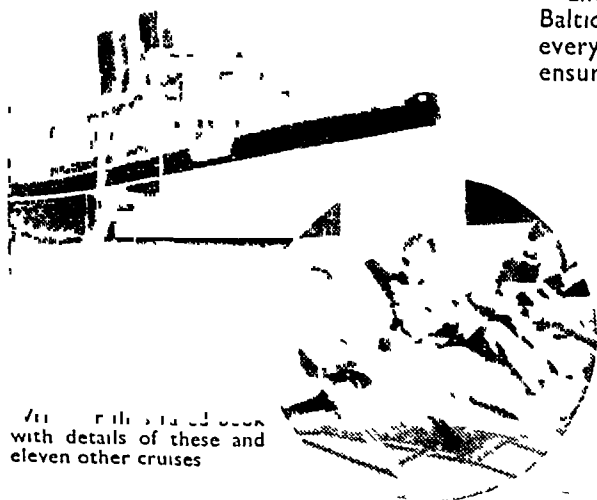
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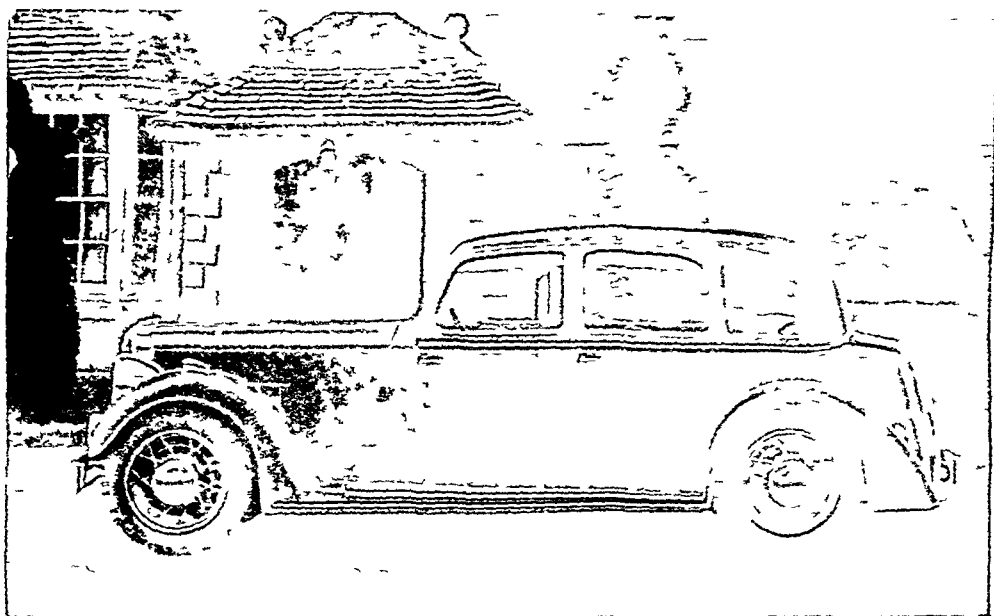
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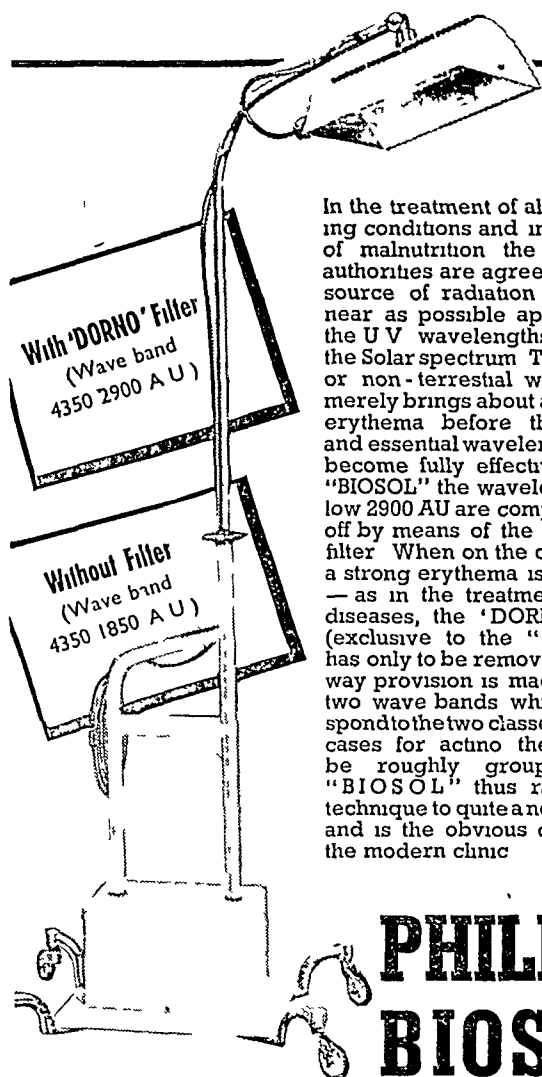
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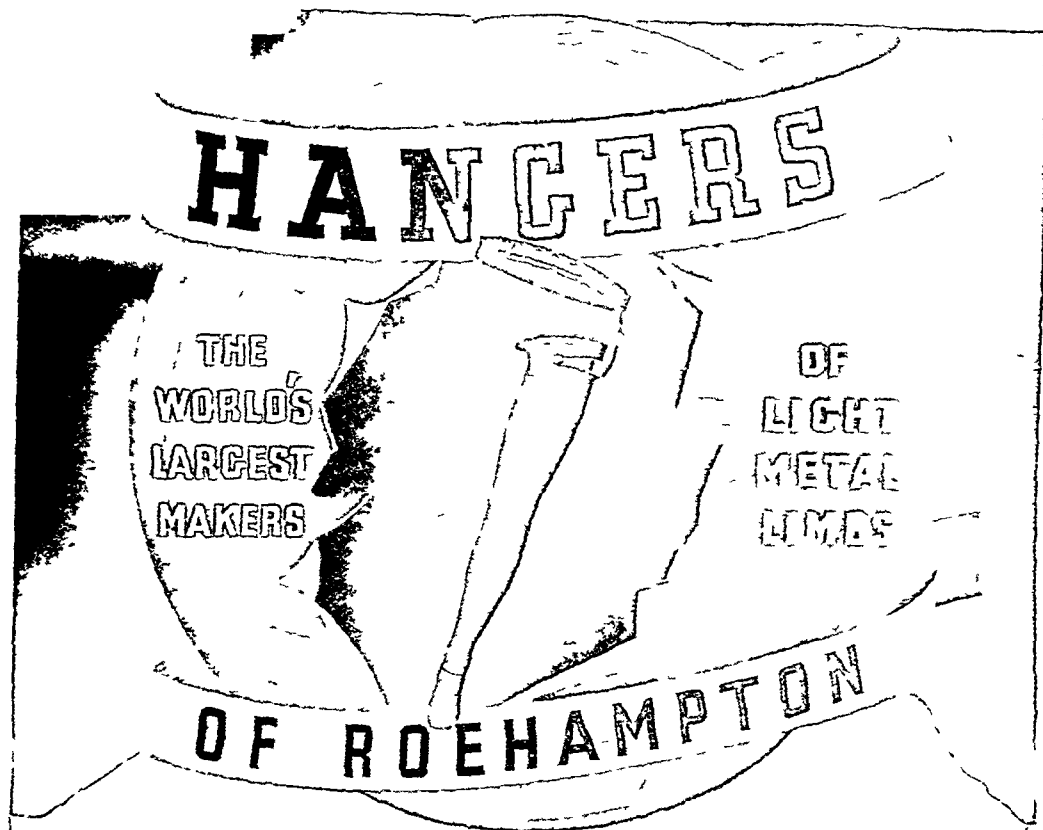
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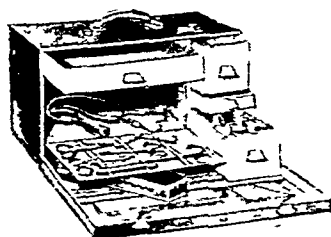
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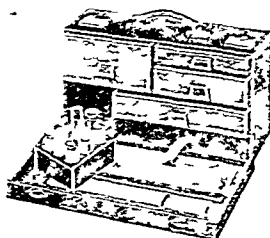
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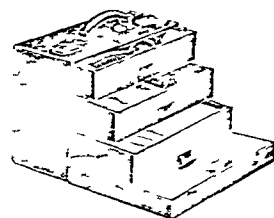
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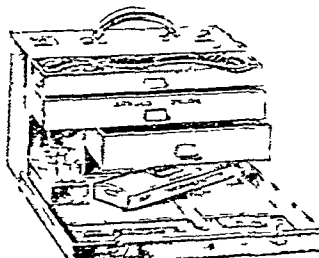
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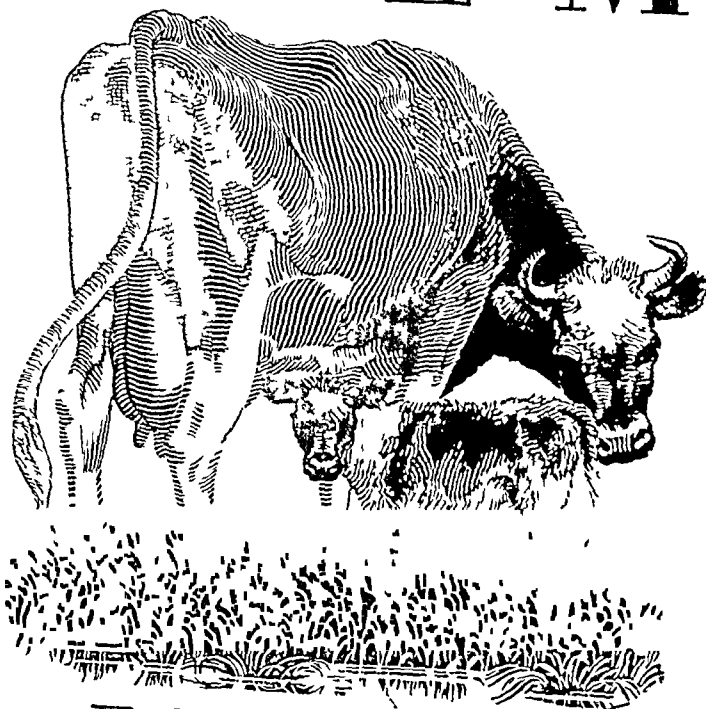
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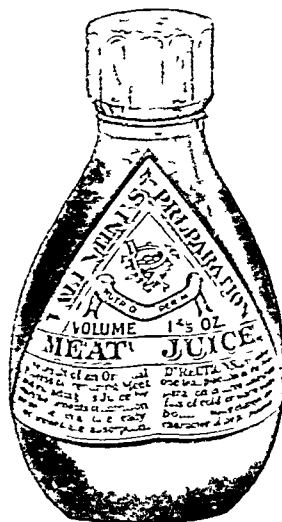
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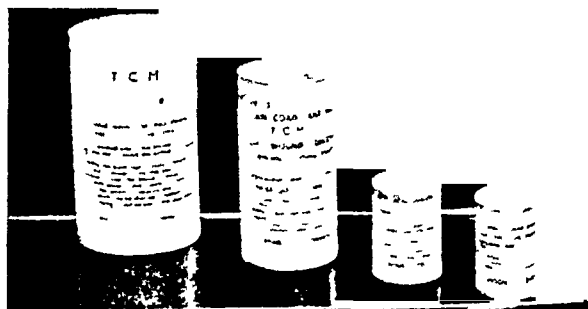


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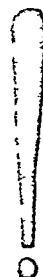
Pregnancy, infection, or  
any other unusual tax

may lead to a prolonged period of convalescence

**COMPOUND SYRUP OF HYPOPHOSPHITES**

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**CONTAINS THE DEFICIENT MINERALS!**



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PROPHYLACTIC and CURATIVE

Immunisation should be commenced in susceptible patients now. In treatment the initial dose is determined by the

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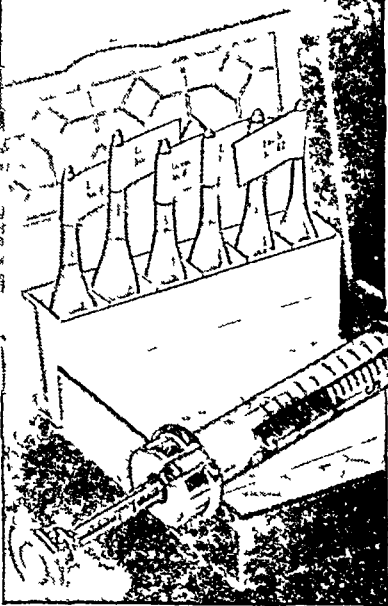
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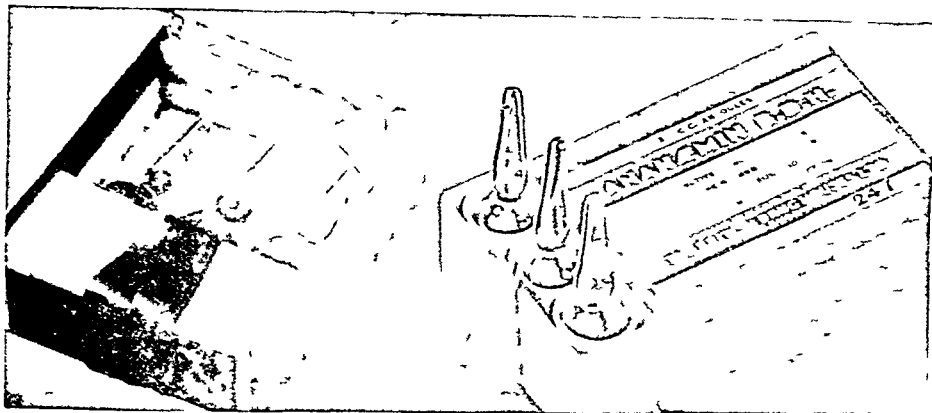
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## 'B E N E R V A'

Oral Tablets and Ampoules

Roche Products Ltd, 47, Bowes Road, London, N 13, and Welwyn Garden City, Herts

# MEDISOAP No. 19

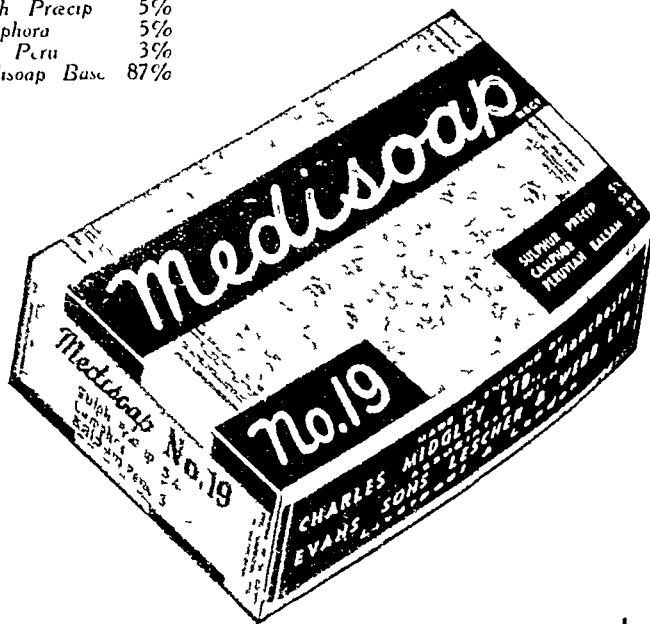
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Formula—  
Sulph. Præcip. 5%  
Camphora 5%  
Bals. Peru 3%  
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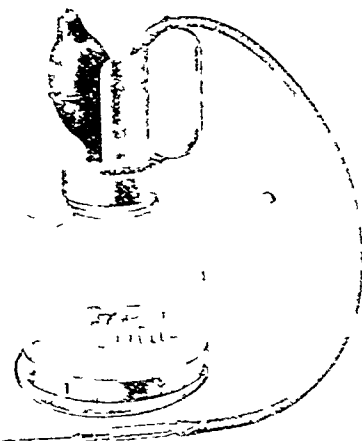
Price 1/3 per tablet



A clinical index to the 49 Medisoap formulae will be sent to physicians on request

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# NEW BLOOD TRANSFUSION TECHNIQUE



**THE BAXTER BLOOD TRANSFUSION SET** An apparatus for the indirect transfusion of citrated blood in which the blood is sealed against contamination from the moment it leaves the donor's vein until it is injected into that of the recipient.

Baxter's New Blood Transfusion Set brings you unequalled simplicity and safety sealed against contamination throughout procedure. The advantages inherent in the SAFETY and speed of transfusions under the Baxter method can hardly be exaggerated.

## OBSTACLES OVERCOME

Hand in hand with the growing use and widening approval of the indirect method for blood transfusion comes the need for a simplified apparatus to make transfusions easier for you and safer for your patients.

The greatest objection to the indirect method has now been permanently overcome. By the modern Baxter method blood is obtained citrated and injected under the same seal—risk of contamination is eliminated—risk of clots is minimised. The blood remains sealed in its

Vacoliter container from the moment it leaves the donor's vein until it is injected into that of the recipient.

## NEW USE FOR AN ALREADY USEFUL INSTRUMENT

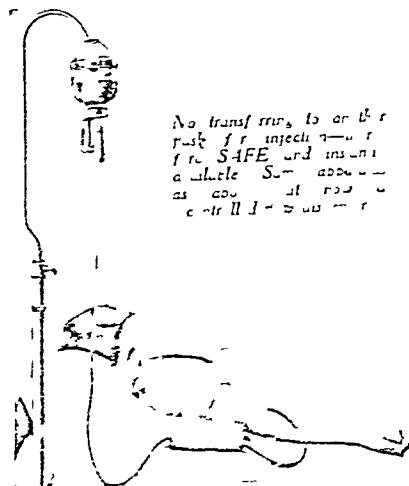
Here is the interesting story of the development of the new Baxter Blood Transfusion Set—Dr W B Cooksey, of Harper Hospital Detroit, long an enthusiastic user of Baxter's Intravenous Solutions in Vacoliters (RTM), saw the remarkable possibilities of the 'Vacoliter' in blood transfusions. He devised a metal handle and a specially designed rubber stopper, fitted them with a negative pressure bulb and an intake tube, attached the whole to a 500 cc Vacoliter, and there was a Blood Transfusion Set that is simplicity itself.

We shall be pleased to send upon request an illustrated folder describing Baxter's Blood Transfusion Set in detail.

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a whole new approach  
as you sit and wait  
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it is now generally agreed that  
"deficiency of the vitamin-B complex  
may be related to increased susceptibility  
to certain kinds of infection"

Proc. R. Soc. Med. 1937 30 1039J

A popular method of raising the vitamin-B content of the diet consists in the systematic administration of Marmite. This yeast extract is rich in all the vitamins of the B group, and is being increasingly prescribed for its health-promoting properties.

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**in preventive and curative medicine and in convalescence****MARMITE**For sample and  
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## ITS CALORIFIC VALUE

Bread is the 'energy component' and Vita-Weat since it contains only 3 per cent of water, has a fuel value nearly twice that of ordinary bread—according to *The Practitioner* its caloric value is 2,132 per lb.

Each section of such a crisp bread—each 'slice,' so to speak—has a caloric value of 37. That is to say that in meeting what is probably the greatest requirement of a national staple food Vita-Weat is almost twice as effective as the softer kinds of wheaten bread.

## STARCH AND DIGESTION

A crisp bread, obviously, calls for a more thorough chewing than a soft 'crumb' bread and mastication is therefore more healthily promoted. The starches and cellulose in Vita-Weat are also converted into a more digestible form by the special processes which go to make a good crispbread—just as oats and crust have become greatly more digestible than bread in its quite unconverted starch form. While *all* the wheat berry is used the bran and fibre are thoroughly disintegrated.

The result is, therefore, that the weight which quantities of unconverted starch places on the

digestion is almost entirely eliminated. Where Vita-Weat has been prescribed

## VITA-WEAT AND ITS ADVANTAGES

In addition to these great advantages of caloric fuel-value and digestibility Vita-Weat retains the protective elements of the wheat berry and is frequently rejected in the refining of white flour. Protein, vitamins and minerals in such a form as normal deficiencies are prevented and the source of this crisp bread as a food is therefore retained. The use of Vita-Weat can be highly recommended desirable in cases of malnutrition, indigestion, infection, lack of appetite, protracted convalescence and as a food of protection for the young and the aged.

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AND STILL  
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(— MRCS LRCS DPH)

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(THE PRACTITIONER)

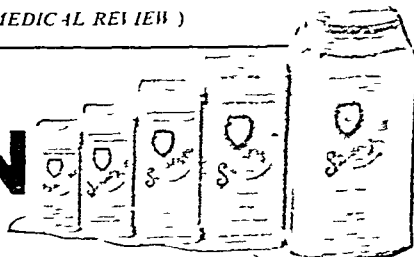
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(BIRMINGHAM MEDICAL REVIEW)

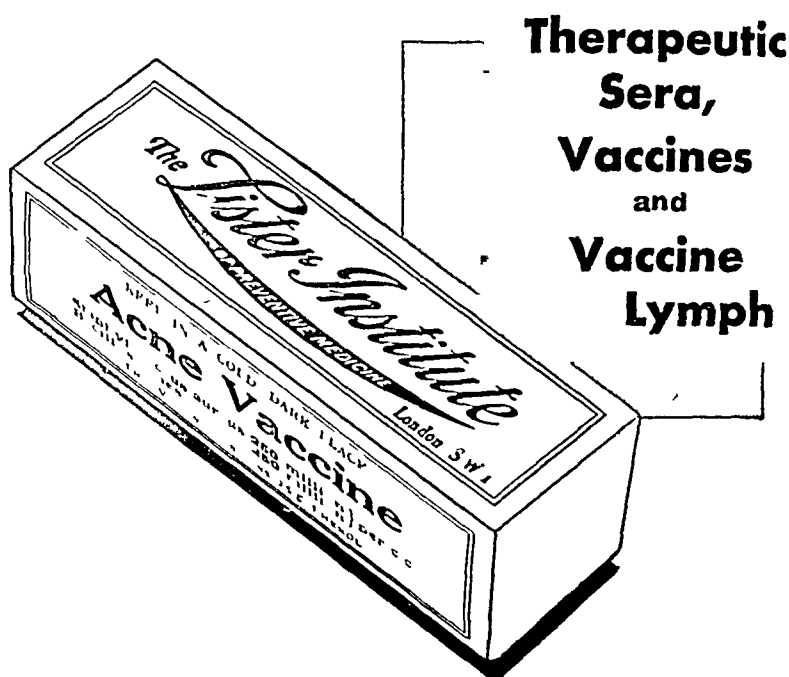
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DOSAGE For infants 1-2 years 1/2 to 1 oz 3 times a day  
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## Acne Vaccines

It has been claimed that, in certain cases of acne, where the ordinary staphylococcic vaccines have failed to ameliorate the condition, good results are obtained by the use of a mixed vaccine of the *Bacillus acnes* (Sabouraud) and the *Staphylococcus aureus*. In addition to the mixed vaccines, one consisting of the *Bacillus acnes* (10 millions per c.c.) alone is prepared.

**DOSAGE.** When the mixed vaccine is used the initial dose is usually 125 million staphylococci and 125 million acne bacilli. This dose may be increased to 250 and 500 millions of each organism, with an interval of 7-10 days between successive doses.

### List of Acne Vaccines, with contents per c.c.

	(a)	*(b)	(c)	(d)	*(e)	*(f)
<i>S. aureus</i>	250 million,	500 million	125 million,	250 million	500 million,	10 million
<i>B. acnes</i>	10 "	20 "	125 "	250 "	500 "	

In ampoules at 2/6 each

\*Also in 10 c.c. rubber capped vials at 15/- each

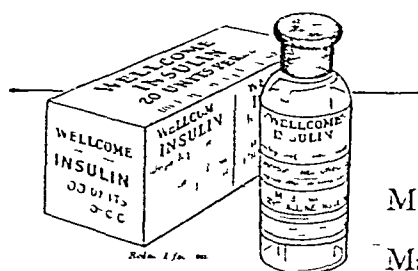
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20 , c.c.	10 c.c.	2 10
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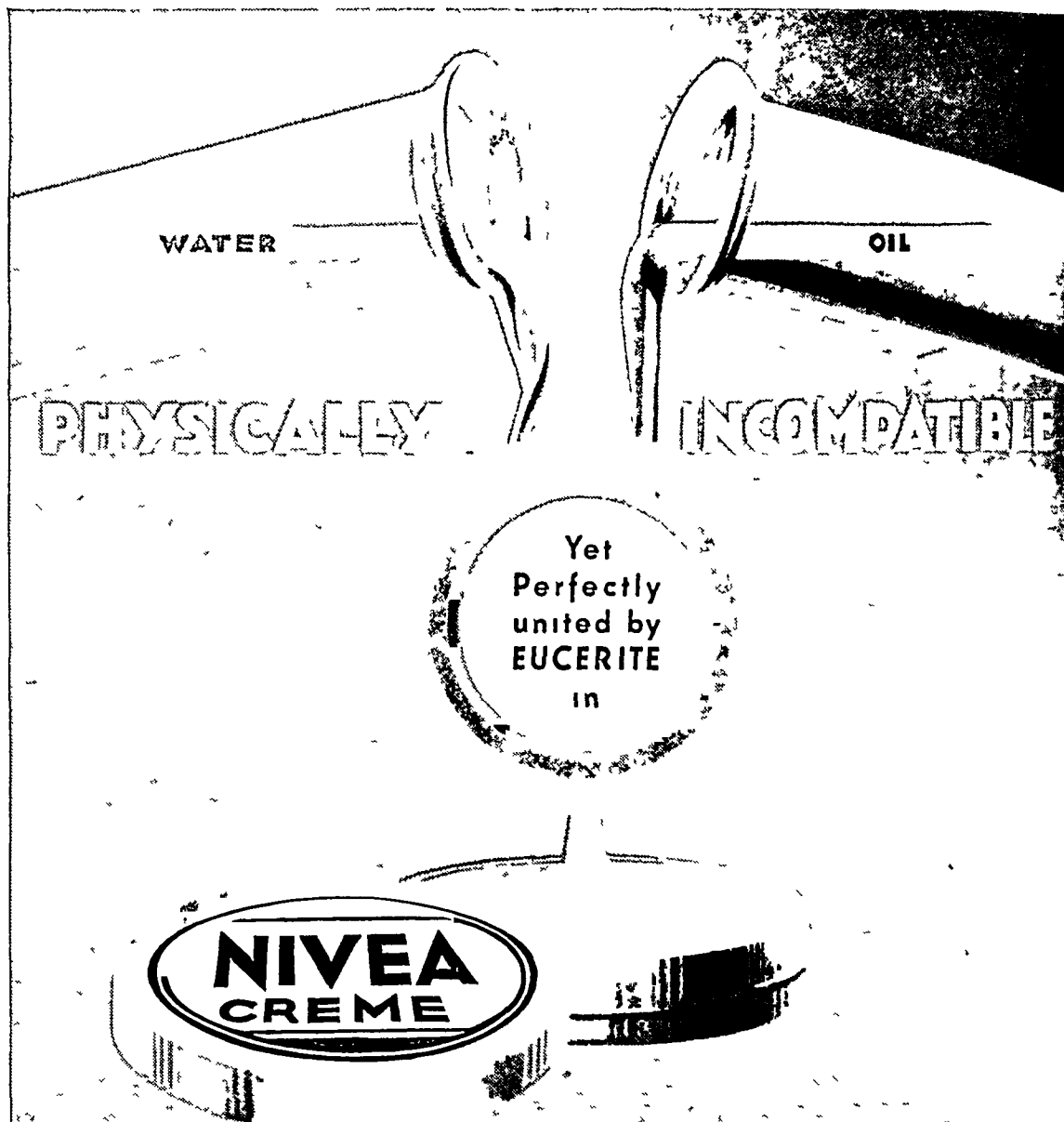
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In A.D 1084 an Irish annalist recorded a pestilence which killed a fourth of the population. He  
attributed this to the invasion of three battalions of demons from the northern isles each battalion  
comprising thirty and ten hundred and two thousand. He himself  
had seen a battalion of them despoiling Leinster. The same writer  
also recorded a colic in the east of Ireland caused by demons  
who were clearly visible to men. The various supernatural beings  
of Celtic folk-lore including spirits, aires, demons, ghosts and  
witches are ill-defined and their qualities overlap.



DATE From prehistoric times The annalist died A.D 1088

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# BRITISH MEDICAL JOURNAL

LONDON SATURDAY APRIL 30 1938

## NASAL SINUSITIS IN CHILDHOOD\*

By

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Since nasal accessory sinusitis is almost always the result of colds, other upper respiratory infections such as influenza, or the exanthemata it is proper to emphasize that the avoidance and correct treatment of these conditions are of the utmost importance.

Children often manage to escape with few infections during their early lives but it is common to find that their first year or so at school is constantly interrupted by colds. This is scarcely to be wondered at for it is at school that they first encounter the millions of organisms which exist where people are herded together. In such places as schools, trains and cinemas it must be almost impossible to breathe air which has not already been in and out of someone else's lungs or which does not contain droplets from the coughs and sneezes of those who have colds. So far the human species has not been able to develop an innate immunity to the organisms that cause upper respiratory infections. It has scarcely had time to do so for, bearing in mind the history of mankind it is only recently that people have lived in such close proximity to each other. At a children's hospital such as that of Great Ormond Street it would not be an exaggeration to say that one third of the patients are suffering from disease which is the result of inhalation of micro organisms.

### Frequency

How frequent is sinusitis in children? That it is common in the early years of life has been demonstrated by many different workers. J. H. Ebbs (1938) recently published the results of the examination of the sinuses of 496 children post mortem. He found disease in 152 instances or 30.6 per cent. Other investigators have submitted a series of children to antrum puncture by this means. Mollison (1922) observed that 22 per cent had muco-pus in the antra and Carmack (1931) 30 per cent. In a series of 100 children at Great Ormond Street I found that twenty-four had muco-pus in the antra (Crooks and Signy, 1936). All these children were from a tonsillectomy list and obviously had something wrong with their noses or throats, or they would not have been undergoing that operation. Since it had been said that removal of tonsils and adenoids cures sinusitis in children and also that this condition is only temporary, I punctured the antra of these twenty-four children again six months later to test these statements and still fifteen of them had muco-pus. Therefore neither of these statements is true. During last year antrum infection was proved by exploratory puncture in over 500 children at my out-patient

department and approximately the same figure applies to several preceding years.

We have been slow to recognize the importance of sinusitis in childhood. It has long been known that it is common in adult life and it stands to reason that children are more liable even than adults. They are more susceptible to colds and their sinuses drain less readily during a cold since the small nose is so easily blocked by mucosal swelling. We know how frequently otitis media occurs in the young, and the middle ear is after all only a specialized sinus off the nasopharynx. And the sinuses are all present in childhood: the antrum exists at birth and by the third year is a fair sized cavity, the ethmoid labyrinth contains well denned cells at birth and the sphenoid is a definite cavity in the third year. The frontals vary greatly in development but by the age of 5 or 6 there is usually a good sized cavity. Therefore there is every reason to expect sinusitis in early life.

### The Causation of Sinusitis

By far the commonest cause of sinusitis is a cold, or colds. Influenza particularly in some epidemics is often responsible for the onset and sinusitis may follow any of the infectious diseases which are accompanied by upper respiratory inflammation particularly whooping-cough. Bathing in infected water is another mode of infection but so far as children are concerned antrum infection from bad teeth does not arise. Lastly allergic rhinitis may give origin to secondary sinusitis.

It is true to say that with every nasal cold there is sinusitis. How could it be otherwise when the mucous membrane lining the sinuses is continuous with that of the nose? A radiograph taken during a cold will almost always show some thickening of the mucous membrane in the antra. But usually as the cold gets better the sinuses return to normal. When however there is retention of exudate in a sinus during an acute infection or if inflammation persists in such a cavity after the general nasal infection has settled sinusitis merits separate consideration. Retention of exudate under tension due to closure of the ostium by inflammatory swelling gives rise to headache, localized pain and tenderness. Persistence of inflammation in a sinus with an open ostium induces nasal congestion and discharge. The latter is often of the nature of an overflow, the matter in the sinus accumulating until it has reached the level of the ostium. Normally the cilia wipe the exudate towards the ostium against gravity if necessary. When they are inflamed they are incapable of doing this.

It is essential to bear in mind that pus in a sinus is strictly speaking outside the main body cavity. It is in

\* Lecture delivered to the City Division of the British Medical Association March 1 1938.

no way comparable to inflammation in a long bone, for instance. Provided the ostium is open drainage is present and there is rarely any increase of temperature or localized pain. These manifestations arise only when the ostium is blocked, and then the condition more closely resembles an abscess elsewhere.

The anatomical peculiarities of an individual nose may make it more liable to sinusitis than is normal. For instance, a deviated septum which presses upon a middle turbinate may completely block the ostia of several sinuses when there is nasal congestion. A small and crowded nose is less likely to maintain adequate drainage for the sinuses during a cold than a good roomy nose, and, of course, a sinus may have an abnormally small ostium. And last but by no means least some people are highly susceptible to upper respiratory infections, and appear to have little or no immunity to colds. They are obviously candidates for sinusitis.

### Bacteriology

It is interesting to compare the bacteriology of sinusitis with the bacteriology of the nose. When I made my observations upon a series of children nasal swabs were taken from them at the time the antra were aspirated. Whereas the commonest organism found in the nose was the staphylococcus, the pneumococcus was much the most frequent organism in the infected antra. Next commonest in the sinus was the Pfeiffer bacillus, but it was rare in the nose. The *Micrococcus catarrhalis* and the *Bacillus hoffmanni* were common in the nose but rare in the sinuses. The streptococcus was a frequent cause of sinusitis but was not so often found in the nose. The usual causes of sinusitis were therefore the pneumococcus, the Pfeiffer bacillus, and the streptococcus. The common organisms in the nose were the staphylococcus, the *Micrococcus catarrhalis*, and the *Bacillus hoffmanni*. The pneumococcus produces a very thick yellow pus, and one wonders whether this fact gives it pre-eminence as a cause of sinusitis, the pus being too thick to escape from the ostium readily.

There is one special peculiarity about the pathology of sinusitis in children: the bone surrounding the sinuses is more porous than in later life, and osteitis is more likely to arise. I will now proceed to the clinical manifestations.

### Acute Sinusitis

Acute sinusitis meriting separate consideration from a generalized inflammation of the nose, sinuses, and throat is comparatively infrequent in childhood, and it only calls attention to itself during the course of such an infection when the discharge cannot escape from the sinus. This happens, of course, when the ostium becomes blocked owing to the swelling of the mucosa encroaching on the narrow opening. It therefore occurs typically at the height of an acute cold or influenza.

### SYMPTOMS

These vary with the sinus involved, and usually consist of severe headache, localized pain, tenderness, and an increase in fever. If the antrum is at fault there may be swelling of the cheek and oedema of the orbit. Sometimes osteitis of the maxilla results. An acute block in the ethmoids with osteitis is not very uncommon in the first year or two of life. When severe there is a tender swelling over the upper part of the side of the nose, and the orbit is closed by great oedema. Sometimes the eyeball is immobilized. On several occasions the diagnosis

of cavernous sinus thrombosis was made. It is important to recognize the nature of the illness, because external opening of the ethmoids results in recovery, while neglect of it may end in cavernous sinus thrombosis and death.

### TREATMENT

In the first place treatment is conservative. In the great majority of instances the ostium can be made to open and let out the discharge without surgical intervention. The patient will of course be in bed, and it is important to maintain an even temperature in the room. Sudden changes of temperature increase nasal congestion. The main object of treatment is to shrink the inside of the nose till the discharge comes away. There are many preparations of use for this purpose—they usually contain ephedrine and volatile oils. A benzedrine inhaler is effective, and children like it. Inhalations of menthol in hot water are helpful if the child is old enough to use them. In addition the middle meatus of the nose should be shrunk by the application of a cotton dressed probe dipped in cocaine 10 per cent and adrenaline 1 in 1,000. Only if these measures fail after trial for a few days should surgery be resorted to, and then it should be as simple as possible—for instance, aspiration of the antrum, but not lavage, which may spread the infection.

It is obvious that acute sinusitis may pass on to a chronic condition in which there is inflammation of the mucous membrane, although drainage has been established.

### Chronic Sinusitis

Chronic sinusitis is so often found in the catarrhal child who is liable to colds that it must claim our chief attention. The pathological condition present is catarrhal, or, more rarely, suppurative, inflammation of one or more of the sinuses with continued discharge into the nose. Most often the trouble lies in the antrum. I had come to that conclusion clinically, and was pleased to see that Ebbs in his series of necropsies had found that the antrum was involved more often than the ethmoids and sphenoids added together.

### SIGNS AND SYMPTOMS

A series of 100 children with sinusitis at Great Ormond Street was analysed for signs and symptoms of chronic sinusitis, and the following figures are based on this examination. Subsequent observations on many hundreds of children have confirmed them.

**Nasal Discharge.**—The most frequent symptom was nasal discharge, and of the 100 children eighty-four suffered from it. There is one point to beware of in children. A child hates to have his nose blown, and will try his best to avoid being attacked with a handkerchief. Therefore he tends to sniff nasal discharge backwards into the throat. It is not enough to ask a mother if the nose runs, you must ask if the child sniffs. Very often the mother says there is no discharge, but that the nose is stuffy and full of catarrh. The secretion may be mucoid and clear or yellow and sticky, and is sometimes purulent. Since sinusitis is so often bilateral—the antrum was involved on both sides in sixty-one children and on one side only in thirty-nine cases in this series of 100—the discharge is usually from both sides of the nose. The child is hardly ever free from catarrh, except perhaps for a few summer months. Each cold is accompanied by a streaming nose, which takes several weeks to improve. In short, children with sinus disease are catarrhal, and one could almost go further and say that children with catarrh have sinusitis. In these eighty-four children the average duration of nasal catarrh was two years.

**Colds**—Of the 100 children eighty three suffered from frequent colds. Sometimes the mothers said they were never free from cold—another way of stating that they had chronic catarrh. Colds are the cause of sinusitis and so we would expect these children with sinusitis to have colds. But sinusitis is also a cause of colds. Sometimes after washing out an antrum a child develops a cold or tonsillitis: active organisms have been released. It is therefore obvious that a discharging sinus may cause a cold and the vicious circle is complete.

**Cough**—Eighty-two of the 100 children suffered from cough. It is a severe hacking cough, often resembling whooping-cough, worse at night and on waking and is the result of post nasal discharge through sniffing. If the discharge lies in the nasopharynx the cough is merely a reflex irritation. Unfortunately it may be a much more serious matter. If some Ipiodol is placed in an antrum and the child then goes to sleep some will be found in the lungs next morning. So it is with the purulent discharge from the sinuses. During deep sleep it drops through the open glottis into the lungs and often serious lung trouble develops. Nearly all bronchiectasies have sinus disease. It has never been proved that the sinusitis is the cause of the bronchiectasis but it seems a reasonable possibility. I do not believe in the other theory that coughed up sputum infects the sinuses. Most likely there is some weakness in the respiratory system or lack of resistance to disease which makes both the lungs and the sinuses liable to inflammation.

**Snoring and mouth breathing** were present in 62 per cent and here one must say a word about the adenoid face. It is a pity that such a term was ever coined, for it has misled all of us. The adenoid face is the face of a child with a blocked nose and nothing more. And adenoids are not the most common cause of a blocked nose even in children. The nasopharynx is a big space and it needs a good mass of adenoids to block it up. Occasionally such a mass is found but not more often than say once in every five or six operations for the removal of tonsils and adenoids. On the other hand the nose is a narrow space and is very easily blocked by swelling of the turbinates and accumulation or discharge. In sinusitis the turbinates become swollen, particularly the inferior turbinates over which the discharges flow. In my opinion an adenoid face is more often the result of nasosinusitis than it is of adenoids. Of course the two may go together.

**Sore throats** may occur in sinusitis from mouth breathing and tonsillitis may result from infected post nasal discharge.

**Enlarged cervical glands** are seldom the result of sinusitis by itself. Lymphatic absorption from an intact sinus is not great.

**Headaches** are common and occurred in 44 per cent. They are usually frontal, and are apt to be severe during a cold.

**Otitis media** occurred in forty-four of the 100 children with sinusitis. Trickling as it does over the orifices of the Eustachian tubes it is little wonder that post nasal discharge often leads to otitis media. It is almost an axiom these days that otitis media calls for the removal of adenoids. It also calls for an investigation of the sinuses and one has often seen persistent otorrhoea clear up after treatment of an infected sinus.

**Systemic Effects**—Chronic sinusitis causes general debility characterized by mental lassitude and a change for the worse in temperament. A child with sinusitis is often morose and ill tempered, he is easily tired and has

dark rings under his eyes. Sinusitis does not commonly constitute the focus of infection responsible for such diseases as rheumatism or arthritis. Organisms are not readily absorbed from the sinuses and even the lymphatic drainage is slight.

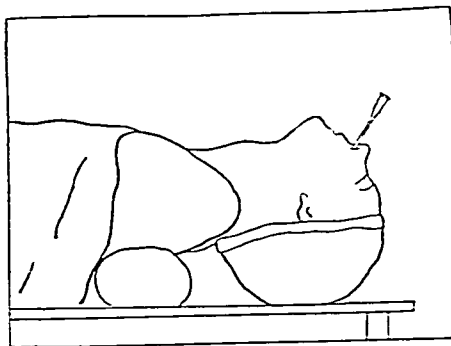
#### DIAGNOSIS

This rests upon the symptoms in the first place but must be supplemented by certain special observations which are (1) examination of the nose (2) transillumination (3) radiography and (4) puncture aspiration.

**Examination of the Nose and Throat**—Continued discharge from a sinus causes nasal congestion on the corresponding side and of course nasal congestion leads to further retention in the sinus so one expects to see congestion and hypertrophy of the inferior turbinate on the side of the nose corresponding to the sinusitis. The middle turbinate is also often swollen but is less easy to see. In the middle meatus or between the inferior turbinate and the septum there may be an accumulation of mucus or muco pus. A post nasal examination would reveal post nasal discharge. It is difficult to carry out in a child but often enough a blob of muco pus will be seen hanging down behind the uvula. The pharynx is usually red and granular.

**Transillumination** is sometimes useful. If the sinus involved is the antrum and if the condition is unilateral a definite finding is obtained with transillumination. Unfortunately circumstances are not often so favourable for when both antra are infected it is still possible to get a light through them in a child it is powerful enough. And again if they are poorly developed or have unerupted teeth in front of them they appear dull.

**X ray examination** is essential. For general purposes one film taken in the naso-mental position is sufficient. It shows the antra, the ethmoids and the frontals and the cause of any opacity—whether thick mucous membrane only or fluid content. Usually the infected antrum shows a uniform opacity made up of thick membrane and retained secretion. In a child a fluid level is rather rare and indicates a not very thick lining for such a lining would obscure the level. A good radiograph will always



Puncture aspiration of the antrum. This procedure is used for either local or general anaesthesia. The antrum is the most dependent part of the cavity and the fluid is held still.

show disease if it is present and it is unwise to presume a pathological change in a sinus that is clear in such a film.

**Puncture aspiration** of the antrum is the final proof of the presence of infected contents in that cavity. It is not such a delicate test of sinus pathology as a transillumination for many a sinus shows changes in trans-



mucosa in a radiograph but is clear on aspiration or wash. The converse does not hold good. There are two points worth mentioning in regard to puncture-aspiration. It is advisable to culture the fluid aspirated, and it would be useless to aspirate it through the ordinary cannula, since that is contaminated by the withdrawal of the trocar. Therefore a finer cannula is attached to a glass syringe containing sterile saline, and this is passed through the original cannula left *in situ* and the contents are aspirated into the syringe. The position of the head is also important, for the point of the cannula must reach the lowest part of the antrum cavity. This can only be attained by adopting the position I advocate: the child lying on his back with the shoulders on a sand pillow, and the head extended fully (see diagram).

#### TREATMENT

The treatment of chronic sinusitis is in the first place preventive. Colds must be avoided by improving hygiene and general health and resistance. When they occur the nasal mucosa must be shrunk so that the ostia of the sinuses remain open. If subacute or chronic catarrhal sinusitis persists after a cold general medical treatment is indicated. Only if there is retention of inflammatory products in a sinus is lavage necessary. Operation is reserved for chronic suppurative sinusitis.

As an example, take the child who has all the past winter been subject to repeated colds and since the last cold a month or so ago has had continuous nasal catarrh. Examination reveals a debilitated sniffling child with a little cough. The inferior turbinates of the nose are swollen. There is a mucoid discharge seen running down the back of the throat. X-ray examination shows swollen mucosa of the antra, and perhaps the opacity is more marked on one side than on the other, suggesting some amount of retention. What is the correct line of treatment? It should be started by keeping the child in a warm, well-ventilated room for a week, the nose meanwhile being shrunk by repeated applications of shrinking drops and by inhalations of menthol. At the same time a vitamin-containing tonic should be given. After that the child should get out whenever the weather is reasonable, and when he has been doing that for a week, the nasal shrinking being continued with, he should go to the seaside. After a month or two on the south coast a radiograph would probably show the sinuses to be clear. Admittedly such expensive and prolonged treatment is out of the question for many children. It so, one may be forced into washing out the antra as the quickest way to get rid of the symptoms. It often works like a charm, but it is no real substitute for the improved general condition and resistance which would have resulted from a holiday at the seaside.

Now consider a more severe example, that of a child who has had constant nasal discharge all the winter. The general condition has suffered a good deal, and a hard barking cough which interrupts sleep at night has developed. Perhaps there has been headache. Radiographs show complete opacity of one or both of the antra. It is unlikely that the line of treatment suggested for the previous case will be rewarded with success. It is necessary to proceed straight away by washing out the sinus in question and there is no doubt that recovery, even if it does not depend entirely on lavage, will come about much quicker because of it. It is quite possible to wash out the antra of children under local anaesthesia. With a very nervous or difficult child it may be necessary to give a general anaesthetic but I rarely have to resort to it, especially in hospital practice. According to the find-

ings on lavage the procedure may need to be repeated several times, usually at weekly intervals. The average number of washes necessary in the 100 children I have quoted was three. The treatment as outlined for the milder case should be given at the same time.

Finally, consider the exaggerated example of a child who has had a purulent nasal discharge for several years, and is found on x-ray examination to have an opaque antrum with chronic changes in the mucosa. In my opinion lavage is again indicated, and should be repeated up to a dozen times if there is improvement rather than that an intranasal operation should be resorted to. Of course, if there is as much purulent discharge on the sixth wash as there was on the first, one would probably feel that more radical treatment was necessary.

What is more radical treatment? It is antrostomy—that is, punching as large a hole as possible in the bone of the inferior meatus, between the nose and the antrum. There is then dependent drainage and a large opening through which it is easy to insert a curved tube for washing. I do not consider it such a desirable operation as it sounds theoretically, at any rate in childhood. The floor of the antrum being higher than the floor of the nose during youth, the opening cannot be made very large unless the inferior turbinate is sacrificed, which I am unwilling to do. Also, the hole in the young bone is apt to close in a month or two. Finally, lavage through the opening is little more pleasant than puncture. In spite of its drawbacks, however, it is an operation which has often been followed by good results.

Lastly, there are those cases, even in childhood, in which such advanced disease of the mucosa of the antrum is present that only its removal will alleviate the symptoms. Then a Caldwell-Luc operation has to be done.

We have been discussing the antrum. It is easier to treat than the other sinuses and enables one to present a scheme of treatment more readily. In addition it is far more frequently diseased than the other sinuses in childhood. Disease in the *sphenoid* is more difficult to diagnose and treat. One depends on radiographs even more than in the case of the antrum. Lavage can be carried out through a straight trocar and cannula.

The complicated structure of the *ethmoids* makes them unsuitable for puncture and lavage. In advanced disease it may be necessary to remove the middle turbinate and open the cells, but in less severe inflammation of the *ethmoids*—and the same applies to the *sphenoids*—Proetz (1931) has worked out a most valuable form of treatment which he calls displacement. The principle is the introduction of shrinking or therapeutic fluids into the sinuses by means of repeated negative pressure applied to the nose, which is filled with the fluid selected. This form of treatment applies particularly to the *ethmoids* and the *sphenoids*, and is of less value in the antrum.

Short-wave diathermy has been used recently, and is of benefit in those conditions of chronic catarrhal sinusitis which are not accompanied by retention of exudate.

#### Prognosis

What is the outlook in sinusitis in childhood? It is obviously much more favourable than in later life, for two reasons: (1) the young tissues recover more quickly and completely, (2) sinusitis in the adult may have been in existence for years before it is diagnosed.

Sinusitis has a bad reputation, and one is told that it is never cured for life. That is obviously because it

does not fall into the ectomy class. Appendicectomy and tonsillectomy leave no room for recurrent inflammation in the organs involved. No doubt removal of the antrum would be followed by a complete cure of antritis. But the cure would be much worse than the disease. It is possible to cure inflammation in a sinus completely by adequate treatment but of course the sinus remains and so does the inherent liability to infection of it which caused the original trouble.

Of the 100 children we have been discussing fifty-two were completely cured—that is they were free of symptoms and final radiographs showed normal sinuses, thirty-two were improved and sixteen remained unchanged.

### Relation of Tonsils and Adenoids to Sinusitis

Even in a short paper one cannot omit referring to the tonsils and adenoids and their relation to sinusitis. The first question that comes to mind is: Does infection of the tonsils and adenoids cause sinusitis? If so it must be either because the adenoids are so large as to block the nasal airway and interfere with ventilation of the sinuses, or because it is a result of surface spread of infection against the normal mucous stream kept up by the cilia. The removal of tonsils and adenoids should cure sinusitis and it should be uncommon among children who have had their tonsils and adenoids removed. I have already mentioned that of twenty-four cases of sinusitis in children only nine cleared up after removal of the tonsils and adenoids and they might have done so without the operation. Of the 100 children with sinusitis forty-one had already had their tonsils and adenoids removed completely. The broad conclusion is justifiable that disease of the tonsils and adenoids is not a common cause of sinusitis and that their removal is neither a preventive nor a cure of the condition.

The second question is: Does inflammation in the sinuses give rise to infection of the tonsils and adenoids? As the post-nasal stream of mucus is over the adenoids and posterior halves of the tonsils the mechanical possibility of such an infection is evident. It is difficult to draw conclusions from the fact that forty-one of our 100 children had previously had their tonsils and adenoids removed. They may have had the operation done for symptoms which should more properly have drawn attention to the sinuses. Even worse they may have developed sinusitis as a result of imperfect technique during the operation of removal of their tonsils and adenoids. One has seen that happen. Infected blood runs into the sinuses and sets up inflammation there.

I believe that sinusitis is a common cause of inflammation of the adenoids and to a lesser degree of the tonsils. The first step in the treatment of sinusitis is the treatment of the sinus itself and not the removal of the tonsils and adenoids. If the latter are infected and fail to respond to such treatment they should be removed. If there is a large pad of adenoids interfering with respiration treatment of coexisting sinusitis is not likely to lead to cure until it is removed.

### REFERENCES

- Carmack J W (1931) *Ann Otol Rhinol Laryngol* St Louis 40 315  
Crooks James and Signy A G (1936) *Arch Dis Child* 11 231 London  
Ebbes J H (1936) *British Medical Journal* 1 385  
Mollison W M and Kendall N E (1922) *Guys Hosp Rep* 72 225 London  
Proetz A W (1931) *Displacement* St Louis

## A CLINICAL EXPERIMENT IN OESTRIN THERAPY

By

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Oestrin is now well established as a therapeutic agent but many problems remain to be solved before the most effective mode of administration can be determined. The principle of endocrine therapy is to give the hormone by the most convenient route in such a form and dosage that it will be delivered at the site of effect at a suitable rate in suitable concentrations and over as prolonged a period as possible or desirable. The following case illustrates some of the factors to be considered in the use of oestrin.

On February 27 1936 Mr Frank Cook did a bilateral ovariectomy for cysts of both ovaries on a girl aged 20 who had suffered for some time from irregular menstrual bleeding. Three days later uterine haemorrhage started and continued for three days. Nine days after the operation hot flushes began to appear. Oestrin was first given forty-four days after operation by which time the patient was complaining of about twelve hot flushes a day and during the subsequent two years the case afforded an opportunity for studying the effects of oestrin given by mouth by injection and by implantation. In Chart I the number of daily hot flushes is indicated and is correlated with the dose of oestrin administered.

### The Effective Dose of Oestrin for a Recent Castrate

A consideration of the chart shows that the symptoms as measured by the daily frequency of hot flushes began to come under control when oestrone (mentormon Organon) was given in daily doses of 6 000 IU (0.6 mg) by mouth and after a prolonged period of administration of higher doses remained completely controlled by 3 000 IU daily. The case is particularly suitable for this type of investigation since the daily hot flushes cur e rose rapidly when treatment was discontinued. Later in the patient's history (January 1937 et seq) doses increasing from 1 000 IU of oestrone by injection had an effect on the symptoms and later still (October 1937) 1 000 MU of oestrin by mouth\* (tridesmin Paines and Byrne) was found to be a suitable maintenance dose. Finally the implantation of a 14 mg tablet of crystalline oestrone produced a demonstrable effect lasting over a period of weeks.

Thus it would appear that relatively small doses of oestrin by mouth are effective in controlling the symptoms of acute ovarian deficiency in a castrate. This observation is supported by results obtained in other cases. For instance the administration of 1 000 IU daily for a fortnight followed by 2 000 IU for another fortnight completely relieved the symptoms of a woman of 34 who was suffering from a moderately severe menopause with six hot flushes a day and converted a well marked menopausal vaginal smear into one typical of oestrin.

It is important to determine the minimal effective maintenance dose of oestrin in these cases for the administration of high doses has certain disadvantages.

1 It may induce uterine haemorrhage and the patient suffering from the effects of a natural menopause should be

Oestrin (trihydroxy-oestrin) is less potent when given by injection than oestrone (acetohydroxy-oestrin) but it is more effectively absorbed than oestrone when given by mouth. It therefore appears to be a suitable method of peroral administration of oestrin.

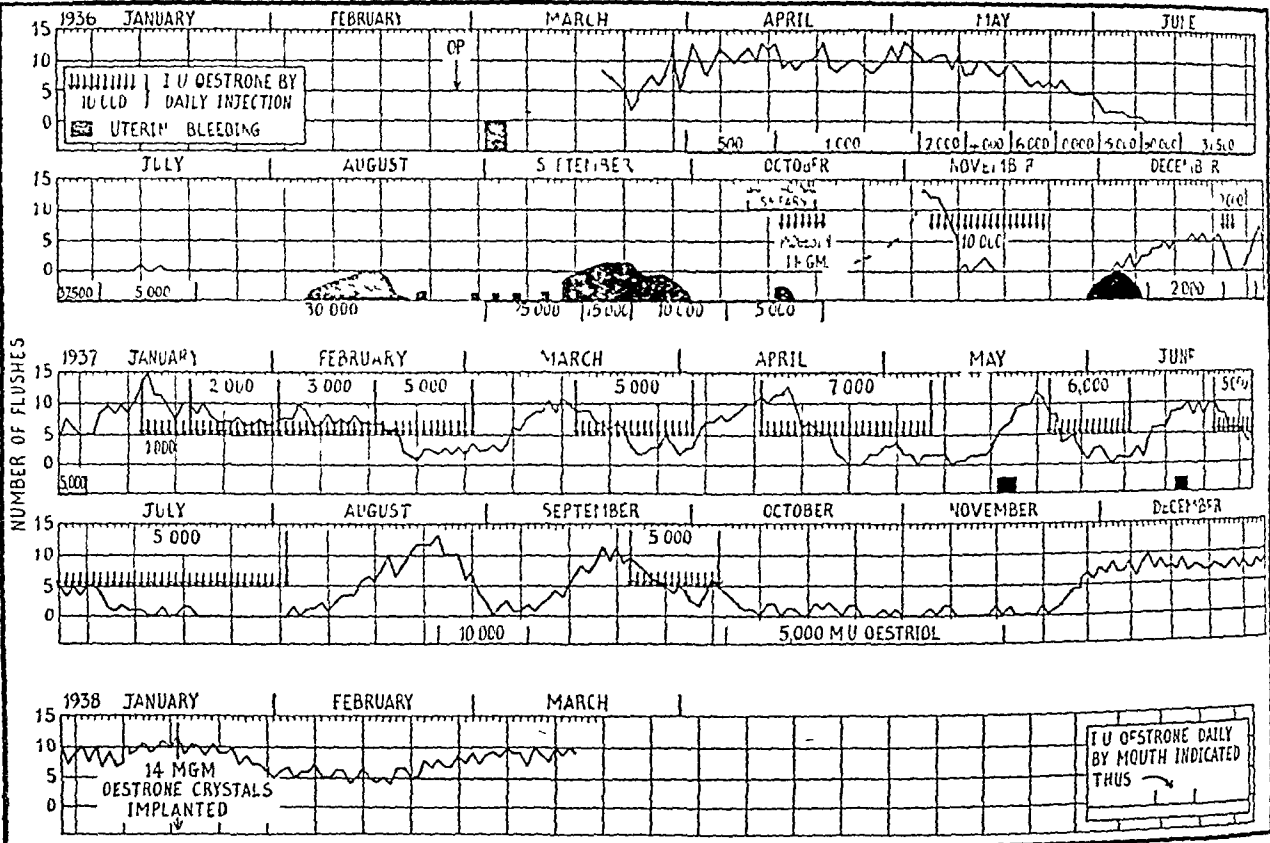


CHART I—Showing the number of hot flushes daily and their correlation with the dose of oestrin administered

warned of this possibility if moderately high dosage oestrin therapy is contemplated

2 It may give rise to certain uncomfortable symptoms such as a feeling of fullness headaches and nausea, which are probably minimal in nature and are due to dosage slightly below that which would produce oestrin withdrawal bleeding

3 It may inhibit the gonadotropic activity of the anterior pituitary gland. The sudden or gradual diminution of ovarian function in the castrate or at the menopause produces excessive gonadotropic activity and it is the disturbance of balance between these two endocrine secretions that is responsible for the symptoms of the menopause. The action of oestrin in minimal effective doses is to accustom the organism to the new level of hormone activity whereas the administration of unnecessarily high doses inhibits pituitary function and merely postpones the appearance of menopausal symptoms until oestrin therapy is discontinued

**Oestrin Threshold Bleeding**

From the beginning of August to the middle of October, 1936 intermittent uterine haemorrhage was taking place. Observations by Zuckerman (1937) on the cause of uterine haemorrhage in primates have revealed the fact that there are three significant levels of oestrin utilization by the uterus. (The term 'oestrin utilization' is preferred to oestrin concentration, since two factors are concerned—the concentration of oestrin in the blood reaching the endometrium and the degree of sensitivity of the endometrium to oestrin.) These levels are (1) subthreshold, (2) threshold and (3) superthreshold (see Chart II). The superthreshold level is indicated by uterine haemorrhage occurring a week or so after the dose of oestrin is lowered or completely withdrawn. This is known as 'oestrin-withdrawal bleeding'. The threshold level is shown by intermittent bleeding occurring during the period of administration of oestrin—oestrin threshold bleeding."

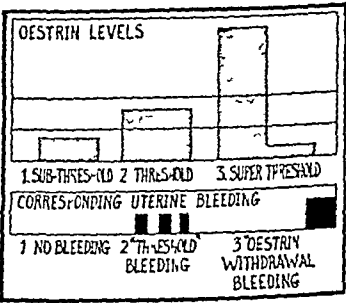


CHART II—The effect of different levels of oestrin

Zuckerman points out that this type of haemorrhage tends to occur in forty-two-day cycles. The subthreshold level fails to produce bleeding either during or after the period of administration. The haemorrhage which occurred in August could not have been oestrin-withdrawal bleeding, since the daily peroral dose of oestrone had been raised from 25,000 to 30,000 IU (2.5 to 3 mg) a fortnight previously. Nor can the haemorrhage in September be regarded as a withdrawal bleeding, for the dose had been lowered only from 30,000 to 25,000 IU. It seems probable, therefore, that this represents threshold bleeding, and it may be noted that the two main bouts of haemorrhage occurred at an interval of thirty-seven days, which approximates fairly closely to Zuckerman's forty-two day interval. It will be seen that the dose of oestrin required to produce threshold bleeding is about five times higher than that required to relieve subjective symptoms such as hot flushes.

The calibration of the threshold-bleeding level is important, since it provides information as to the physiological dose of oestrin requisite for proliferative development of the endometrium, and consequently suggests the dosage

necessary to stimulate the endometrium in cases of amenorrhoea. An attempt was therefore made to determine the level for threshold bleeding when oestrone was given by injection. Administration of 10 000 IU (1 mg) of oestrone by injection daily for a fortnight induced withdrawal bleeding after a seven day interval. Later (April 1937) a three weeks course of 7 000 IU by injection and a fortnight's course of 6 000 IU gave rise to withdrawal bleedings nine and eight days after administration was discontinued whereas a seven weeks course of 5 000 units by injection did not produce uterine haemorrhage. Thus it would appear that the intramuscular dose of oestrin necessary to produce threshold bleeding in this case is between 6 000 and 5 000 IU (0.6 and 0.5 mg) whereas the oral dose was found to be between 25 000 and 30 000 units suggesting that oestrone is about five times as effective by injection as by mouth. This agrees with the observations on the relief of subjective symptoms (frequency of hot flushes curve)—namely that 5 000 units by mouth and 1 000 units by injection diminished the number of hot flushes.

It is not suggested that 5 000 IU represents the bleeding threshold of all castrated women. It is obvious that this level depends on factors such as the degree of atrophy of the endometrium at the time the experiment is begun and the individual sensitivity of the subject's reproductive tract to oestrin. For instance in the case of another castrate a three weeks course of daily injections of 1 000 IU for fourteen days followed by 2 000 IU for seven days provoked an oestrin withdrawal bleeding five days later whereas a fortnight's course of 1 000 IU daily provoked no withdrawal haemorrhage. Her bleeding threshold would therefore appear to be between 1 000 and 2 000 IU daily.

#### Effect of Implantation of a Tablet of Crystalline Oestrone

Parkes (1938) has recently drawn attention to the fact that the duration of effect of an endocrine preparation is inversely proportional to its solubility in the body fluids. For this reason the administration of oestrone or oestradiol by injection in the form of the monobenzoate prolongs the effect by diminishing the rate of absorption from the site of injection. The pure crystalline hormone administered in solid form and not in an oily solution appears to be absorbed considerably more slowly and Deanesly and Parkes (1937) have shown that the implantation and reimplantation of a single 6 mg tablet of compressed crystalline testosterone into a series of castrated rats for ten day periods demonstrated its effectiveness over a total of 130 days.

This method has been employed in the case under discussion. The hot flushes frequency curve was allowed to reach a plateau at a fairly high level (about ten to twelve a day) and then on January 17 1938 a 14 mg (140 000 IU) tablet of compressed pure crystalline oestrone was placed beneath the skin of the abdominal wall. The hot flushes frequency curve began to descend in about a week and reached a trough at four to six daily about four weeks after implantation after which it gradually rose again reaching a level of eight to ten daily flushes about seven weeks after implantation. Assuming that absorption from the surface of the crystal occurred at a constant rate (though there is no evidence to support this assumption), and taking the period of effectiveness as four to five weeks (twenty eight to thirty five days) it may be calculated that the daily absorption corresponded to 0.4 to 0.5 mg (4 000 to 5 000 IU). An examination of Chart I

shows that the effect of the implantation on the hot flushes-frequency curve is very similar to that of daily injections of 5 000 IU (see February 1937).

The inference is that the dosage used in this case was too low and that the effect might have been more marked and prolonged if a crystal of greater weight had been implanted. Taking these facts into consideration it would appear that this new method of hormone administration represents a significant advance in the field of endocrine therapy.

#### Summary

Experiments performed on a human female castrate are described.

1 Administration of oestrin in quite small doses by mouth was effective in controlling symptoms.

2 The level of oestrone threshold bleeding was found to be between 6 000 and 5 000 IU by injection and 25 000 and 30 000 IU by mouth suggesting a peroral intramuscular ratio of 5 : 1.

3 A 14 mg tablet of crystalline oestrone was implanted subcutaneously and was effective in controlling symptoms for four or five weeks.

I should like to acknowledge my indebtedness to my colleagues in the endocrine clinic Dr A. C. Hampson and Mr H. A. Hamilton for their interest and co-operation in this experiment and to thank Dr A. S. Parkes for supplying me with the tablet of crystalline oestrone. Dr A. N. Macleith of the Organon Laboratories for generous supplies of mentormon and Messrs Paines and Byrne for supplies of oestriol (tridestrin).

#### REFERENCES

- Deanesly R. and Parkes A. S. (1937) *Proc. roy. Soc. B* 124: 279.  
Parkes A. S. (1938) *British Medical Journal* 1: 371.  
Zuckerman S. (1937) *Proc. roy. Soc. B* 123: 441.

G. Crile (*Clev. clin. Quart.* January 1938 p. 33) discusses the diagnosis and treatment of essential hypertension. There is an increase in the diastolic blood pressure changes in the optic disks and in the kidneys and a history of disability and distress. Sclerosis may become established if hypertension begins in early life. It is urged that when hypertension has reached the malignant phase the risk of operation in the hope of curing or relieving the symptoms is justified. In a series of sixty nine consecutive cases symptomatic improvement was noted in 95 per cent on discharge from hospital. Surgical treatment of essential hypertension was carried out on the adrenal sympathetic system in 213 patients; a total of 358 operations being performed. Of these 200 were coeliac ganglionectomies in 129 patients. It was found that this operation with denervation of the adrenal glands gave the most encouraging results. It does not interfere with metabolism or with the function of the digestive or genito-urinary tract. It was found that many patients were completely relieved of symptoms after operation while a large majority experienced considerable relief. Among the last 112 individual coeliac ganglionectomies there have been only two deaths. It was considered that impaired kidney function was a contraindication to the operation but the early results in two cases in which glomerulonephritis was associated with essential hypertension have led the author to believe that this may not be correct. A final judgment regarding the end results of coeliac ganglionectomy cannot yet be made but it is suggested that the symptomatic relief, the improvement in the blood pressure and the fact that many patients are able to return to their usual occupation make this form of operative treatment well worth while.

## LEUCOPENIA IN PNEUMOCOCCAL PERITONITIS TREATED BY SODIUM PENTOSE NUCLEOTIDE

BY

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The exceptionally high mortality rate of primary pneumococcal peritonitis (Rischbieth, 1910-11, 90 per cent, McCartney and Fraser, 1921-2, 65 per cent) justifies the evaluation of any ancillary methods of treatment used in surviving cases. There appears to be a general consensus of opinion to-day in favour of delaying operation until there are signs of localization of the abdominal exudate—that is, about the end of the second week of the disease in surviving cases. Horine (1935), quoting Continental surgeons, gives a 75 to 95 per cent mortality rate in cases treated by early operation, compared with up to 25 per cent in cases treated by simple drainage in the stage of localization. From time to time, however, a case occurs where the diagnosis is uncertain, and the surgeon, feeling that he may be overlooking peritonitis of appendicular origin and lacking the courage to temporize, decides to explore the right iliac fossa. In the diagnosis of such cases of peritonitis of doubtful origin much importance has been attached to the leucocyte count as indicating the type of infection present (Budde 1933, Gibson, 1930). It is considered that an unusually high leucocyte count with a high percentage of polymorphonuclear cells is distinctive of pneumococcal peritonitis.

The case about to be described, in which the initial leucocytosis was slight, presented difficulties in diagnosis so far as the origin of the peritonitis was concerned, and the history of the administration of an aperient soon after the onset of the attack was the deciding factor in favour of immediate operation.

At operation the true state of affairs—namely, an "idiopathic" general peritonitis—was disclosed, this was found to be pneumococcal. The subsequent course of the disease, which responded to treatment in a remarkable manner despite the later complication of double basal pneumonia leads me to publish this case, in the hope that the measures adopted may be useful to surgeons faced with a similar condition. For a few days, however, the case appeared to be hopeless, both clinically and especially so far as prognosis could be based on the blood picture.

### Case History

A British girl aged 10 years in good health, was seized with acute generalized abdominal pain on the night of May 22 1937. This became progressively worse during the following morning when she vomited several times. Her mother attributing her symptoms to overindulgence at a recent party administered a dose of salts. The child's condition became worse during the afternoon when her temperature rose to 102°. Several loose motions were passed, and the abdominal pain appeared to be very severe.

I first saw the child at 6.30 p.m. on May 23, and it was obvious that there was general peritonitis. Her pulse was 120, her temperature 102.8° and respirations 24 per minute. Abdominal distension was present and she was in considerable distress from pain most severe over the lower abdomen which was held almost immobile during respiration. A vivid malar flush was evident. On palpation marked

rigidity of the lower abdomen was felt, and although tenderness was general it appeared to be most definite over the right iliac fossa. The patient stated that her pain was worse in that region when the right thigh was fully extended. On rectal examination general tenderness was elicited, but no localized swelling was palpable. There was no history of any vaginal discharge. Examination showed no abnormal signs in the heart or lungs, and urinalysis was normal. A blood count resulted as follows: Red blood cells, 4,980,000 per cmm, white blood cells, 10,600 per cmm, haemoglobin 80 per cent, colour index, 0.81. The differential count read: Polymorphonuclears 80 per cent, large lymphocytes, 2 per cent, small lymphocytes, 17 per cent, hyalines, 1 per cent, eosinophils, nil. Owing to the extremely acute nature of the child's symptoms and the history of the aperient, a diagnosis of acute peritonitis of appendicular origin was made and immediate operation advised. This was performed under ether anaesthesia at 7.45 p.m. on May 23, approximately twenty-two hours after the onset of the patient's symptoms.

The abdomen was opened by Battle's incision, and a small quantity of greenish-yellow seropurulent fluid escaped on incising the peritoneum. Smears and cultures were taken for examination. The coils of small intestine were intensely congested and dark red in colour, with numerous flakes of fibrinous lymph adhering to the serous coat. The appendix was red and congested, as were the pelvic organs, and some purulent fluid was present in Douglas's pouch. Apart from sharring in the general inflammation the tubes did not appear to be particularly inflamed. The case suggested in early streptococcal peritonitis appendectomy was performed, the fluid exudate completely removed by suction and the abdomen closed without drainage. The patient was returned to bed and nursed in the Fowler position a continuous rectal drip saline with 5 per cent glucose being administered. Later the laboratory reported that the smears contained numerous pus cells with Gram positive diplococci, showing evidence of a capsule. On the following day the cultures yielded a pure growth of pneumococci; the patient had therefore been operated on in the early phase of pneumococcal peritonitis. Unfortunately type sera were not available for the treatment of the case. Blood transfusions did not appear to be indicated.

On the day following operation (May 24) the patient's condition was fair: the pulse was 128, temperature 102° and respirations 26. Abdominal distension was considerable, although the passage of the rectal tube resulted in the evacuation of fluid faeces and gas. Morphine was administered hypodermically in 1/12-grain doses whenever the patient became restless, and large hot fomentations were applied, covering the whole abdomen and flanks. The rectal drip was continued at intervals throughout, and only sips of water were given by the mouth.

Next day the patient's general condition was much worse, with a great deal of abdominal pain and distension, and several fluid motions were passed. The pulse was now 135, the temperature 103.5°, and the respirations 32. A blood count at this stage showed a sharp drop in leucocytes to the extent of a marked leucopenia, and the presence of numerous immature forms. Red blood cells, 4,850,000 per cmm, white blood cells, 2,600 per cmm, haemoglobin, 80 per cent, colour index, 0.83. The differential count gave: Polymorphonuclears, 81 per cent, large lymphocytes 5 per cent, small lymphocytes, 12 per cent, hyalines, 2 per cent, eosinophils, nil. The Schilling-Torgau ratio of immature to mature forms of polymorphonuclears was 6.5. From the general and haematological standpoints the prognosis appeared hopeless.

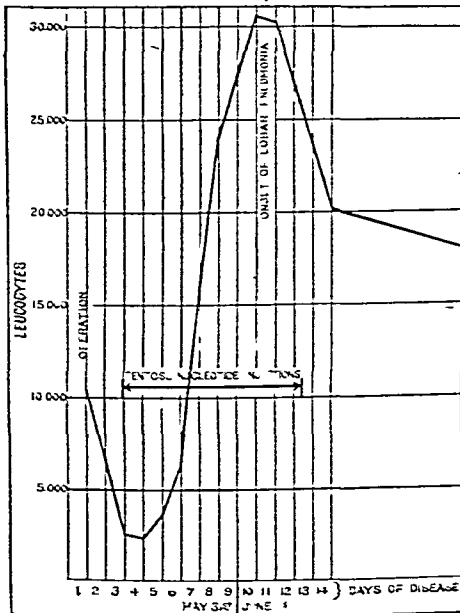
Dr J B Robinson, who confirmed the blood findings with Dr T J Hua saw the patient in consultation that day and suggested immediate treatment with a pentonucleotide preparation so as to try to induce leucocytosis. The preparation sodium pentose nucleotide (Evans, Sons, Lechar and Webb) was available and treatment was at once started, giving 2 ccm intramuscularly twice daily. This dose was gradually increased during the following days until 5 ccm

was being given twice daily by May 30. The white cell counts during this period were as follows: May 27 3-00, May 28 6-600, May 29 1-700, May 30 23-700.

On June 1 as the patient's abdominal condition was assuming a more chronic character a further rise in temperature with dyspnoea and severe cyanosis heralded the onset of pneumonic consolidation in the lower lobes of both lungs (pulse 140, temperature 104, respirations 42). At this time the leucocytes numbered 27,000 but the Schilling-Torgau count gave a 3.6 ratio. During the next week the clinical picture was one of typical pneumonia and the child's condition became very critical. Routine treatment and careful nursing with intranasal oxygen when cyanosis was severe aided her over until resolution by 10.15 started on June 6. The temperature now began to remit and increasing lower abdominal distension suggested localization of the abdominal exudate. On June 10 several ounces of thick yellow pus were discharged from the wound yielding on culture a pure growth of pneumococci. On June 12 under light ether anaesthesia a suprapubic incision was made and 14 oz of thick odourless yellow pus was evacuated with masses of fibrin. A large drain was left in.

The patient thereafter proceeded to a prolonged but steady convalescence. Pockets of pus higher in the abdomen discharged along the drainage track at intervals. Some delay in complete resolution of the pneumonic consolidation at the left base occurred but the right lung cleared up rapidly. She was discharged from hospital on July 20 and subsequently left for England with her family. She had lost 12 lb in weight during her illness but apart from emaciation was convalescing rapidly and had developed a voracious appetite. Dr Hector Cameron to whom the child was referred wrote in October 1937 that she had made great progress, had put on weight, and had regained the look of health.

Graph showing Fall in Leucocytes after Operation and the Development of Leucocytosis following Pentose Nucleotide Injections



#### Commentary

Fraser (1931) has suggested that the peritoneal area as representing a mesothelial space has peculiar properties of reaction in response to general infection. From observation of cases of so-called idiopathic peritonitis—that is cases in which no obvious source of intraperitoneal infec-

tion can be demonstrated—he believes that the peritonitis is in some respects a salutary feature affording possibilities of an immunity influence. On such a basis pneumococcal peritonitis is explained as a local reaction secondary to pneumococcal septicaemia—a condition that was undoubtedly present in this case as proved to be the subsequent development of bilateral basal pneumonia.

Recovery from primary pneumococcal peritonitis is not unusual though the mortality rate is high but recovery in any case of peritonitis where leucopenia and a return to the left mark the immediate post-operative course must be very rare. Piney (1926-7) in his *Arts and Galleries* on the importance of haematology in surgery points out that recovery rarely occurs in these processes where there is a progressive fall in the total number of leucocytes with an extreme degree of shift to the left, total absence of eosinophils and well marked lymphopenia.

In discussing cell counts in the different types of pneumonia however Fleming (1926) has stated that in Type I infection—the usual one in pneumococcal peritonitis—according to Brechot and Nove-Josseland (1931)—high leucocyte counts are common. Low leucocyte counts are found in many patients who recover despite a grave condition at the onset of the disease. He also points out that in young patients recovery may occur with moderately low counts. The remarkable response in the blood picture of this case during the course of sodium pentose nucleotide injections however coincided too closely with clinical improvement to be merely accidental.

Wilkie (1931) has advocated the pre-operative injection of *B. coli* and streptococcal vaccine combined with sodium nucleate as a useful prophylactic against peritonitis in abdominal operations where there is a risk of serious infection. While the pentose nucleotide preparations have been of special value in the treatment of agranulocytic anginas they would appear to have also a definite place in the treatment of acute surgical infections in which neutropenia results from the effect of the circulating toxins on the bone marrow.

#### REFERENCES

- Brechot A. and Nove-Josseland (1931) *J. Clin.* 38, 53.  
 Budde W. (1933) *Arch. Klin. Chir.* 178, 10.  
 Fleming J. (1926) *Quart. J. Med.* 5, 10.  
 Fraser J. (1931) *British Medical Journal* 2, 2.  
 Gibson C. L. (1930) *Am. J. Med. Sci.* 150, 77.  
 Horne C. F. (1931) *Surg.* 102, 391.  
 McCartney J. E. and Fraser J. (1931) *Br. J. Surg.* 9, 47.  
 Piney A. (1926-7) *Ibid.* 2, 9.  
 Rischbieth H. D. (1910-11) *Quart. J. Med.* 2, 10.  
 Wilkie D. P. D. (1931) *British Medical Journal* 2, 10.

H. Brücke (*Zbl. Chir.* February 12, 1913, p. 49) states that congenital local gigantism in which both skeletal and soft parts are concerned may affect from one to four or various combinations of limbs or small zones such as the finger, toe, ear or nose. Macroductivity is no very rare. The distal is more commonly affected than the proximal part of limbs and the right more often than the left side. A familial occurrence is very uncommon. The parts concerned are specially liable to be the site of pigmented naevi, lymphangiomas, lipomata and fibromata. The case is recorded of a man aged 21 mentally subnormal in whom the whole of the left leg was enlarged, the shin and calf showed a large capillary-cavernous tumour and trophic ulceration. Surgical measures—of amputation, osteotomy to shorten the femur and improve secondary static defects such as scoliosis—were it is said unlikely to be successful for the giant parts have generally an interior functional capacity and regenerative power. This patient's trophic ulceration dated from attempts to cure by sclerosing injections the varicose veins of the naevus.

## ECLAMPSIA

### A STATISTICAL REVIEW

BY

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This is an attempt to observe by statistical study certain features in the behaviour of eclampsia in the north eastern area of Scotland, an area served to a great extent by the Aberdeen Maternity Hospital. A period of five years (1932-6) was chosen so that the number and distribution of the cases would be representative enough for deductions to bear a satisfactory degree of accuracy.

#### Incidence

TABLE I—Incidence of Eclampsia According to Year

Year	Jan 1932	1933	1934	1935	Dec 1936	Total
Total confinements	722	705	759	823	812	3,851
Cases of eclampsia	10	13	14	11	13	61
Deaths	0	3	1	0	2	6

In the period under review 3,851 women were confined in the Aberdeen Maternity Hospital. Sixty one of these had eclampsia (Table I), giving an incidence rate for the hospital of 1.59 per cent. Professor R. W. Johnstone (1932) has stated that "the incidence is usually placed at 1 in 500," and for comparison it is interesting that he found that "the incidence of eclampsia in the years 1923 to 1930 in the Royal Maternity Hospital, Edinburgh, was exactly 2 per cent of all cases delivered in hospital, excluding abortions." Chamanlal Mehta (1936) records that the incidence of eclampsia in his hospital in Bombay for the years 1929 to 1934 was 0.45 per cent. He further states that "the figures of the Rotunda Hospital, Dublin, in 1930 were 0.5 per cent."

Hospital statistics, of course, give an exaggerated idea of the frequency of eclampsia. No account is taken of the great number of what I may term "extramural pregnancies." In this connexion I tried to estimate the true incidence of eclampsia in Aberdeen for one year by getting the total number of births from the registrar, but I found it impossible to arrive at the total number of cases of eclampsia occurring that year which were treated by the patient's own doctor at home or in a nursing home. Douglas and McKinlay (1935a), discussing maternal morbidity and mortality in Scotland, state "In the sample of births discussed 0.19 per cent of the cases were described as having suffered from eclampsia."

#### Seasonal Incidence

TABLE II—Seasonal Incidence of Eclampsia

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Cases of eclampsia	7	4	8	4	5	4	5	2	5	5	6	6
Deaths	1	-	-	-	-	1	1	-	1	-	1	1

It will be seen from Table II that during the months October to March (inclusive) there were thirty-six cases of eclampsia, whereas from April to September (inclusive) there were twenty-five cases—an appreciable difference of eleven cases or 18 per cent. It would appear therefore

that the onset of cold damp weather was one factor favouring an increase in the incidence of eclampsia in this part of Scotland. A somewhat similar finding has been recorded by Hues (1928).

#### Age Incidence

TABLE III—Incidence of Eclampsia According to Age

Age Period	17-20	21-25	26-30	31-35	36-40	41-47
Cases of eclampsia	6	26	8	14	4	3
Deaths	-	-	-	4	-	1

This table is significant in that forty cases (65.5 per cent) occurred up to the age of 30 years, whereas twenty-one cases (34.5 per cent) occurred after that age. But even more obvious is the fact that there was no mortality in the younger group and a very appreciable mortality (28.6 per cent) in those over 30 years of age.

#### Gravidity Incidence

TABLE IV—Incidence in Relation to Number of Pregnancies

	Number of Cases	Incidence	Mortality	
			Number	Per Cent
Primiparae	36	59.02%	2	5.5
Second Pregnancy	9	14.75%	0	0
Others	6	26.23%	4	66.66

It will be seen that 59 per cent of all the cases occurred in primiparae, and that 73.77 per cent occurred in either first or second pregnancies. The much higher mortality in multiparae might be assumed to be due to the existence of some degree of renal disease previous to the pregnancy, a fact I was unable to study accurately. These figures are not much in accord with those for Scotland as a whole. Douglas and McKinlay (1935b) say "The foregoing table shows that 83.5 per cent of all cases occurred in primigravidae, 14 per cent in two gravidae, and under 3 per cent among the higher degrees of multiparity. Among all cases of eclampsia 80 per cent were said to occur in primigravidae."

#### Type Incidence

TABLE V—Incidence in Relation to Labour

	Number of Cases	Mortality	
		Number	Per Cent
Ante partum	31	41 over 30 years of age	12.9
Post partum	26	21 15c	7.7
Both	4	-	-

Twenty of the twenty-six post-partum cases (77 per cent) occurred in women before the age of 30 years, and 65.4 per cent before 25 years of age. Of these post-partum cases 62 per cent were in primiparae. On the other hand, 50 per cent of the ante-partum cases were in women over 30. The point I wish to make from these figures is that the ante-partum and post-partum grouping of cases is artificial and should be discarded. It seems that the younger the woman and the less parous the longer does eclampsia with its latent period take to reach its acme, or the later is its onset and the milder its severity.

I would draw attention to the large proportion of post-partum cases in this series. They account for 42.6 per

cent of all the cases and it would appear that eclampsia in this area of Scotland is generally of a milder type than that seen in other parts of the country. For comparison I quote from Bourne and Williams (1932a). It will be noticed that contrary to the usually accepted belief post partum eclampsia (in London) bears a much higher risk than the other forms. I am disappointed that the age factor was not considered in that review.

### Distribution of Cases

TABLE VI—Town versus County

	Number of Case (1)	Mortality		Ante natal Supervision	
		Number (2)	Per Cent. (3)	Number (4)	Per Cent. (5)
Town	55	7	5.71	15	42.9
County	46	4	15.4	1	3.4

Of the cases of eclampsia 57 per cent were in town patients and 43 per cent in county women. The most striking features of Table VI are Groups (3) and (5) where ante natal supervision was more common the mortality rate was much lower. This is surely a strong point in favour of ante natal care. The above figures are very disappointing to the county. There is of course, no excuse for not carrying out pre natal care. We must recognize the fact however that many of the county cases had to travel between thirty and forty miles in an ambulance in a very ill state before admission to hospital. In this connexion it is interesting to note the distances travelled by those county patients who died. They are: Echt thirteen miles, Peterhead thirty four miles, Peterhead thirty four miles, Alford thirty one miles. This factor of distance is I feel sure an added barrier to recovery in the county patients. One is tempted to remark that these patients should come into hospital at an earlier date by their own choice or conveyance rather than by ambulance as the last resort yet that is the doctor's responsibility. The establishment of rural ante-natal centres would help greatly. Under the new Maternity Services (Scotland) Act 1937 the compulsory examination of the patient by her doctor at least three times before confinement is a progressive step in this direction.

### Illegitimacy

There were ten cases of eclampsia in illegitimate pregnancies—four in county and six in town cases—a total incidence of 16.4 per cent in the series. Of these ten patients two died (both county) giving a mortality rate of 20 per cent—a figure double that for eclampsia in this review as a whole. This point agrees with the following statement (Professor J. M. Munro Kerr (1933a) quoting Kinloch, Stephen and Smith). The death rate among the mothers of illegitimate children for 1918 to 1927 was also like that of their infants fully twice as great as among other mothers—namely 13.2 as against 6.0 per 1000 births. Death from albuminuria and convulsions was also distinctly higher.

### Maternal Mortality

Reference to Tables I to VI shows the relation of mortality to year, season, age, gravidity, labour and distribution respectively. The effect of illegitimacy is seen in the preceding paragraph. It will be noted that there were six deaths in sixty one recorded cases during the five years under review. This gives a total mortality rate of 9.84 per cent which compares favourably with

the figures of other hospitals—for example Hewitt (1933).

Successful in reducing maternal mortality in the Glasgow Royal Maternity Hospital in 109 cases of eclampsia or 9.1 per cent the lowest figure yet attained in this hospital as the type of case received into it is of special severity. Further Munro Kerr (1933b) states. In the Scottish returns there is no evident decline in the death rate from the causes included in this group. The figures are:

Total deaths (1925-30) 591  
Deaths from albuminuria and eclampsia 66 (11.5 per cent)

The Departmental Committee has arranged the deaths investigated as under:

Deaths Percentage Eclampsia 11.6

### Foetal Mortality

There were twenty two children stillborn in the series—a total mortality rate of 36.0 per cent including an early neo natal loss (two cases) the rate is 59.3 per cent. This figure is undoubtedly favoured to a great extent by the large number of post partum cases (42.6 per cent of total) and it is far short of the reported by Bourne and Williams (1926) as follows. The great risk to the foetus of a mother who has chronic nephritis has long been known but in toxæmia it is very much less. Some babies are lost by premature induction of labour at a date too early for their survival while others are born macerated. The total foetal death rate including neo natal loss is from 10 to 15 per cent.

### Treatment

The treatment given to the cases in this review followed very closely that which is employed in the Rotunda Hospital, Dublin (Solomons 1932). Colonic lavage, gastric lavage and venesection where blood pressure is 160 mm Hg or over were performed with the patient well under the influence of morphine. A chart was kept indicating the relation of fluid intake to output per day. Thyroid extract (B.P.) 1 grain every four hours was administered as a diuretic. Veratrine 1/2 ccm intramuscularly was in many cases used as an alternative to venesection.

The obstetric treatment given was induction of labour by rupture of the membranes near to term. When the patient was in labour it was completed as quickly as possible. Conservative measures were employed only if the patient was unduly far from term and if she responded well to treatment.

### Conclusions

1 The incidence rate of eclampsia in the Aberdeen Maternity Hospital over a period of five years (1932-6) was 1.59 per cent.

2 An appreciable difference of 18 per cent was found between the incidence of eclampsia in the winter months, October to March, and that in the summer months, April to September. This would appear to indicate that the onset of cold damp weather was one factor in causing an increase in the incidence of eclampsia in this part of Scotland.

3 73.77 per cent of cases occurred in either the first or second pregnancies.

4 The greater proportion of cases (65.5 per cent) occurred up to the age of 40 years without any difference in the mortality rate or in the severity of the cases. The mortality rate over 40 years of age was 28.6 per cent.

5 Ante partum eclampsia was as common after 30 years of age as before. The post partum type of the disease



hand, was much more common (77 per cent of cases) before the age of 30

6 There was a most striking difference between the mortality rates for the town (5.71 per cent) and the county (15.4 per cent). This was supported by the finding that only 3.84 per cent of county patients, as opposed to 42.9 per cent of town patients, received ante natal supervision

7 The total maternal mortality rate for this series was 9.84 per cent. This figure was doubled in illegitimate pregnancies

8 The foetal mortality rate, including neo-natal loss, was 39.34 per cent

I wish to record my thanks to the staff of Aberdeen Maternity Hospital for putting case-records at my disposal and to Professor Baird for his helpful suggestions

#### REFERENCES

- Bourne Alcock W and Williams, L. H. (1932a) *Recent Advances in Obstetrics and Gynaecology* 3rd ed., p. 129, Churchill, London  
 ——— (1932b) *Ibid* p. 126  
 Douglas C. G., and McKinlay, P. L. (1935a) Report on Maternal Mortality and Morbidity in Scotland, p. 105, H.M. Stationery Office, London  
 ——— (1935b) *Ibid* p. 107  
 Hewitt, quoted by Keri, J. M. M. (1933) *Maternal Mortality and Morbidity* p. 204, Livingstone, Edinburgh  
 Hulse (abstract) (1928) *J Obstet Gynaec Brit Emp* 35, 197  
 Johnstone, R. W. (1932) *Text Book of Midwifery* 6th ed., p. 226, A. and C. Black Ltd., London  
 Keri, J. M. Munro (1933a) *Maternal Mortality and Morbidity* p. 21, Livingstone, Edinburgh  
 ——— (1933b) *Ibid*, p. 43  
 Mehl, C. M. (1936) *J Obstet Gynaec Brit Emp* 43, 267  
 Solomons B. (1932) Bourne and Williams's *Recent Advances in Obstetrics and Gynaecology* 3rd ed., p. 139, Churchill, London

## SPONTANEOUS HAEMATOMYELIA

BY

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Haematomyelia occurring without any history of injury in otherwise healthy subjects is very rare, and references to it in the literature are scanty. In a larger number of cases a history of slight direct or indirect injury to the spine is obtained, and although in many of them the injury may seem negligible in comparison with the severity of the symptoms, it is not justifiable to include these with the cases of truly spontaneous haematomyelia.

#### Cases in the Literature

C. Doerr (1906-7) was able to collect only sixty-three cases in his full review of the condition, which comprised all the literature from 1808 to 1904. In thirty-three of these cases no aetiological factors were mentioned, and of the remainder a convincing explanation in the light of modern pathology was available in only three cases. One was said to be due to syphilis, and in another military aneurysms of the cord were found at necropsy. In the third case the haematomyelia followed an earlier apoplexy in a man aged 70. J. Lepine (1900), in a review of forty-five cases suggested that in many instances 'fragility' of the spinal blood vessels was present, apart from such vascular abnormalities as aneurysm or arteriosclerosis, but he is cautious in his conclusions, and makes no definite suggestions as to the nature of the fragility. Chevallier and Desoille (1930) discuss six cases of spontaneous haematomyelia in young subjects, five of which came to necropsy. In three of them aneurysmal dilatations of the

vessels of the cord were found (one is also included in the reviews of Doerr and of Lepine—that of Liouville, *Soc. de Biologie*, 1872). Of the other two cases one was in a child, aged 2, in whom an endarteritis with thrombosis of the spinal vessels was found, probably due to syphilis. The remaining case showed a generalized hyaline degeneration of the arteries of the central nervous system. Chevallier and Desoille suggest that the most frequent cause of spontaneous haematomyelia in young subjects is congenital syphilis, but apart from the child aged 2 none of the cases they discuss affords very convincing evidence of syphilitic infection. On the available evidence it seems more reasonable to follow the suggestion of Lepine and suppose that a vascular fragility in the nature of a congenital haemangioma or aneurysm is responsible for the majority of cases, at any rate in young subjects in whom there is no evidence of systemic or arterial disease. In Doerr's sixty-three cases the incidence is much higher in young subjects than in old ones, as will be seen from the following figures:

Age	0-10	1 case	Age	41-50	4 cases
	11-20	11 cases		51-60	2
	21-30	22		61-70	6
	31-40	12			

In five cases the age was not given, but 79 per cent of the above occurred under the age of 40, and, so far as can be made out from the review, most of the subjects had previously been healthy.

Haemangiomatic malformations of the spinal vessels occasionally give rise to symptoms of spinal compression, and they are not uncommonly encountered in neurosurgical clinics when laminectomy is performed. Spontaneous rupture of these haemangiomas is, however, a very rare occurrence. Cases have been recorded by Ohlmacher (1899), Lissowsky (1933), Buckley (1936), and Richardson (1937), the clinical features of which resembled the one recorded below, and in which the haemangioma was definitely demonstrated at necropsy. Richardson also describes a case due to syphilitic endarteritis of the spinal vessels.

Aneurysms of the spinal vessels are very rare, but they have been described in association with contraction of the aorta, and are occasionally found in syphilis and periarteritis nodosa. In comparison with the congenital "berry" aneurysms of the circle of Willis they are practically unknown.

#### The Clinical Syndrome of Spontaneous Haematomyelia

The onset of paraplegia is nearly always sudden, and paralysis is usually complete within a few minutes. It may accompany a slight exertion, but often there is no history of this. Severe lancinating pain, often of a 'girdle' distribution, occurs at and above the level of the lesion, and there is a more or less complete loss of sensation below the level of the haemorrhage, depending upon its size. The pain persists for several days afterwards, and if the haemorrhage extends may change in level and severity.

Apart from injury there is probably no lesion of the cord in which the symptoms develop as suddenly as in haematomyelia. In Doerr's collection of sixty-three cases the onset was sudden in fifty-five, and pain was a prominent feature in thirty-six. The paraplegia is flaccid at first, and the deep reflexes are usually lost owing to the 'spinal shock' but an extensor plantar response may sometimes be obtained. In the case to be described the plantar responses remained flexor for a considerable time.

The haemorrhage usually occurs into the central grey matter of the cord and the sensory changes may resemble those of syringomyelia in cases where the haemorrhage does not extend into the lateral and posterior columns but it is more common to find a very extensive loss of all forms of sensation in the early stages owing to the spinal shock and oedema. Sphincter control is generally lost and there is complete retention of urine and faeces.

Considerable improvement occurs in patients who survive the initial stages. The spinal shock wears off and the oedema of the cord subsides with a gradual return of sensation and motor power. In favourable cases there may be little residue beyond a segmental band of anaesthesia but if the white matter of the lateral and posterior columns has been damaged there will be a much more extensive sensory loss with spastic paraplegia and perhaps permanent loss of sphincter control. If the grey matter of the anterior horns is damaged muscular atrophies are a sequel. Death in the early stages is usually due to respiratory paralysis as a result of the upward extension of the haemorrhage involving the cervical cord and origin of the phrenic nerves. It may occur later from urinary or other sepsis complicating the paraplegia.

The case described below presents most of the typical features of spontaneous haematomyelia. Death from respiratory paralysis was averted by the use of a Drinker's respirator and the symptoms were considerably relieved by repeated lumbar puncture.

#### Case Record

A girl aged 15 was sent into the Staffordshire General Infirmary on March 19 1937 by Dr McGeough. The evening before admission she was engaged in household duties when she was seized with sudden severe pain in the back and legs. The legs rapidly became weak and she had to sit down. Soon afterwards she found that her legs were completely paralysed and numb and she was unable to pass urine. The site of greatest intensity of the pain was in the mid-dorsal region and it had a lancinating character like knife stabs shooting round to the front of the chest and abdomen.

On admission to hospital there was a complete flaccid paraplegia with loss of all sensation except deep pressure up to the fifth dorsal level. Immediately above this there was a narrow zone of hyperaesthesia above that sensation was normal. The left pupil was larger than the right but both reacted normally to light and accommodation. The cranial nerves showed no abnormality. The abdominal reflexes and all the tendon reflexes of the lower limbs were absent but the plantar responses were present and were flexor. There was complete retention of urine and the bladder was distended up to the umbilical level. No history of any recent or previous illness or of any injury or undue exertion could be obtained and before the onset of paralysis there had not been even slight symptoms referable to the nervous system. Radiographs of the dorsal and lumbar vertebral column showed no abnormality.

On the first day in hospital lumbar puncture revealed a deeply blood stained fluid under a pressure of 290 mm. There was no spinal block. The protein content of the fluid was 360 mg per 100 c.c. and the supernatant fluid was not yellow in the first specimen. The Wassermann reaction was negative in the blood and the cerebrospinal fluid. On the second day the pain in the back was still severe and the cerebrospinal fluid was still deeply blood stained and under a pressure of 220 mm. On the third day the amount of blood in the cerebrospinal fluid was less and the pressure had fallen to 200 mm but the level of sensory loss was found to be rising and some respiratory distress became evident.

On the fourth day there was complete loss of all forms of sensation below the second dorsal level with severe headache and neck rigidity suggesting that blood had reached the posterior fossa. Respiratory distress and cyanosis were much

more evident and movements of both chest wall and diaphragm were feeble. The cerebrospinal fluid pressure had fallen to 1.0 mm and the blood content was very much less. The patient was put in a Drinker's respirator and artificial respiration was kept up almost continuously for the next ten days when it was found that the sensory level had descended to the fifth dorsal segment and breathing was possible without distress or cyanosis. The cerebrospinal fluid was then slightly blood stained and yellow and was under a pressure of 120 mm. The paraplegia and complete sensory loss continued for many weeks. Some automatic bladder function appeared after about the fourth week but up to that time there was complete retention. There was likewise retention of faeces and rectal washouts had to be given.

By May 12 a good deal of recovery had taken place and the upper limit of sensory loss had descended to the ninth dorsal segment. Deep pressure and vibration sense were present below this level and pin prick and light touch could be felt but they gave rise to unpleasant sensations of the thalamic type. Temperature discrimination was poor. There was a constant feeling of pins and needles in the lower legs. Some motor power had returned to the right leg and flexion and extension of both ankles could be performed and the right knee could be flexed and extended. Both legs were very spastic and the tendon reflexes were grossly exaggerated. Knee and ankle clonus were easily started. The plantar responses had become extensor. No sphincter control had yet returned. The cerebrospinal fluid was normal.

The patient was seen again on February 12 1938. She is now able to walk although with difficulty. Both legs are very spastic with bilateral extensor responses and knee and ankle clonus. There is no appreciable impairment of any type of sensation even of segmental character and there is only an occasional slight impairment of voluntary control of the bladder. Apart from her spastic paraplegia no patient perfectly well.

The most probable explanation of the aetiology in this case is spontaneous rupture of a spinal haemangioma and from the evidence which can be obtained from the available literature it is reasonable to suppose that most cases of spontaneous haematomyelia in young subjects are due to this cause. It is possible that a few cases may be due to rupture of aneurysms but aneurysms of the spinal vessels unlike those of cerebral vessels are very rarely encountered either in the post mortem room or at operation. In older subjects syphilis or the spinal disease may be a factor in determining their rupture but there is little evidence that it is of common occurrence.

#### REFERENCES

- Buckley A C (1936) *J. nerv. ment. Dis.* 83 42  
Chevallier P and Desoille H (1930) *Rev. Med.* 27 6  
Doerr C (1906-7) *Dtsch. Z. Nerven.* 32 1  
Lepine Jean (1900) *Thèse de Lyon* No 117  
Lissowsky P (1933) *Z. ges. Neurol. Psychiat.* 128 691  
Ohlmacher A P (1899) *J. nerv. ment. Dis.* 26 395  
Richardson J C (1937) *Proc. roy. Soc. Med.* 30 1101

The first congress of the International Society of Comparative Biology will be held at Nice from June 2 to 6 (Whitson 2c). This congress was brought into being by the Medical Society of Climatologists and Health of the Mediterranean Coast with the aid of the International Association for the Study of Solar, Terrestrial and Cosmic Radiations. On June 4 and 5 the meetings will be continued in Monaco. There will be various scientific and social excursions during the congress the programme of which includes discussions on ultraviolet light, conductivity and ionization of the air and their effects on human beings, and the value of climatology in medicine and botany. Requests for a detailed programme should be addressed to the President of the Medical Society of the Mediterranean Coast Dr M. Floure Rue Verdi 24 Nice. At the end of the congress there will be an excursion to Corsica.

## Clinical Memoranda

### Intra-nasal Ionization for Hay Fever

A special clinic for the treatment of hay fever by intra-nasal zinc ionization, under my care, was organized in 1937 at the Chest Hospital, Margaret Street, W1. Owing to the publicity given to this method, and to the successful results obtained by many who had used it, a large number of patients attended. In order to assess the value of this treatment, all those treated were asked to reply to a questionnaire.

#### A STATISTICAL SURVEY

Between March and July 860 cases were treated. There were 659 replies to the questionnaire. Of those replying 20 had only one treatment and therefore will not be included in this statistical survey. The figures are therefore based on 639 adequately treated cases. Of these 639 cases 80 per cent were benefited by the treatment—namely, 9 per cent were free of all symptoms during the season, 35 per cent were greatly improved, and 46 per cent were moderately relieved.

The age incidence of the patients who came for treatment was as follows. The majority—namely, 63 per cent—were between the ages of 20 and 40 years, 20 per cent were between the ages of 40 and 60 years, 13 per cent were between the ages of 10 and 20 years, 3 per cent were over 60 years, less than 1 per cent were under the age of 10.

The statistical review reveals some interesting facts—for example although the hay fever was shown to begin under the age of 10 in 23 per cent of cases, only less than 1 per cent of patients under that age actually came to the clinic for treatment. Similarly, although in 40 per cent of cases the age of onset was between 10 and 20 years only 13 per cent of patients of that age attended the clinic for treatment. Between the ages of 20 and 40 years the proportion of patients who came for treatment was more than double the corresponding figure for the age at onset—that is whereas the symptoms were shown to begin between the ages of 20 and 40 years in 30 per cent of cases, 63 per cent of the patients treated were of that age. These figures may indicate either that the younger patients are less concerned by the symptoms, or have not the time, inclination, or material means to undertake a course of treatment.

The sexes were represented more or less equally—that is, 55 per cent male, 45 per cent female. In over 50 per cent of the cases there was a definite familial predisposition.

Slightly more than half the patients had symptoms over two months during each season. Of the remainder, the average duration of the symptoms was four to six weeks.

#### COMMENTARY

This survey has proved that impressions based on a limited experience may be fallacious. Until last year, under the impression based on a previous experience of twelve years with a limited number of cases, I recommended a pre-seasonal treatment, whereas the statistics of a much more extensive number of cases have shown that the fullest benefit is obtained when treatment is given either immediately prior to the onset or during the attack. Equally fallacious was the previously recommended strength of the ionization current—between 3 and 5 milliamperes—which I suggested in an earlier article in this *Journal*. At the clinic the best results have been obtained with patients who were treated with a current of 7 to 10 milliamperes.

The number of treatments required and the interval between treatments should vary with each case. Four treatments at weekly intervals are usually adequate, but in

many cases it may be necessary to increase the number of treatments. Where asthma supervened during the latter part of the hay fever season it was found that if the treatment for the rhinorrhoea was successful the asthma was generally relieved.

As so many patients had severe ocular symptoms an attempt was made to relieve this by ionization applied directly to the eyelids. A pad of lint saturated in a 1 per cent solution of zinc sulphate was applied to the eyelid by means of a metal electrode connected to the positive pole, the negative pole being applied to the nape of the neck. A current of 15 milliamperes was given for fifteen minutes. The results of the treatment were so satisfactory that this will be used as a routine treatment during the coming season in all cases with severe ocular irritation.

The numerous applications for treatment during the last hay fever season necessitated the creation of a special organization to deal with the large number of patients. I am indebted to our radiologist and electrotherapist Dr Orley who made it possible to treat a large number of patients simultaneously. The medical assistants were concerned only with the picking and unpacking of the nose. Thus each assistant was able to deal with fifteen to twenty patients in an hour. The actual ionization was supervised and carried out by experienced nurses, each in charge of six to eight ionization sets, so that each nurse was able to deal with twenty-five to thirty cases in an hour.

#### CONCLUSIONS

(1) Ionization treatment is definitely beneficial in a large proportion of hay fever cases.

(2) The best results are obtained by treatment given just before or at the onset of the symptoms.

(3) The strength of the current should vary between 6 and 10 milliamperes, the weaker current having proved less effective.

(4) Zinc ionization of the conjunctiva may prove to be of considerable benefit in cases of severe ocular irritation.

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### Hernia through the Right Dome of the Diaphragm

The following is a report of the case of a planter aged 28 years who was referred to hospital by two doctors with a diagnosis of chronic appendicitis. He gave a typical history of pain around the umbilicus and in the right iliac fossa. He had repeated attacks of this pain, each accompanied by a slight rise of temperature.

#### CASE RECORD

About two years ago while the patient was in England he suffered from indefinite pains in the loins. He had a series of x-ray examinations which proved negative for renal calculus. A year ago he had a cough which was rather slow in clearing up. His chest was examined radiologically, and his lungs were pronounced to be fairly normal except for a high diaphragm on the right side, the case was diagnosed as pleurisy. Apart from these two mild illnesses the patient had never suffered from any ailment worthy of note except that he sometimes complained of vague gas pains on rising in the morning. These were more marked when he was constipated.

*Examination*—There was slight tenderness in the right iliac fossa. An indefinite mass which did not move on respiration was felt passing across the abdomen at the level of the umbilicus. Permission was obtained from the patient to perform a laparotomy instead of the usual McBurney's incision. Undue dullness was present over the right lower

lobe of the lung. The heart was normal as were the temperature pulse and respiration rates.

**Operation**—The abdomen was opened through a low right paramedian incision. The liver presented in the upper part of the wound. The appendix could not be traced and the incision was enlarged. The liver was displaced downwards and the lower edge was lying below the umbilicus. It was retracted upwards and the following organs were seen: (1) Large intestine twelve to fourteen inches in length commencing on the right side of the pelvis proceeding upwards and to the left being finally invaginated into the peritoneum at the level of the body of the second lumbar vertebra and slightly on the left side. The mesenteric attachment of this visible portion of the large intestine allowed it moderate mobility. No small intestines were visible in the general peritoneal cavity. (2) The stomach which was normal in appearance. The first portion of the duodenum passed sharply backwards and was lost behind the liver. (3) The liver which was low in position and very movable. (4) The gall bladder which was normal in appearance and in position relative to the liver. (5) A knuckle of intestine which was felt and seen retroperitoneally behind the liver. The abdomen was closed.

Three weeks after the operation the patient was submitted to a thorough radiological examination. The first barium meal was given at 3 a.m. the second meal was given and the first x-ray film taken at 9 a.m. Other films were taken at later intervals. These showed the intestines protruding through an opening in the right diaphragm near the mid line and withdrawing as they became empty. The appendix is well outlined and is apparently not diseased. All the small and the majority of the large intestines are contained in a peritoneal diverticulum above the liver. Screening showed the right diaphragm in an unusually high position but capable of movement. The passage of the barium from the stomach along the coils of the small intestines was unusually rapid.

#### CONCLUSIONS

We wish to draw attention to several unusual points in this case:

1 The vague symptoms which did not give any suggestion of diaphragmatic hernia except vague gas pains. The definite and repeated reference of the pain to the right iliac fossa.

2 The occurrence of a hernia through the right dome of the diaphragm very few cases of which have been reported.

3 A degree of malrotation of the gut which permitted the whole of the small and the greater portion of the large intestines to be contained in the lesser sac of the peritoneum.

4 In spite of the gross degree of rotation of the intestines and presence of the hernia the patient lives a very active life.

Our thanks are due to Major T. J. Hallinan CBE MB BS Director of Medical Services for Jamaica for permission to publish this case and to Dr C. Parkin and his department for invaluable assistance rendered in connexion with the x-ray examination.

A. L. McFARLANE MB F.R.C.S. Ed  
W. N. DICKENSON BM BCh

The seventh International Congress of Genetics will meet in Edinburgh in 1939 probably from August 23 to 30. The organizing committee have chosen as president of the congress Dr N. I. Vavilov, vice president of the Lenin Academy of Agricultural Science and director of the Institute of Plant Industry, Leningrad and of the Institute of Genetics of the Academy of Sciences of the U.S.S.R. The secretary general is Professor F. A. E. Crew of the Institute of Animal Genetics, West Mains Road, Edinburgh 9.

## Reviews

### TWO CONSOLIDATION ACTS

*The Public Health Acts Annotated with Appendices containing the various Incorporated Statutes and Orders of the Minister of Health etc.* Eleventh edition in four volumes. Volume I. By Sir Joshua Schofield Esquire. Simes M.A. Charles E. Schofield and A. N. C. Shelley M.A. BCL. (Pp. 1426 to be published in four volumes £16 16s. On thin paper 2s. 6d. per volume extra.) London: Butterworth and Company Ltd. and Shaw and Sons Ltd. 1937.

*The Public Health Act 1936*. By H. Samuels M.A. and Philip Fores M.A. LL.B. assisted by Dennis Pugh B.A. (Pp. 570 50s.) London: Sir Isaac Pitman and Sons Ltd. 1938.

It is over sixty years since Lumley's *Public Health* first saw the light. The tenth edition was published in 1930. An eleventh edition, the first volume of which has now been issued, was as the editors explain in their preface, "the work clearly inevitable when it became known that there was a purpose to consolidate the accumulated mass of legislation on local government and public health." While it would doubtless have been formally correct to postpone action until a time when it would be possible to survey the new consolidated fabric as a completed whole, nevertheless it was felt that procedure of that kind would ill serve the needs of many users of the book who would desire its early guidance upon the Public Health Act 1936 which was due to come into operation on October 1, 1937. It was accordingly decided that the first volume of the new edition should contain this important Act accompanied only by the Local Government Act 1933, the former supplying the action of the piece and the latter setting out the stage. These two Acts, together with the annotations upon them, make up a volume of such ample size that it has not been found practicable to present comparative tables showing the extent of the numerous repeals.

In Section 101 of the new Public Health Act, which relates to the smoke nuisance, the source of the smoke is no longer as in the Act of 1875, "an open fire or furnace" but "any installation for the combustion of fuel." It is explained in the annotation to the section that the present phrase is substituted on account of the extension in the Act of the expression "smoke" to include grit and gritty particles, the mechanism for the disposal of which does not usually form part of a furnace. Section 155 of the new Act is of historic interest, inasmuch as it enshrines the proceedings set forth in an adoptive section in the Public Health Acts (Amendment) Act of 1907 for preventing the transmission of a notifiable disease by a book belonging to a public or circulating library. The definition of a drain in Section 243 is described in the annotation as simpler and less restricted than that in the Act of 1875 which had been an enigma to many. The definition of sewer on the other hand has been narrowed down and would, according to the annotation, presumably no longer include the drainage of the fens of Lincolnshire by means of canals. The diseases defined as notifiable are as in the Infectious Diseases (Notification) Act with the omission of continued and sporadic fever. The reasons ascribed in the annotation as to the effect that the former is an obsolete term and that sporadic pyrexia which includes the latter is notifiable by regulation. Among sections of medical interest in the Local Government Act 1933 are those dealing with the appointment and status of medical officers of health.

The volume is excellent in form and admirably produced throughout, as befits a classic.

*The Public Health Act, 1936* by Messrs Samuels and Fores, is a full exposition of the statute, the 347 sections being taken up serially and annotated. In preparing this large work the authors have had it principally in view to provide for the needs of their fellow-members of the legal profession in both its branches and of those who have to administer the Act. As, however, a knowledge of public health law is necessary to many others besides local government officials and lawyers, the book should be useful also to architects, surveyors, builders, public works contractors, and members of local authorities, as well as to medical officers of health and other members of the medical profession who are actively engaged in combating disease or insanitary conditions or promoting child welfare. The introductory pages include a comparative table showing by what provisions in the Public Health Acts, 1936 and 1937, the principal enactments thereby repealed are reproduced.

### PROCTOLOGY

*The Principles and Practice of Rectal Surgery* By William B. Gabriel, M.S. F.R.C.S. Second edition (Pp 364, 9 coloured plates, 162 figures 28s net) London: H. K. Lewis and Co. Ltd. 1937.

The second edition of Mr Gabriel's book is, like its predecessor, a valuable contribution to proctology. The work is based on the well-established teachings of St Mark's Hospital, and the new edition has been thoroughly revised and brought up to date, with the addition of several new chapters on surgical anatomy, injuries of the rectum, and sarcoma of the rectum. The introductory chapter on surgical anatomy includes a description of the ano-rectal musculature which gives the reader a clear and practical conception of the principles and treatment of many of the minor ano-rectal conditions, especially fistula in ano. The important details in diagnosis, preparation, treatment, and after-treatment are plainly presented, and the need for careful attention to these details is stressed and discussed. The illustrations throughout the book are excellent. The chapter on carcinoma of the rectum is outstanding, more especially with regard to spread and prognosis. The details of the operation of one-stage perineo-abdominal excision and the after-treatment are lucidly described.

This book, which is devoid of tiresome repetition and unpadding with useless and confusing text, can be strongly recommended to students, general practitioners, and surgeons as a sound practical guide to the surgery of the rectum.

### STUDY OF THE SKELETON

*Dixon's Manual of Human Osteology* Revised by E. B. Jamieson, M.D. Second edition (Pp 465, 180 figures 21s net) London: Humphrey Milford, Oxford University Press. 1937.

The second edition of this book, revised by Dr E. B. Jamieson, is an excellent memento of the late Professor Francis Dixon and one of the best testaments of his devotion to the descriptive aspect of anatomy. Written in a clear and attractive manner, with the use of the Anglo-Saxon equivalents of the Latin or Greek anatomical terms and in conformity throughout with the B.R., or Birmingham Revision nomenclature, it is certain to meet with a favourable reception. Dr Jamieson has rendered a signal service in bringing about this change in nomenclature which was much desired by the original author

and will greatly facilitate the use of the book by junior medical students, and he has accomplished the change without any material departure from the primary scheme and the easy fluent style of his predecessor. Where in conformity with recent advances in knowledge and requirements of the medical curriculum changes have been deemed necessary, certain sections have been rewritten or simplified and new illustrations, including some excellent x-ray photographs, have been introduced. Certain points in the anatomy of the soft parts have also been included, such as the relation of ligaments to bones (Dr R. Walmsley) and some general relations of the skeleton to the thoracic and abdominal viscera, which are best learned when a student is studying the bones for the first time with the help of a living model or by palpation on his own body.

In general we should like to have seen more references than are already made to applied anatomy—for example, some allusions to the diagnosis and effects of fractures and dislocations of bones, which can well be introduced at the stage when a student is first studying the bones and greatly add to the interest of his work. It is, however, a matter on which there is a difference of opinion as to the period of study in which this information should be imparted, but there are many who think the sooner the better, though they are well aware of the practical difficulties which hinder the insertion of such matter in the way of paragraphs containing "tittbits" of information in small print or in the form of footnotes. One other item which would have been very helpful is some good illustrations showing the microscopic structure of developing bone and some reference to the biochemistry of bone formation, in view of the importance of this knowledge in relation to the proper treatment of certain diseases, defects in the growth of bone, and the union of fractured bones.

The work, considered as a whole, is excellent, and it should serve not only as an introduction to the study of the skeleton but as a most valuable book of reference.

### PROGRESS IN PATHOLOGY

*Recent Advances in Pathology* By Geoffrey Hadfield, M.D. F.R.C.P. and Lawrence P. Garrod, M.D. F.R.C.P. Third edition (Pp 420, 65 figures 15s) London: J. and A. Churchill, Ltd. 1938.

The third edition of *Recent Advances in Pathology* by Professors Hadfield and Garrod, maintains the high standard of the former editions published respectively four and six years ago. The authors have adhered to their main purpose to present recently acquired knowledge of disease processes in a form useful to the student of medicine. And by student it is obvious they have had in mind the unqualified student. Bacteriology and haematology have been dealt with in other volumes of the series so that the pathology consists largely of morbid anatomy, histology, and some pathological physiology. The first chapter is new, and deals with the localization of infection and the nature and significance of bacterial allergy. The sections describing the pathology of rheumatic fever, lobar pneumonia, and glomerular nephritis have been rewritten and brought into line with the principles expounded in the first chapter. The other entirely new chapter is the third, here the potentialities of undifferentiated mesenchyme are described. The chapters on experimental cancer research have been largely rewritten, and they now include sections on chemical carcinogenesis and hereditary predisposition, and they conclude with a review of the present position of the cancer problem as a whole. The authors do not accept the 'virus theory'

of the cause of cancer in general and suggest as a working hypothesis that malignant disease is not aetiologicaly a single entity at all but a type of reaction to a variety of stimuli usually chemical and possibly sometimes microbic

The main skeleton of the book has been retained but every chapter and most sections show evidence of careful revision. To make room for the new material two chapters and five sections on subsidiary subjects and a good deal of introductory matter have been omitted. In the next edition the authors might consider so re-grouping the chapters that the deficiency diseases pernicious anaemia and the ductless glands come together. By setting their own bounds the authors have to some extent simplified their difficult task of selection and with the needs of students in mind they have retained enough introductory and explanatory matter to stress the importance of the new knowledge and to put it in its proper perspective.

It is an axiom of good teaching that the instruction should be clear, connected and as definite as possible. It is better to have a definite wrong view than a muddled one that may be right. The only serious criticism of this book is that the authors have inserted too many contradictory opinions and hypotheses without giving sufficient indication to the student which of them he should believe. The book is complementary to the textbooks of pathology; it still keeps ahead of them and serves the very useful purpose of emphasizing activity in pathology and advance in pathological knowledge.

### FITTING PEARSONIAN CURVES

*Frequency Curves and Correlation.* By W. Palin Elderton. CBE, FIA, FFA. Third edition. Pp. 271. 6 tables. 12s. 6d. net. Cambridge University Press, 1938.

We have received a copy of the new edition of Sir William Elderton's *Frequency Curves and Correlation* now published by the Cambridge University Press. The first edition of the book was a slender volume written more than thirty years ago by a young actuary under the spell of Karl Pearson's genius and hoping to interest his professional colleagues in Pearson's methods. Subsequent editions have corrected errors and incorporated improvements and extensions of the Pearsonian family of curves but follow closely the original plan. As a guide to the fitting of Pearsonian curves to statistical data the book has neither superior nor equal. The examples chosen are actuarial and the mathematical proofs of the several formulae require more knowledge of algebra than most medical readers have. But actuarial terms are clearly defined and the arithmetic of the fittings is given in such careful detail that an intelligent person who knows nothing of actuarial work and little of algebra can use the book without embarrassment. Curve fitting occupies more than half the book; the remainder deals with correlation, sampling errors and goodness of fit. Here the author competes with many writers; he is always lucid and all he says bears the stamp of wide practical experience. This section however has not the unique value of the first part. No doubt some statisticians of repute now deprecate the amount of energy devoted to fitting Pearsonian curves but those who are primarily interested in graduation—that is in the replacement of irregularities due to unsystematic errors or imperfections by a regular curve or function which can be systematically computed and does as little violence as possible to the data—will reply that no better system than Pearson's has been found.

### Notes on Books

*Myocarditis.* The St. Cyres Memorial Lectures is published by Eyre and Spottiswoode at 10s. 6d. In this book six lectures given at the National Hospital for Diseases of the Heart are reprinted. The Lectureship was founded and endowed in 1926 by the late Dorothy Viscountess St. Cyres the lecture to be given annually on myocarditis. This term was used at the time of the foundation of the lectureship to cover both inflammatory and ischaemic disease of the myocardium though to day the tendency is to reserve it for the former. However the lectures deal with both aspects though myocardial ischaemia is as one would expect the main theme. Some of these lectures were delivered several years ago and since the concern a subject which has lately developed very rapidly it is inevitable that they will be found in some respects to be out of date. One lecture on beriberi heart is perhaps of greater interest now than at the time of its delivery since it has recently been claimed that the disease is not confined to the Orient and may occur in the West, particularly in alcoholics. The hypothesis suggested to account for the cardiac condition is however challenged by more recent work.

The longer one lives the more one wonders at the vast amount of specialized knowledge which nurses nowadays are expected to acquire. From the available literature it would appear that an even higher standard is sought in the United States of America than in this country but this supposition is not backed by any positive knowledge on the writer's part. A question one would like to ask is: How many nurses in point of fact are there with their heads crammed with all this theoretical knowledge and how did the comparatively numerous other type whom one comes across not so infrequently ever manage to get their certificates for registration? These thoughts were prompted by a survey of *A Text Book of Surgical Nursing* by Dr. HENRY S. BROOKES (Kington 12s. 6d.). It seems to us after reading this book that it would carry most medical students through their final surgery examination. It is full of detail and the illustrations are excellent.

Mr. H. ST. JOHN RUMSEY, speech therapist and lecturer in speech therapy at Guy's Hospital has written a useful small book on *Clear Speech for Stage, Platform and Pulpit* (Frederick Muller 3s. 6d.). His exact purpose is important. He thus states it: 'Clear speaking by lecturers and public speakers on the platform stage and in the pulpit is rapidly becoming a lost art at the same time the elocution business is booming. This little book is intended to explain the difference between teaching recitations to children and the art of clear speaking to men and women between elocution and speech training. The aims of a good speaker should be three: to be heard to be understood to be remembered. This threefold standard is kept in mind throughout and the author's explanations, instructions and suggestions are not only practical as resulting from large experience but simple, concise and clear. It is possible to differ from him with regard to an occasional detail—as when he advocates the total abandonment of aspiration in pronouncing 'th' or seems to approve the introduction of an 'r' sound in the most open vowels—for example 'ar' for 'ah'—but if all who have to speak in public were to follow broadly his teaching life would be happier both for them and for those who have to listen.

After an interval of nearly twelve years a new edition has been published by the Oxford University Press of *Histological Technique* by H. M. CARLETON, with whose name appears that of E. H. LEACH as joint author. The methods of examination described are for normal tissues, morbid changes and the identification of parasites. We noticed the first edition very favourably on October 2, 1926. The price of this useful book is 1s. 6d.

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## VIRUS IMMUNITY

Some forty years ago Beclere, Chambon, and Menard<sup>1</sup> passively immunized heifers against vaccinia virus by the injection of serum from immunized animals and gave the first convincing proof that antibodies played a part in the mechanism of immunity to a virus. And although from time to time since then attempts have been made to minimize or deny the importance of antibodies in virus immunity, the great mass of evidence collected since the experiment of Beclere and his colleagues has stressed the importance of the humoral factor. In the case of specific resistance to bacterial infection we have a fairly clear idea of the way antibodies help to ensure the immune state. Neutralization of soluble toxins, the preparation of the bacteria for phagocytosis and intracellular destruction, or more rarely for extracellular lysis, are some of the functions of bacterial antisera which are recognized and have been extensively studied. What part does antibody play in preventing infection by a virus? In order to understand this it is necessary to bear in mind certain differences that exist between this class of infecting agent and bacteria. Apart from their smaller size viruses differ from bacteria in their cultural requirements, they are unable to multiply apart from living cells and appear to be highly specialized intracellular parasites. Some might object to the use of the term "parasite" in connexion with viruses, particularly in view of the recent work of Stanley in America and Bawden and Pirie in this country, which demonstrates to the satisfaction of most workers that some plant viruses are heavy proteins which can be obtained in a para-crystalline form. But both plant and animal viruses behave in many essential ways like living things, and, as Burnet, Keogh, and Lush<sup>2</sup> point out in their recent monograph on the immunity reactions of viruses, they can be most usefully considered as minute, organized, living micro organisms—at all events so far as the problems of immunity are concerned.

There is as yet no evidence that viruses elaborate soluble toxins, as do some bacteria, so that any antitoxic action on the part of antiviral sera does

not come into the picture. Does the antiserum prepare the virus for phagocytosis and intracellular destruction or does it so change the virus that it cannot enter the susceptible cells or multiply if it gets inside them? Beclere and his collaborators<sup>3</sup> expressed themselves in doubt as to whether the specific antibody had a direct virucidal action or whether it altered the tissue cells, rendering them resistant to infection. Quite recently Sabin<sup>4</sup> has supported the latter contention. There is no reason to suppose that the protective antibody has any direct virucidal action, and, as Bedson<sup>5</sup> has pointed out, there is as yet no convincing evidence that virus is sensitized for destruction by phagocytes or by complement. Burnet and his colleagues are satisfied, as others before them, that union between virus and protective antibody does take place, but all are agreed that this union is readily reversible, although prolonged contact may lead to its becoming firmer. In the light of our present knowledge—or lack of it—one can suppose, as Burnet and his colleagues do, that as the result of this union with antibody the virus is hindered from entering susceptible cells or from multiplying should it succeed in reaching that intracellular environment essential to its growth.

So far as the reactions of the viruses and their antisera *in vitro* are concerned there is ample evidence that these differ in no fundamental way from what has been found in the case of bacteria or any other antigen-antibody system. Apparent differences, as Merrill<sup>6</sup> has shown, are due to the small size of viruses. With such minute things a much greater number is required than in the case of bacteria to obtain that concentration of antigen necessary for the demonstration of precipitation, agglutination, or complement fixation. But given that concentration, these immunological reactions are available for work with viruses, and, as in the case of bacteria, they can be used either in the identification of viruses or in the diagnosis of disease. In connexion with their employment for the latter purpose, however, there is one point to bear in mind: the search for antibody in the blood of the infected individual is likely to be a more fruitful line of investigation than an attempt to demonstrate virus in his tissue by serological means. It is true that Burgess, Craigie, and Tulloch have demonstrated the value of a precipitin test in the diagnosis of small-pox, in which the known factor was a vaccinia antiserum and the unknown a suspension of the crusts from the suspected case, and more recently Craigie and Wishart<sup>7</sup> have

<sup>1</sup> *Ann Inst Pasteur* 1899 13 81<sup>2</sup> *Brit J exp Path* 1935 16 70<sup>3</sup> *Proc roy Soc Med* 1937 31 59<sup>4</sup> *J Immunol* 1936, 30, 169<sup>5</sup> *Med Res Council Spec Rep Ser* 1929, London, No 143<sup>6</sup> *Canad publ Hlth J* 1936, 27, 371<sup>7</sup> *Ann Inst Pasteur* 1898 12 837<sup>8</sup> *Supplement Austral J exp Biol med Sci* 1937 Sept, vol 15



applied the complement fixation test to the same end. But generally speaking the concentration of virus in virulent material from a case of virus disease will fall below the critical level necessary for its demonstration by a serological test *in vitro* whereas with a known virus suspension of adequate concentration the search for antibody in the patient's serum should present no great difficulty

### ZINC SULPHATE SPRAY FOR PREVENTION OF POLIOMYELITIS

Since the publication of a series of disasters following specific vaccination in the control of poliomyelitis the attention of workers in this field has been turned to less heroic methods but whether these are entirely devoid of risk remains to be seen. A further trial of spraying the nose with zinc sulphate solution in an attempt to provide prophylaxis against poliomyelitis has recently been made by a team of Canadian workers.<sup>1</sup> Faced with an outbreak of acute poliomyelitis of considerable magnitude in Toronto in the early weeks of August 1937 they organized, with the co-operation of the public health services a comprehensive scheme which involved the setting up of some eighty nine clinics at different hospitals in the city at which oto-rhinologists attended to carry out the treatment. A brief but intensive propaganda campaign led to an immediate response of volunteers although the number of subjects required for the initial experiment was 5 000 of ages ranging from 3 to 10 years, over 6,000 applications were received in three days the final number being 7 412. Being fully aware of the defects of an earlier experiment of this character the workers so planned the investigation that the test subjects and controls were similar in all respects in so far as it was possible to attain this in human experiments the numbers and ages were approximately the same and the conditions of exposure and risk of attack were comparable. They chose as the prophylactic zinc sulphate as being less toxic and less apt than the alternative substances so far tested to produce permanent ill effects. The first suggestion that the use of chemicals might be effective in the control of poliomyelitis came in 1935 from Armstrong and Harrison<sup>2</sup> who showed by their experiments on monkeys that the application of a 4 per cent solution of sodium alum into the nostrils tended to prevent development of the disease when active virus was afterwards instilled into the nasal passages. Of many chemical substances tested in the same way picric acid and picric alum were found to be the most active. Their findings were

confirmed in the following year by Schultz and Gebhardt<sup>3</sup> who tested forty different preparations on monkeys and came to the conclusion that zinc sulphate being of simple composition and low toxicity was most suitable for trial on human subjects moreover compared with picric alum both rate and duration of protection were rather more favourable.

The first human experiments<sup>4</sup> were carried out in the summer of 1936 in Alabama Tennessee and Mississippi where over two million subjects were sprayed with picric alum solution. The spraying was not done in a uniform manner as regards either technique or the number of applications and the absence of proper controls forbade satisfactory assessment of the results. In the Toronto investigation 1 2 to 1 ccm of 1 per cent zinc sulphate to which was added 1 per cent pontocaine and 0.5 per cent sodium chloride was sprayed by an atomizer into each nostril on two occasions at an interval of approximately twelve days. Much importance was attached to the technique of spraying so as to cover the whole area of mucous membrane and a team of oto-rhinologists carried out the work. Most of the children suffered temporary discomfort such as headache nausea and occasionally vomiting while a few complained of stiffness of the neck or severe transient pain between the eyes. A rise of temperature for a few hours was common. Reactions as a rule were more frequent and more severe in the older children. Despite these unpleasant immediate effects no less than 88 per cent. returned for the second spraying. Loss of smell was observed in just under one-quarter of the number treated. If anosmia is taken as the criterion of complete spraying of the whole area of the nasal mucosa the technique employed must be regarded as faulty. More recently Pentecost has described a method of spraying whereby he claims that anosmia follows in 100 per cent. of cases treated. He anaesthetizes the nasal mucosa with 0.25 per cent pontocaine and 0.25 per cent. ephedrine five minutes before the application of zinc sulphate solution during spraying the patient is in the dorsal recumbent position which is maintained for a full minute to secure even distribution of the solution over the mucous surfaces. The Toronto oto-rhinologists heard of Pentecost's results while the investigation was in process but decided not to change their method which to them appeared satisfactory for the majority of cases.

The final results of the spraying in affording protection against poliomyelitis were subjected to detailed analysis. It is enough to state here that

<sup>1</sup> *Canad. publ. Hlth. J.* 1937 28 523.  
<sup>2</sup> *Publ. Hlth. Rep. Wash.* 1935 50 725.

*Proc. Soc. exp. Biol. N.Y.* 1936 34 13.  
*Publ. Hlth. Rep. Wash.* 1936 51 233.  
*Canad. publ. Hlth. J.* 1937 28 725.



among the 4,713 children sprayed eleven cases of poliomyelitis occurred within thirty days from the second spraying, as one of the eleven occurred between the second and first spraying it is excluded from the analysis, making the attack rate 2.1 per 1 000 cases treated. In the control group of 6 300 children eighteen cases of poliomyelitis (or 2.8 per 1 000) occurred during the same period. The attack rates for the period seven days after the first spraying to thirty days after the second spraying were 1.8 per 1 000 in the test group and 2.9 per 1 000 in the control group. In both sets of figures the differences between the test and control groups were found to be too small to be statistically significant, and the workers were forced to the conclusion that the method of prophylaxis was ineffective in securing the desired end. While nothing has emerged on the credit side, only time can show whether something has to be registered on the debit side. The animal experiments appear to show that the action of these astringent solutions is not a direct virucidal one. It is more probable that a mechanical barrier to the passage of the virus is set up by the formation of a layer of coagulated protein or dead epithelial cells over the olfactory area. Referring to previous experiments with spraying of alum and picric acid we<sup>1</sup> suggested that the possibility of the risk of permanent damage to the nasal mucous membrane had not been fully considered. Whether the trauma to the mucous membrane is transient or may proceed to a chronic inflammatory or atrophic condition is uncertain, as experiments indicate that the protective action only lasts for seven to twelve days. Numerous applications may be found necessary in a prolonged epidemic, and the risk of permanent damage is thereby proportionately greater. Even if the method were proved effective it is unlikely that it would ever be applied in this country so long as poliomyelitis remains a comparatively uncommon disease. For the present one must conclude with regret that a preventive method which held out some hope of success has failed to fulfil its early promise.

### AN UNEXPECTED BUDGET

In pre war days, when Parliamentary debates were waged over expenditures and taxes that now seem by comparison such inadequate causes for so much strife, the issues were at least unclouded by what is nowadays a perplexing complication. The nation's accounts were strictly on a cash basis, and all current expenditure had to be met by current taxation. The war changed all that, as it did so

many other things, and though we struggled to a cash basis, or one that was very nearly a cash basis, the great rearmament scheme which was initiated last year again produced strong and acceptable arguments for meeting a special expenditure in part from borrowings and only the balance by further taxation. This year the general press indulged with some confidence in pre budget speculations that Sir John Simon's well known intellectual gifts and suspected financial skill would enable him to avoid any serious increase in direct taxation, especially in income tax. Some journals besought him to exercise his legal knowledge on the "tax-dodgers," some delivered economic homilies on the ultimate effects of taxation, but all united in suggesting that he would probably be able to avoid increasing the heavy burden of the income tax payer. The Chancellor has gone his own way, and has declined to follow the easier path so generally sign-posted for him, and whether his Budget be regarded as dull and disappointing, or honest and courageous, will depend on the political views of his critics—and perhaps on the extent of the sacrifices the Budget inflicts on them personally. The easy path is often the wrong one, but the other path is not necessarily right because it is hard. It is of course possible that other considerations have entered into the question besides those of national finance. It may be that both at home and abroad good will accrue from so clear a demonstration that the whole country, including the well-to-do no less than the poor, is determined to shirk no sacrifice that may be required to ensure peace and the preservation of the nation's liberty and rightful position in the world. But the price to be paid is a high one. The very small income tax payer escapes scot-free, though the increases in the petrol and tea duties will cost many of them a few shillings a year. Once, however, that class of taxpayer is left behind the additional 6d in the £ imposes a serious burden. To the majority of medical men it will mean practically an additional 10 per cent to the 1937-8 tax. For instance, for that year a married practitioner earning £1,000 a year would, apart from special allowances, be liable to pay £132 10s income tax, the same circumstances in 1938-9 will extract £144 12s 6d. That in itself is an unpleasant enough addition to a year's expenses without taking into account the additions to the cost of petrol used for the work of the practice and of the tea consumed by the household. True the Chancellor promises to give a small increase in the depreciation allowance, but that is a loan rather than a gift, because the more the car owner received by way of depreciation allowances the less he obtains a year or two later when he replaces his car.

<sup>1</sup> *British Medical Journal*, 1937, 1, 1126.  
Ibid. 1936, 2, 1037.

Probably the most general feeling with regard to the Budget is one of disappointment that nearly twenty years after the end of the war that was to end war, our national finances should be so swollen and personal incomes so reduced by the effort however necessary, to avoid another war or at least to be ready to meet one if it should come upon us. That necessity is of course the overriding consideration in which there must be almost universal agreement what is open to argument is the proper ratio between borrowing and taxation as the only sources from which the special expenditure can be met. The decision of the Government is a stern one and the Chancellor of the Exchequer did not exaggerate when he referred to 'the dogged determination and dauntless courage' which it would demand from the nation's taxpayers. Fortunately or unfortunately it is not possible to solve such questions by trial and error. A Government stands or falls by its major Budget decisions and no substantial alteration in the Chancellor's proposal is at all likely. It remains for citizens to shoulder the additional burdens with what grace and fortitude they can muster and hope that so notable a proof of determination will not pass unnoticed by those who have it in their power to help or hinder the cause of international peace.

### THE PLANNING OF MATERNITY HOSPITALS

An interesting paper on this subject by Dr Thomas Orr the medical officer of health for the borough of Ealing was read to the Royal Sanitary Institute on April 21. The paper included an account in some detail of the construction of the Pervale Maternity Hospital which was opened in October 1937. Dr Orr advances sound reasons for dissenting from the recommendation of the Departmental Committee on Maternal Mortality and Morbidity (1932) that new maternity accommodation should when practicable be associated with general hospitals. It is now however generally accepted that this recommendation is not in accordance with the lessons of experience and that whatever may be the case with regard to other special departments of medicine midwifery on a large scale demands a particular specialized environment which can best be provided through an independent organization. The view is generally held in the Public Health Service that in planning a maternity hospital the governing consideration must be the exclusion of known cases of infection and the prompt and effective segregation of all interim cases in which the suspicion arises that infection is developing. It is a regrettable fact that outbreaks of puerperal sepsis of limited extent, still occur from time to time in our maternity hospitals particularly though not exclusively in those whose layout does not comply with the requirements which are now generally accepted. A maternity hospital lacking isolation accommodation in detachment from the main building is an anachronism

—not merely an interesting survival but a positive peril to the lives of the women who are entrusted to its care. The complete isolation of cases of suspected infection which arise within the hospital is a comparatively simple problem the management of cases which are sent to the hospital when openly or potentially infected calls for special arrangements. All large maternity hospitals are not infrequently called upon to receive women in labour who are sent in as 'emergencies' by practitioners who may be unknown to the members of the hospital staff. Such cases must be regarded as potentially infected and therefore as sources of serious danger. These cases should be dealt with in a delivery room which is not used for the general purposes of the hospital and subsequently nursed in an observation ward until it becomes clear either that frank infection is present or that the patient has escaped the risk. Unless the most stringent precautions are taken in dealing with emergency cases the efficiency of the hospital will at times be scaled with results disastrous to the normal cases whose safety is the greatest of all its responsibilities.

### INJECTION RISKS

A fatality in Germany after an injection directs attention once again to the sterilization of syringes. What is the simplest procedure which will obviate all risk? After an injection of luminal into the thigh the patient developed gas gangrene and died; he was suffering from a serious attack of pneumonia. While the risk of death from this alone was material the assumption apparently made by Jungmichel and his colleagues<sup>1</sup> was that gas gangrene began at the site of injection and quickly caused death. The interesting point is that typical *C. welchii* were found in the 70 per cent alcohol in which the syringe was kept. An inquiry at many hospitals showed that in Germany—as probably in this country—syringes and needles are kept in alcohol as a routine in the wards being boiled between successive injections or merely washed with alcohol. As this method has the authority of a number of textbooks and was taught in many universities the medical man was finally exculpated. It is emphasized in the report that Koch as long ago as 1881 showed that anthrax spores resist alcohol and that Wankel in 1926 traced a death from gas gangrene to *C. welchii* spores which were present in the alcohol in which the syringe had been stored. Dalrymple, Champneys<sup>2</sup> and Garrod and Keynes have pointed out the danger of trusting to alcohol for disinfection in certain conditions staphylococci may survive even for several hours and spores have been found in material which had been immersed in spirit for twenty years. C. G. Coulton and G. Sykes in a review of the literature recording infection by spore bearing bacteria stress the failure of ordinary alcohol to kill spores. They found that by adding 1 per cent of various acids or alkali or a cresol derivative the destructive power for spores was

<sup>1</sup> *Monatsschrift für Geburtshilfe und Gynäkologie* 1937 55 1-5  
<sup>2</sup> *Proc. Roy. Soc. Med.* 1937 29 476  
*Brit. Med. J.* 1937 2 123  
*Pharm. J.* 1936 137 73

considerably increased Jungmichel and his colleagues state that the risk of gas-gangrene must be small, for though many deaths from gas-gangrene or tetanus following hypodermic injection are recorded, cases of this kind are very rare in the myriads of injections carried out all over the world. They mention that to every experienced hospital superintendent the occurrence of local sepsis after injection is a well-known phenomenon. They further conclude that since the spores of *Cl. welchii* occur in all garden soil and dust they must be injected very often by patients or by doctors in private practice away from the sterilization resources of a big hospital and that the spores do not germinate unless the condition of the tissue favours this. They therefore warn doctors against repeated injections at the same spot, or injection into the buttock at a place where the muscle is subject to injury in ordinary life. The question then arises, What should replace the condemned practice of storing syringes and needles in alcohol? The ideal is to autoclave every syringe and needle after every injection—an ideal unattainable in practice. The authors suggest that in hospitals syringes and needles should be autoclaved or sterilized by dry heat and each one stored, until used, in a dust-proof package. For the doctor in practice the problem is a difficult one—ordinary boiling in water is not sufficient, and the authors finally recommend boiling for ten or fifteen minutes in water containing 3 per cent soda. Most bacteriologists will agree with the general argument of the German writers, and will advise the prudent practitioner who consults them to boil the syringe and needle for a few minutes in water containing a little sodium bicarbonate, sodium hydroxide or lysol, and thoroughly to wash the syringe through with sterile water before drawing up the solution to be injected.

### RHEUMATIC HEART DISEASE AND THE VAGUS NERVE

For many years the activity of rheumatic carditis in childhood has been judged by the frequency of the pulse as much as by anything else, and a persistently high pulse rate is usually accepted as evidence of marked myocardial damage. A further refinement has been introduced by the electrocardiogram, and a prolongation of the P R interval is now held to be diagnostic of rheumatic heart disease in young subjects provided that syphilis can be ruled out. Dr J. D. Keith in a recent communication<sup>1</sup> has brought forward evidence that over-stimulation of the vagus is the cause of this change and accounts, he suggests, for the prolonged P R interval in mild cases of chorea and arthritis in which there is no clinical evidence of carditis. He found that injection of atropine definitely shortened the P R interval in these cases. Similar experiments were carried out with adrenaline, but the large doses that had to be administered did not decrease the P R interval in rheumatic children to the same extent as did atropine but the decrease was greater than that produced in control children. Another

piece of evidence that Dr Keith brings forward is the fact that abdominal pain and vomiting are not uncommon in children with rheumatic fever, and in the absence of pericarditis, pleurisy, or cardiac failure in such cases he believes the symptoms to be due to over-stimulation of the vagal nerve supply to the gastro-intestinal tract. The origin of the over-stimulation of the vagus appears to be obscure. Certain evidence points to a peripheral abnormality, and it seems more likely that the site of over-stimulation of the vagus is at the nerve-endings rather than at the centre. Dr Keith quotes experiments in which severe heart damage with areas of fibrosis in the muscle followed the administration of acetylcholine to dogs; acetylcholine, it will be remembered, is liberated at the nerve endings of the vagus when it is stimulated. Perhaps in rheumatic fever there is some derangement of the humoral mechanism for transmitting vagal impulses. Dr Keith is continuing his investigations from this point of view, and meanwhile his attractive theories will certainly receive attention from other workers.

### SPONTANEOUS HAEMATOMYELIA

In contrast to vascular lesions of the brain, vascular lesions in the spinal cord are rare. Trauma has long been accepted as the most common cause of haemorrhage into the spinal cord, but recently doubt has been cast on this view by Jefferson, who found that haemorrhage was not a feature of cases in which there was a fatal injury to the spinal cord. It appears likely that in many cases trauma acts only by precipitating a haemorrhage into the cord from vessels in which there is a congenital or acquired weakness of the walls. It is tempting to draw an analogy between such cases and those in which intracranial subarachnoid haemorrhage occurs from rupture of a "berry" aneurysm in the circle of Willis, but aneurysms of the spinal arteries are exceedingly rare. Developmental malformations of these arteries are, however, known to play a part in the production of spontaneous haematomyelia, and in one of Dr J. C. Richardson's four cases,<sup>1</sup> three of which came to necropsy, bleeding from an angiomatous malformation of a spinal artery in the lumbar region was proved to be the cause of the haemorrhage. In another of his cases there was a syphilitic lesion of the spinal vessels, one of which had ruptured. In the third case the source of the haemorrhage could not be determined. As in all vascular lesions of the nervous system the onset of symptoms is sudden, and in spontaneous haematomyelia it is unusual to find any previous history suggestive of vascular disease. This may be explained by the fact that the age incidence, as opposed to that in cerebral vascular lesions, is much lower, the greatest number falling in the third and fourth decades. In the case recorded in the present issue by Dr MacDonald Holmes (p. 946) the patient was a girl of 15 years who, following sudden severe pain in the back and legs, rapidly became paralysed in both legs and developed complete retention of urine. This severe pain, often of a girdle distribution at a segmental

level followed by rapid onset of paresis either of both legs or of arms and legs according to the level of the lesion with complete loss of all forms of sensation below that level is almost diagnostic of haemorrhage into the spinal cord. In Dr Holmes's case it must be assumed that there was haemorrhage also on the surface of the spinal cord because lumbar puncture produced a deeply blood stained cerebrospinal fluid whereas in the cases reported by Dr Richardson in which the haemorrhage was central the cerebrospinal fluid did not contain blood. The prognosis in spontaneous haematomyelia varies according to the level of the haemorrhage as well as with the cause. In Dr Holmes's case in which the sensory level was as high as the second dorsal segment respiratory distress made the outlook appear hopeless but by the use of the Drinker respirator in which the patient was kept for ten days and artificial respiration maintained until the sensory level dropped to the fifth dorsal segment and easy respiration was once more established the expected fatal outcome was averted. Although the paraplegia persisted and sensation returned only slowly the ultimate result was fairly good as eleven months later the patient was able to walk though with difficulty and bladder control was practically unimpaired. Dr Richardson's fourth case that of a man of 38 years also survived his haemorrhage into the cord examination fourteen months after the onset showing only a residual weakness and rigidity of the muscles of the arms and legs. The prognosis in cases in which a fatal outcome does not result immediately from shock or respiratory paralysis or within a few weeks from secondary infection of the urinary tract may therefore be not too bad. It is unlikely however that complete recovery of function will take place owing to gliosis of the haemorrhagic area in the cord this may result in a clinical picture not unlike that of syringomyelia.

### AIRCRAFT REGULATIONS, 1938

On July 1 next the Public Health (Aircraft) Regulations 1938 will come into operation. The document embodying these regulations defines the duties and powers of medical and other officers at aerodromes with regard to aircraft arriving or leaving also the duties of commanders of aircraft. The diseases on which special stress is laid are plague cholera yellow fever typhus and small pox. If for example an aircraft should arrive with a case of plague on board the following procedure must be observed. The aircraft is inspected and passengers and crew medically examined the sick immediately disembarked and isolated all other persons placed under surveillance or in exceptional cases isolated for a period not exceeding six days. Should the aircraft arrive at a sanitary aerodrome further measures are prescribed. Here it should be stated that a sanitary aerodrome is one provided with an organized medical service with a medical officer and at least one assistant with a place for medical inspection with either a laboratory for examination of suspected material or with equipment for taking and dispatching elsewhere such material with facilities for isolation transport and care of the sick for separate isolation of contacts

and for the carrying out of prophylactic measures with apparatus for disinfection disinfecting and deratization with a sufficient supply of wholesome drinking water and with a proper and safe system for the disposal of excreta and refuse and for the removal of waste water. Following the arrival of a plague infected aircraft at such an aerodrome bedding covered linen and other articles are cleansed of vermin and if necessary disinfected merchandise if thought liable to harbour rats or fleas is treated at the discretion of the medical officer such parts of the aircraft as may be considered infected are cleansed of vermin and if necessary disinfected and the medical officer may require the aircraft to be freed from rats. Similar courses of procedure are laid down for observation in the cases of the other diseases named. The issue of these regulations marks a further advance in the provision of health services adapted to conditions of to-day.

### HEALTH IN INDUSTRY

The object of the Industrial Health Education Society has been concisely put by its president Lord Horder in a letter to employers. Our aim is to give the workers information how they can best safeguard their health against the sicknesses and diseases which affect them in the course of their employment and on real matters generally. The annual report for 1937 includes an article reprinted from the periodical *Labour* as an exposition of the Society's work. In this the general secretary Mr James Mackenzie discusses the gigantic wastage caused by sickness and disablement with a loss every year of approximately 28 000 000 weeks to industry. Experience has shown that almost every advance in industrial methods means the birth of some new baffling health problem and that tens perhaps hundreds of workers will suffer and many even die before effective preventive measures can be evolved. In combating the scourge of occupational disease simple rules of hygiene are not always enough specialized information has to be given so that the worker may learn how he can make himself immune to the dangers of his job. Much of this health instruction is provided by the Industrial Health Education Society. During the fourteen years of its existence over 6000 health talks have been given. After each lecture individual health problems arising out of the employment are discussed and the best known methods of combating the particular perils of certain industries are dealt with. The office is at B.M.A. House Tavistock Square W.C.1.

Professor F. R. Frazer will deliver the Croonian Lectures before the Royal College of Physicians of London Pall Mall East S.W. on May 24 25 and 26 at 5 p.m. His subject is "The Clinical Aspects of the Transmission of the Effects of Nervous Impulses by Acetylcholine".

The Earl of Athlone Chancellor of the University of London will open the new Westminster Hospital School of Medicine on Thursday May 12 at 3 p.m.

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## THE TREATMENT OF OTITIS EXTERNA

BY

F C W. CAPPS, F R C S

### Classification

The affections of the auricle and surrounding skin, external meatus, and outer surface of the drumhead which are included in the term "otitis externa" may be grouped (1) according to the infecting agent, (2) according to clinical type. Under the former heading the staphylococci, *albus* and especially *aureus* are common offenders, aided in the seborrhoeic subject by the acne bacillus and pityrosporon. The haemolytic streptococcus comes a good second. In the former the pilo-sebaceous follicles are usually attacked, and may give rise to a boil, in the latter the deeper layers of the epidermis are infected, resulting in vesicles, fissures, ulceration, diffuse cellulitis, or erysipelas. Infections that occur more rarely are due to various moulds (otomycosis), the Klebs-Loeffler bacillus (croupous otitis externa), the tubercle bacillus, and other organisms. Clinically we have

#### (1) Chronic conditions

Chronic seborrhoeic or "eczematous" dermatitis  
Otomycosis

#### (2) Subacute conditions or chronic conditions liable to exacerbations

Acute seborrhoeic dermatitis  
Acute (impetiginous) dermatitis  
Recurrent furunculosis

#### (3) Acute conditions

Acute diffuse otitis externa (usually a meatitis)  
Acute circumscribed otitis externa & furuncle  
Erysipelas  
Acute haemorrhagic otitis externa  
Perichondritis

### Contributory Causes

These may be constitutional—debilitated or depressed states (test the urine), or local—the seborrhoeic scalp, the irritating and infecting discharge from an otitis media, impacted wax. Finally, trauma may play a part; either self-inflicted by scratching or the use of matchsticks etc., or due to careless or septic instrumentation.

Although I have put the contributory causes last, they are very important where treatment is concerned. Patients must be warned against scratching and poking their ears, and in the case of babies and young children this may be prevented by splinting the elbows. It goes without saying also that any practitioner who examines an ear or uses instruments therein should do so only under direct vision and with aseptic precautions. Local measures alone will not clear up a succession of boils in a poorly nourished or overworked body needing a holiday, and to treat an intertrigo or eczematous meatitis, which are a local spread, and leave the seborrhoeic scalp untreated is a waste of time.

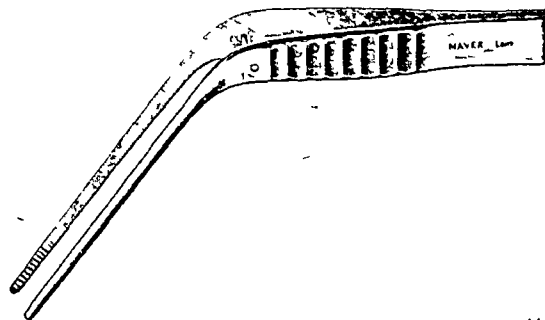
### Examination

Before any treatment is undertaken a careful examination must be made of the affected parts, and if possible the drumhead should be inspected. For this

purpose a few instruments are essential. An electrical self-illuminating auriscope is a very nice piece of apparatus for the inspection of a drumhead at the bottom of an unobstructed passage, but it is not easy to dry a meatus, remove debris, or insert therapeutic applications through it, and for these manoeuvres (which must be done under direct vision) a head mirror, or head lamp and a set of different-sized specula are much better. I prefer the type of speculum shown in the illustration, and usually



known as Keen's pattern, but everyone will have his particular liking in this respect, the only specification being lightness, moderate size, smooth rounding of the narrow or meatal end, and an easy grip for finger and thumb at the larger end. Add to these an aural syringe, a pair of light angled forceps (Keen's pattern, as illustrated, is satis-



factory), one or two fine wool-carriers, and possibly a fine, light, and not sharp right-angled hook for loosening and pulling out debris. Stainless steel, when available, is an economy in the long run. The syringe should be of all-metal type, and should take to pieces for cleaning and greasing. The nozzle should be fine, tapering, and smooth-ended not bulbous, a "bayonet" fitting allows of its easy and rapid removal for filling the syringe. As the syringe must be controlled by one hand there must be finger rings at the proximal end, and it is wise to choose a syringe of a size that will suit your "span" when full. A word of warning here—always see that the component parts are firmly fitted together before use, and tip the nozzle up and empty the syringe of air. Nothing is more horrible, and to a child even frightening, than a blast of bubbles in the meatus.

When syringing, gently hold the pinna out and slightly upwards with the finger and thumb of the disengaged hand. Carefully cleanse out the auricle first and then approach the meatus cautiously especially in children. Insert the nozzle and direct the stream upwards and backwards unless there is an obvious boil or tender swelling in that situation. In this direction a fair amount of force can safely be applied without causing pain at the drumhead, and most debris will be washed out by the return flow. For drying, the best quality fine white wool is advisable. Handiest of all are the small cardboard packets of sterilized wool used by dentists from which as much as is needed can be pulled through a small hole. The wool may be used with forceps as thin pludgets or firm

rolled in a thin flat piece on to an applicator so as to leave the end soft and fluffy. Sometimes when the deeper parts of the meatus or drumhead are difficult to see the swelling of the walls may be reduced by the insertion of pledgets soaked in cocaine 5 per cent and adrenaline 1 in 1 000 in equal parts.

### Differential Diagnosis

So important is the distinction between an otitis externa and an otitis media with mastoiditis that no apology is made for including here three cardinal points of difference. It should be pointed out that in very painful cases it may even be necessary to give an anaesthetic for diagnostic examination.

#### *Post-auricular Oedema due to Furuncul or other Acute Inflammation of External Parts*

1 Drum membrane usually intact and may be normal or only slightly congested

2 Pressure upon tragus and manipulation of auricle causing movement of fibro-cartilaginous meatus usually result in severe pain

3 Pressure over the mastoid process just behind the post-auricular sulcus and opposite the orifice of the meatus will if so directed as not to disturb the position of the auricle cause absolutely no pain. The oedematous tissues pit deeply under the compressing finger after which no bone tenderness can be elicited. Pressure at exactly the same point but directed slightly forwards so as to disturb the auricle causes severe pain.

#### *Post-auricular Swelling due to Acute Suppurative Mastoiditis*

1 Drum membrane usually perforated and always shows some of the cardinal signs of suppurative otitis media

2 Pressure upon tragus and manipulation or movement of fibro-cartilaginous canal cause absolutely no pain

3 Firm pressure upon the mastoid process just behind the post-auricular sulcus and opposite the orifice of the meatus usually elicits deep-seated bone tenderness.

### Treatment

This is largely a question of cleansing, drying the application of suitable salves, the treatment of pain and the prevention of reinfection. Now and again but very rarely, the knife is needed and in certain cases specific treatment is indicated. So far as general treatment goes it is probably wise to make it a rule to treat all bad cases of boils or otitis externa whether febrile or not in bed preferably in an institution where all facilities are available. Owing to the tightness of the integument the pain of a bad boil in this region can be maddening—far worse even than a mastoiditis—and the debilitation of the patient is in proportion. The diet should be light and plain and alcohol should be avoided in the acute stage as the throbbing set up by even a small quantity may be intense. On general principles an initial purge is advisable. Plenty of fresh fruit and fruit drinks may be given.

In the treatment of pain there is very little to touch aspirin for inducing sleep aspirin should be followed some fifteen minutes later by a hypnotic. Local and specific treatment will be discussed under each type separately.

For cleansing plain boiled warm water a solution of bicarbonate of soda—a drachm to the pint (especially where waxy debris has to be cleared)—boric lotion or dettol 1 in 20 are all suitable. Dry scabs and scaldiness may be removed with the aid of spirit soap. Peroxide either as drops or lotion should never be used. There is no particular virtue in it and the irithness merely makes the epidermis sodden and tends to spread the

infection. No patient with active or potential otitis externa should allow water to get into the ears except—and that not more frequently than is absolutely necessary—for cleansing purposes after which they should be thoroughly dried and may even be desiccated by swabs dipped in 95 per cent alcohol.

### Chronic Seborrhoeic Dermatitis

This is common in adults and takes either the form of dry scaldiness which when shed leaves a glazed sensitive surface or of thickening and desquamation with infection and fissuring and blocking of the meatus with debris.

The scalp should first be treated with frequent spirit soap shampoos followed by thorough rinsing and this should be continued at regular intervals after the ears have returned to normal. At the same time the meatuses should be thoroughly cleansed of debris if possible without syringing but better with it if attempts at dry removal are likely to lead to trauma. The skin of the meatus and any affected area on the pinna should then be smeared with a thin film of ung. hydrarg. oxid. flav. or zinc oxid. cream. The first cleansing should be done and the first one or two applications made by the practitioner himself. He can then train the patient to smear in the ointment on a wool-headed matchstick. To make this strike the match and then blow it out. A piece of fine wool is then firmly rolled around the blackened end between the finger and thumb so as to leave plenty of wool over the end. The patient should learn to introduce the applicator with a gentle rotatory movement. When well an occasional smear in both meatuses should be a lifelong routine along with the treatment of the scalp.

### Otomycosis

This is not very common in temperate or cold climates as the growth of the fungus often an *aspergillus* is favoured by warmth and moisture. The mouldy appearance in the meatus is unmistakable. Otomycosis is relatively harmless and painless unless the mycelia invade deeply to the bone or through the outer layers of the tympanic membrane. It may set up an inflammation which leads to secondary infection. The essential treatment is to avoid water and all oily or fatty applications. Even glycerin favours its growth. Spirit is the only application necessary. As much of the fungus as possible should be carefully swabbed away and the patient given 95 per cent alcohol drops to instil twice daily.

### Acute Seborrhoeic Dermatitis

This is merely a further stage of the chronic condition with much soreness and fissuring which may lead to secondary infection and boils or cellulitis. All fissures of the meatus, pinna and post-aural sulcus should be cleaned and painted with a strong solution of silver nitrate or cauterized with a silver nitrate pencil. Otherwise the treatment is mainly as above. Unguentum calamine or the lotion is useful for the pinna and surrounding skin. If there is much excitation in the meatus an ointment containing 10 grains of salicylic acid to the ounce may be used and in very severe cases one or two skin doses of tr. rays may be tried.

### Acute (Impetiginous) Dermatitis

This is most often seen in children and may be associated with an otorrhoea or dry scalp. Small pus-filled form which burst and become covered with yellow crusts.

There is often an associated lymphadenitis. It should be treated as an impetigo, and risk of contagion avoided. The hair should be cut well back from the ear or combed up and held back by a band. The crusts should be bathed away frequently and the raw surfaces covered with a smear of one of the zinc ointments mentioned above or ung. hydrarg. ammon. dil. It is a good plan to cover with a protective dressing at night to prevent scratching and the infection of other areas via the pillow. Any cause of reinfection such as pediculosis or otitis media must be treated. If there is much discharge from the meatus a wool swab may be loosely inserted, but all parts with which it comes in contact should be well greased to prevent it sticking and pulling away the inflamed epidermis.

### Furunculosis

Boils in the ear may be single or multiple, and often a single boil will just have cleared up, only to be followed by another owing to the infection of a neighbouring hair or sebaceous follicle by the discharge from the first. The prevention of reinfection is therefore of prime importance. This may be accomplished (1) by protecting the rest of the meatus, (2) by specific anti-staphylococcal treatment. The meatus should be cleansed, dried, and mopped out with 95 per cent spirit. In all stages—irritation, swelling, and necrosis—I have found that the best treatment thereafter is to pack the meatus fairly tightly with a wick of half-inch ribbon gauze thickly impregnated with a paste composed of exsiccated magnesium sulphate, 2 parts, and glycerin with  $2\frac{1}{2}$  per cent carbolic acid, 1 part, by weight. This should be changed once or twice in the twenty-four hours, the meatus being carefully cleansed each time, and the process continued as long as there is any swelling or a discharging fistula. The paste, being very hygroscopic, reduces the oedema and congestion, and the wick, by separating the opposing walls of the meatus, prevents cross-infection. If this treatment is continued for long the skin at the entrance to the meatus and over the lobe may become sore and cracked. This is best avoided by smearing with zinc ointment before inserting the wick.

Heat is comforting, and may be applied whether a wick has been inserted or not, either as poultices, a rubber hot-water bottle, an electric eye-pad, or as short-wave diathermy if available. The extravagant claims made for the last-named hardly appear to be substantiated by personal experience, but the comfort of the application is undoubted. As soon as the boil has aborted or has run its course, the core is expelled, and the fistula scabbed over, the meatus should be cleansed with spirit and smeared with a protective coating of ung. hydrarg. oxid. flav., which should be repeated nightly for some days.

The ordinary boil is much better not incised, but now and again a boil will burrow deeply and give rise to a meatal abscess, and then incision may be necessary. If there is no doubt as to the diagnosis, cutting is best done with a small curved bistoury or a furuncle knife through the meatus. Occasionally there may be a doubt as to whether a fluctuating post-auricular swelling is a meatal abscess, suppurating glands, or a subperiosteal abscess from a mastoid. Then it may be necessary to open for diagnostic purposes behind the auricle to see whether the collection is merely in the superficial tissues or whether bone has been bared.

In all staphylococcal infections specific treatment should be tried at the same time as local measures. Collosol

manganese intramuscularly or by mouth, stannous oxide by mouth, yeast, etc., are all successful in some cases, none in all. In recurrent cases vaccines, either stock or autogenous, should certainly be tried, but in my experience they are of no use unless the dose is carried much higher than usually recommended—up to 2,000 or 3,000 millions of the ordinary vaccine, for example.

### Acute Diffuse Otitis Externa

This may be staphylococcal, but it is more commonly streptococcal. It is characterized by uniform swelling of all the walls and great narrowing of the meatus. It may not be possible to insert a wick, but glycerin and carbolic (2 per cent) drops can usually be instilled, and heat should be applied. If a haemolytic streptococcus is the causative organism, prontosil or its derivatives should be given.

### Erysipelas

This has the characteristic raised edge at the margin of the inflamed area, but may be missed unless the patient is examined in a good light, preferably daylight. The danger is that the exquisite tenderness may lead to its being mistaken for an acute mastoiditis. Until quite recently it was a safe bet that if you had the infection over one ear it was certain to reach the other, and it might travel the circumference of the head anything up to three times before dying out, no treatment, local or general, being of avail. Prontosil has definitely changed all this. Probably the best local application is calamine lotion. The infection very often starts from a fissure, this should always be looked for, and should be dealt with after the acute infection has subsided.

### Acute Haemorrhagic Otitis Externa

This fortunately is rare, but it is sometimes seen in epidemics of influenza. The walls of the meatus and outer surface of the drumhead are covered with haemorrhagic blebs, and the differentiation from acute otitis media may be difficult. Cocaine and adrenaline pledgets will often help to determine the outlines of the drum, and mobility of the latter on self-inflation is against middle-ear infection. Treatment is by glycerin and carbolic drops, dry heat, and prontosil.

### Perichondritis

This usually arises as a result of exposure and infection of the cartilage of the pinna or meatus by operation or injury. It is a serious complication, as the cartilage offers no resistance and the resulting deformity may be severe. Abscesses must be opened and drained, but precipitate surgery is best avoided. It is unwise to incise the cartilage owing to the risk of this complication. A "cauliflower ear" is usually a better sight than the results of perichondritis.

S. Miglioli (*Ann. Ist. Carlo Forlanini*, November, 1937, p. 60) states that injection of alcohol into the intercostal nerves in thoracic herpes zoster was suggested by E. Morelli in 1926, but was not carried out until 1936 by Buttafari and Cerulli. Miglioli reports the case of a girl, aged 17, under treatment for pulmonary tuberculosis by bilateral artificial pneumothorax, who developed herpes zoster over the area corresponding to the sixth to the eighth ribs on the left side accompanied by considerable pain. After injection of alcohol into the intercostal nerves for four days the pain completely disappeared.

## VULVO-VAGINITIS IN CHILDREN

### CLINICAL AND ADMINISTRATIVE ASPECTS

The following abridged account of vulvo-vaginitis in children is extracted from a report drawn up by a Departmental Committee appointed by Sir Frederick Menzies Medical Officer of Health to the County of London to investigate the clinical aspects of the morbid conditions included under the designation vulvo-vaginitis and to consider the means necessary to prevent the spread of the disease in hospitals' nurseries and schools in which children may be resident. The full text of the article has been issued for publication under the authority of the Hospitals and Medical Services Committee of the London County Council. The members of the Departmental Committee who are its joint authors are

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The term vulvo-vaginitis includes a variety of conditions varying greatly in their clinical manifestation in the causal organism in infectivity and in the readiness with which they yield to treatment. Characteristically a vaginal discharge is found and may be profuse but frequently only a soreness and irritation of the vulva are present. The vulva and introitus are found to be reddened and possibly oedematous. There may be enlargement of the inguinal glands. Frequency of micturition is of common occurrence. Abdominal pain is not common.

The condition may develop as a complication of a general infection (for example chicken pox or pneumonia) and there may be septic foci elsewhere in the body. A history of masturbation is not uncommon.

### CLASSIFICATION

The best classification of vulvo-vaginitis for practical purposes is considered to be (A) gonococcal and (B) non gonococcal. It is true that some serious cases of infection by the streptococcus or other organisms may be as intractable and as difficult to treat as those due to the gonococcus but gonococcal vulvo-vaginitis stands out as a recognized clinical entity and presents peculiar problems of its own.

The London County Council has had a wide opportunity for gauging the relative frequency of the two varieties of vulvo-vaginitis as it has for over two years maintained a very careful watch for the occurrence of this disease among the many thousands of children sick and healthy under its care. The results for that period may be summarized as follows.

Hospital or School	Cases of Vulvo-vaginitis	Gonococcal Cases
20 general hospitals	523	13
20 special hospitals (including children's, tuberculosis, and fevers)	24	13
20 residential schools and homes	50	—
15 nurseries for healthy infants	17	—
	614	32

At the Hospital for Sick Children Dr. Nabarro divided a series of 1,219 cases into 249 gonococcal, 949 definitely non gonococcal and 21 doubtful. From our patients only the following figures were obtained.

	Total	Positives	Negatives
1930	134	14	120
1931	123	12	111
1932	113	19	94
1933	125	10	115
1934	131	11	120
1935	116	17	99
1936	153	24	129
	955	117	838

It is obvious that these series were to a certain extent selected. The Council's proportion of positives was too low because known gonococcal cases would be diverted at once to St. Margaret's Hospital and would never enter a general hospital. The Great Ormond Street figures are too high as the hospital has a V.D. clinic to which known cases are naturally sent. This is proved by an analysis of the gonococcal cases for 1937. Out of 16 positive cases 9 came from other hospitals, 3 from child welfare centres, 4 from casualty department or outpatients. The fact emerges however that vulvo-vaginitis is only in a small minority of cases gonococcal, a point which is perhaps not widely appreciated.

The classification between gonococcal and non gonococcal is necessary for administrative and clinical purposes and in order to form a clear picture of the disease vulvo-vaginitis but it may be pointed out that no useful purpose is served by emphasizing it to the lay public especially to parents. Vulvo-vaginitis in children is only very rarely a venereal disease. The gonorrhoeal infections of children are in the vast majority of cases non sexual in origin and it is really an accident whether the causal organism of vulvo-vaginitis is a gonococcus, a streptococcus, a *B. coli* or any other.

### NON-GONOCOCCAL VULVO-VAGINITIS

This disease causes the gravest anxiety to all responsible for the health of children owing to its great infectivity, resistance to treatment and the horror it excites in the public mind. Its incidence is very difficult to gauge as it is of course not notifiable and there is a very motive against publicity when outbreaks occur. The number of cases of non gonococcal vulvo-vaginitis in children under the age of 14 coming under hospital or clinic treatment in London in 1936 may be estimated as follows.

St. Margaret's Hospital	22
Hospital for Sick Children, Great Ormond Street	24
London Lock Hospital	14
Children's Medical Home, Waddon	—
V.D. Clinic, Lambeth Hospital	34
	100

This list inevitably excludes cases treated in private but it does include an unknown number from the Home Counties.



### Mode of Infection

Infection with the gonococcus in female children is usually accidental and is a result of contamination of the vulva with such infected fomites as towel sponge, bed linen, or lavatory seat. The high incidence of infection in the parents of these children points strongly to this mode of transmission especially in poorer homes where accommodation is inadequate. This fact emphasizes the need to make every effort, through venereal clinics and other suitable channels, to impress adult sufferers from gonorrhoea with the necessity for protecting from infection any children with whom they come in contact. The contacts of known cases of gonorrhoeal vulvo-vaginitis (for example parents and sisters) should always be examined to exclude infection.

Direct infection by assault does occur, but it is not a common cause in this country. In institutions the infection may be spread by bed-pans, bed-pan covers, lavatory seats, towels, flannels or sponges, nurses' aprons, clinical thermometers (if rectal temperatures are taken), or enema nozzles, hence rigid precautions must be taken.

The vulva of a child is relatively unprotected until the labia majora develop and so is more exposed to these indirect modes of infection than in the adult. The mucous membrane too is thin and less resistant to infection. After the first few weeks of life the vaginal secretion is scanty and alkaline. With the approach of puberty the secretion increases and becomes strongly acid and bactericidal, and Doderlein's bacillus is found in large numbers in normal smears. This acid reaction probably explains the lower incidence of infection in young babies and girls over 10 years of age.

The inflammation and oedema of the urethral meatus and hymen are very typical of gonococcal infection. After careful swabbing of the vulva a probe passed into the urethra shows pus in the majority of cases. The pus spreading back over the perineum may cause a rectal infection. The anus is red and moist. There is sometimes mucus on the faeces. The first rectal test may be negative, but if the vaginal discharge does not clear the tests should be repeated at intervals otherwise an infection may be missed and then re-infection from the rectum may occur later.

The exact limits of the incubation period are difficult to determine. In the great majority of cases it is three to four days, but may in rare instances be longer.

### Symptoms and Clinical Signs

There may be a complaint of vaginal discharge with burning or irritation of the vulva in young children, discomfort on walking or frequency of and pain on micturition. The lack of symptoms is often surprising, particularly in older children, and the mother brings the child to the doctor because the discharge is found on the clothing.

In a chronic case there is a slight inflammation of the vulva and vagina with usually a scanty discharge which may be thin purulent or muco-purulent. The mucous membrane of the vulva is injected, particularly in the deep clefts between hymen and labia minora and just within the urethral meatus. The hymen is frequently torn and stretched. The cervix should be examined in these cases.

In an acute case the diagnosis can readily be made on clinical signs alone. The vulva is hyperemic or acutely inflamed and bathed in pus which oozes from the vagina with an expulsive effort on the part of the child. The pus may be thick or thin, yellow or greenish. It is rarely blood-stained and never so offensive as in the case with foreign bodies in the vagina. In neglected cases there is excoriation of the labia majora, groins, and inner surfaces of thighs, with adherent crusts of dried pus.

The closest co-operation between the clinician and the bacteriologist is necessary especially in doubtful cases. At the same time too exclusive dependence on bacteriological findings is to be deprecated. In acute cases the clinical appearances of gonorrhoea should leave little doubt as to the diagnosis.

### Collection of Material for Bacteriological Diagnosis

The manner in which material for bacteriological examination is collected is of great importance. Many failures to make a correct diagnosis are due to the fact that bacteriologists are supplied with material taken by unsuitable methods or by unskilled workers. Swabs should be taken only by a clinician expert at the task and never delegated to a member of the nursing staff unless she has been specially instructed. No attempt should be made to work single handed. At least one assistant is essential to hold the child still in the correct position.

The child is placed in the dorsal position with the knees drawn up and the thighs separated as far as possible without hurting the child, the external genitalia being exposed in a good light. Any superficial discharge is removed with wool and the labia separated with gloved thumb and forefinger of the left hand.

Two swabs are taken with wooden or wire applicators round which a thin layer of good quality sterilized cotton wool is firmly wrapped. The probe must be passed well into the vagina and withdrawn with some discharge on it. The first swab is used to make a thin even smear on a clean glass slide, the film is allowed to dry in air and is then preferably fixed by being passed through a gas or spirit flame several times after which it is wrapped in paper and placed in the special slide box supplied for the purpose. Smears should never be packed while still moist. The other swab is used for inoculation of the culture medium, which may be done at the bedside or the swab may be transported as quickly as possible to the nearest laboratory.

Smears and swabs for culture should be taken from these sites in proved gonococcal cases or in patients suspected of past or present gonococcal infection or where there is any other special indication. Swabs may be taken from the urethra in a manner similar to vaginal swabs. The child should not have passed urine within an hour, and preferably longer, of being examined. Swabs of rectal mucus or muco-pus should be examined where there is clinical evidence or suspicion of rectal infection.

### Identification of Infecting Micro-organism

It is generally agreed that for primary diagnosis both smears and cultures should be examined wherever possible. This is particularly essential in the case of suspected gonococcal infections, since (a) Gram negative diplococci other than the gonococcus are occasionally present in the vagina and (b) a diagnosis of gonococcal infection on smear alone will not be accepted in any medico-legal proceedings. However, on finding typical Gram negative diplococci in the smear of a purulent vaginal discharge a preliminary report should be sent (or telephoned) in some such form as this: 'Gram negative intracellular and/or extracellular diplococci morphologically resembling gonococci are present in smear'. It is helpful if on receipt of this preliminary report, the clinician sends a repeat smear and swab for examination at the laboratory. A further report is sent on the result of the cultural examinations.

Most workers seem agreed that the complement fixation test is usually negative in the early stages of a gonococcal infection and that therefore it plays little part in the early diagnosis of vulvo-vaginitis in children. The evidence as to its value in the later stages of infection is still rather conflicting. It is certain however that the test should not be regarded as an alternative to careful examination of films and cultures from the mucous membranes especially in the early stages of an inflammation. Definite cases of gonococcal vulvo-vaginitis may have a negative complement fixation test throughout the attack.

### Complications

Cervicitis is one of the common causes of recurrence, and it is possible that it is present in the majority of cases in the early stages. The cervix should not be examined as a routine but only in those cases which fail to clear up with the usual methods of treatment or which relapse after treatment ceases.

Ascending infection through the internal os causing an endometritis salpingitis or pelvic peritonitis occurs rarely. Although urethritis is so usual, cystitis is a very rare complication. Cases of gonococcal conjunctivitis and iritis are very uncommon. They have never occurred as a complication in the series of cases at the Children's Medical Home, Waddon. There have been four cases of purulent conjunctivitis but gonococci have not been found.

When dealing with infants it should be remembered that vulvo-vaginitis may occur concurrently with gonococcal ophthalmia but not as a rule during the first few weeks of life since at this period the vaginal epithelium is of the adult type and the secretion highly acid—conditions inimical to infection with the gonococcus. Later a vaginitis in a child with ophthalmia may be overlooked as the eye condition is more serious and attention is focused on this. Ophthalmia as a secondary complication of gonococcal vulvo-vaginitis is a very rare occurrence.

### General Treatment

**General Nursing Instructions.**—The careful nursing of all children collected in hospitals and in institutions is of the highest importance in the prevention of vulvo-vaginitis. As regards the nursing of children affected with any form of vulvo-vaginitis the following measures are recommended: (a) Certified nurses only shall be employed in the care of affected children until three negative swabs have been obtained in a period of not less than a week and the condition is considered to be non-gonococcal on clinical grounds. Nurses employed in the care of affected children must not while so employed attend to unaffected children but they may with suitable precautions attend to adult patients.\* (b) Every affected child should have a separate bed pan or chamber unless provision is available for efficient sterilization of such utensils after use. (c) Special attention should be paid to the clothing of infected children. When the discharge is profuse a light pad or non-irritating material is advisable so as to minimize friction. All infected clothing should be soaked in a suitable disinfectant before being sent to the laundry.

**General Routine.**—This should include all procedures likely to help in "building up" the resistance of the patient and may in certain cases be the most important factor in arresting the infection. (a) In patient treatment with rest in bed during the acute stage for one to three weeks (according to the severity of the case) is to be recommended and is essential to relieve the initial soreness of the vulva. (b) Balconies or gardens are recommended in which infants can lie and older children play for most of the day after the initial period of resting in bed. It should be realized that excessive exercise may have a detrimental effect. (c) The provision (when possible) of some occupation for the children such as organized games, singing and elementary lessons all help to prevent the dangers of "idle hands." A nursery governess is of the greatest assistance as she removes the children temporarily from the care of the nurse in uniform and the association of hospital in the child's mind. (d) A balanced diet is to be desired: milk, fruit and fresh vegetables are necessary and an excess of carbohydrate is to be avoided. (e) Ultra violet light for use during the winter and for specially debilitated children may be a useful adjunct. (f) Nurses responsible for the care of gonococcal vulvo-vaginitis cases should be specially trained.

### Local Treatment

The following choice of methods is suggested. It is emphasized that no packing of the vagina should be carried out and that throughout only non-irritating solutions should be employed. The vulva should be swabbed with lotion and dusted with a drying powder as often as necessary to keep it free from pus and as dry as possible. If the discharge is profuse a sitz bath may be given as a preliminary to treatment to make the cleansing of the vulva easier.

**Douching** may be necessary to remove excessive vaginal discharge and may be employed as a routine method of local

\* In hospitals for infectious diseases, barrier nursing of the case may be substituted at the discretion of the medical superintendent for removal from a children's ward.

treatment. The following solutions may be used: protargol 1 g per cent. tinct. iodine 1 drachm to 1 pint dist. of 1-2 drachm to 1 pint solution of chloramine T 1-2 per cent. (The two latter are useful in offensive cases.) A rubber catheter may be attached to a douche can or to a Higginson's syringe. Solutions (as above) may be used conveniently at 80 to 100 F. It is suggested that a rotation of the solutions used is advisable every two weeks.

**Swabbing.**—Opinion differs as to the value of swabbing or painting the vagina. Some authorities recommend it as a routine treatment to be applied except when it causes pain or the child is very nervous. Others restrict its use to cases where other treatment has proved ineffective and to very small infants while one authority considers other forms of treatment adequate and does not employ it at all. It carried out one of the following solutions should be used applied to the vagina on dressed throat swabs or wooden applicator: 10 per cent. protargol in glycerin, 10 per cent. miltol in glycerin, 5 per cent. mercurochrome in glycerin. Dressed Plastair probes may be used for the purpose in older children.

**Urethral Treatment.**—Here again practice differs. Routine swabbing or painting with 5 per cent. protargol or 1 to 2 per cent. silver nitrate is recommended by some when the canal is involved unless contraindicated as above. Other authorities depend upon alternative forms of treatment.

**Rectal Treatment.**—Swabbing is used at all, should be restricted to cases in which the rectum has been found to be infected with the gonococcus and carried out with the greatest care but some authorities are not in favour of this form of local treatment of the rectum.

It is emphasized that probes should be careful and evenly dressed and with the best quality cotton wool.

### Special Treatment

**Vaccine Therapy.**—A reliable stock gonococcal vaccine may be used but the use of this form of therapy appears to be infrequent and some authorities are definitely opposed to it. It has been recommended in chronic cases where there have been relapses and in the rare cases of tenosynovitis or arthritis. It should never be given during the acute stage.

**Oestrin.**—Many observers have reported favourable results on the use of oestrin. It can be given by mouth by injection or in the form of suppositories, the dosage being approximately five times as great by mouth as by injection. The oestrin used is probably to be preferred as children do not object to it and the daily insertion of a vaginal suppository is considered undesirable and a procedure to be avoided if possible. The daily dose is 5000 to 6000 units according to the size of the child and it may be given at one time or every morning. The character of the discharge macroscopic and microscopic should be noted every day. The purulent gonococcal discharge soon gives place to one containing many squamous epithelial cells and Doderlein's bacillus but no gonococci. The duration of the treatment varies from a few weeks to a few months. If the urethra or rectum (which are not affected by the oestrin) is found to be infected treatment should be applied in the manner indicated above. Relapses may occur after or even during a course of oestrin and are then usually found to be due to a urethral or rectal infection. These usually clear up quickly with oestrin and the local treatment of the urethra or rectum. It is important that the change in the character of the discharge mentioned above is brought about. Unpleasant effects such as enlargement of the breasts, vaginal haemorrhage and especially muscular pain have been ascribed to the use of oestrin by some observers. The great value of the drug is however firmly established in the view of many experienced clinicians.

**Sulpharilamide** and allied substances have been used in some cases with encouraging results but it is too early at this stage to assess fully the value of this treatment. Attention is drawn to the varying degree of efficiency in the preparations of both oestrin and sulpharilamide now on the market. If good results are to be obtained the selection of a reliable preparation is essential.

### Relapses

The tendency to bacteriological and clinical relapse is one of the features of this disease. It is important to recognize the fact that these relapses may sometimes be of very short duration and pus may be present only for a few hours. A test may be positive on one day and when repeated the following day for confirmation a negative result may be obtained. There may be no clinical signs in these latent cases, but the gonococci may be found in apparently clear mucus.

Relapses may be due to reinfection from an insufficiently treated urethra or from the cervix or rectum, but masturbation is a contributory factor. It is the persistence of this habit after treatment has ceased which makes a clinical diagnosis of cure very difficult in many cases. Reliance on the bacteriological reports is essential. The influence of bad hygienic conditions at home of tight and dirty clothing and of masturbation in prolonging an unhealthy appearance of the genital parts should not be forgotten. From 11 or even 10 years onwards the physiological changes of puberty may be responsible for intermittent congestion of the parts, moisture and mild leucorrhoea. None of these conditions should be mistaken for a genuine relapse. It is impossible to arrive at a correct diagnosis in such cases without the help of an experienced bacteriologist. Films and cultures (the latter being the more important in chronic or latent cases) must be taken.

It is of importance to remember the importance of *cross-infection and reinfection* when considering apparent relapses. Very great care is required to prevent convalescent cases of vulvo vaginitis in a hospital being reinfected by children still in the acute stage. It may also happen that a child discharged from hospital may be reinfected in her own home (perhaps by the original source of infection), and then brought back to hospital with a complaint that she has relapsed.

The intractable character of gonorrhoeal vulvo vaginitis is shown by the long period of treatment and observation required—for example up to two years even when the case is in skilled hands from the beginning.

### Criteria of Cure

Of all the vexed questions associated with vulvo vaginitis none has given rise to greater controversy than 'When is the child cured?' The marked tendency to bacteriological and clinical relapse, the uncertainty of finding the gonococcus in chronic discharges and the obvious difficulty of proving a negative lead to the necessity for extreme caution in giving a certificate of cure. The query cannot however, be evaded. Anxious parents must be reassured schools must be advised when they can safely readmit pupils, and hospitals want to know when they may finally discharge patients.

The problem is peculiarly difficult of solution because the clinician is not only required to determine whether a child patient is at any particular moment free from infection but also when the liability to relapse has ceased. As against an excessively pessimistic attitude it is pointed out (1) that there is no direct evidence of gonococcal infection contracted in childhood lasting into adult life. Large numbers of patients who have suffered from gonococcal vulvo-vaginitis have now been followed up for many years and no such case is known. Moreover the previous history of thousands of adult patients who have attended the V.D. clinics during the past twenty years has been recorded with care and no such tendency has been noted. (2) Exacerbations commonly occur in the early stages after treatment has ceased although rarely after three months.

*Criteria of cure should be negative tests (films cultures and gonococcal complement fixation) for a minimum of four months after cessation of all treatment. During this time the patient should be under observation at frequent intervals.*

Daily inspection of the vulva is advisable for the first three months after suspension of treatment in view of the very short duration of some relapses. (This can be done quite adequately by an intelligent mother after the first few weeks.) Normally the vulva clears up completely after treatment, but in a few cases there may sometimes be a persistent redness and slight discharge which is not pathological.

After treatment has been discontinued a full set of films and cultures should be made from vagina, urethra, and rectum (if considered advisable). For a minimum of four months vaginal and urethral swabs should be taken at weekly intervals for the first three weeks, and subsequently at intervals of two or three weeks. Tests from the rectum need not be repeated as a routine unless it has been infected. The final set of swabs and cultures should be taken after a provocative dose of vaccine administered twenty four hours previously.

The place of the complement fixation test among the criteria for cure of gonococcal vulvo vaginitis is still undecided. When performed in a laboratory where such tests are being done weekly on a considerable scale and under well controlled conditions—the L.C.C. laboratories come into this category—the test has been helpful. When both the bacteriological and serological tests are negative cure may be assumed. When the bacteriological test is negative but the complement fixation test remains positive for more than six weeks persistence of some hidden focus of infection may be suspected. Such persistently positive tests are rare. Change to a negative reaction is sometimes accompanied or followed by a recurrence of the vaginal discharge.

When a period of six months has elapsed after cessation of treatment without obtaining a 'positive' result (bacteriological or serological), or definite clinical evidence of vulvo vaginitis, there can in the opinion of the writers, be no object in continuing observation of the patient. Such continuous observation will tend to perpetuate anxiety in those responsible for the child, to keep up bad habits if they exist, and to fix in the memory an unfortunate experience.

### NON-GONOCOCCAL VULVO-VAGINITIS

This condition is not uncommon in girls between the ages of 2 and 7. It becomes relatively infrequent after that age, and appears to be very rare after the age of 10. The conditions which may give rise to vulvo vaginitis or are found in association with it, are of a very diverse character. They are as follows.

#### General Causes

It may develop as a prodromal symptom of the exanthemata—for example, of chicken-pox and measles—or as a sequela for example, of scarlet fever. It may occur during the course of general acute infections, particularly pneumonia and has also been observed in attacks of influenza and possibly in ordinary coryza.

It occasionally occurs in the course of general debilitating diseases and has been observed in the anaemias.

It may be secondary to acute throat infections most commonly streptococcal, it also occurs in association with cases of diphtheria and of Vincent's angina.

#### Local Causes

Foreign bodies—safety pins, marbles, gauze swabs, etc.—in the vagina.

Direct infection from fingers of mother, nurse etc., and by towels and clothing or by direct contact with dirt (as in children with inadequate clothing).

Secondary to irritation congestion, or inflammation in adjacent organs—for example, in association with thread worms, chronic constipation, appendicitis (acute or chronic) and infection of the renal tract.

Direct irritation of the parts by tight clothing or masturbation causes a local hyperaemia and predisposes to invasion of organisms. The tendency has also been noted in neglected children and in those especially difficult to keep clean—for example, spastic cases.

#### Clinical Signs

A differential diagnosis between the various types of vulvo vaginitis cannot be made without bacteriological tests but certain clinical signs are highly suggestive of certain causes. In diphtheroid infections for example redness of the vulva is present and discharge if present, is scanty. Discharge due to the presence of foreign bodies is characteristically blood

stained and offensive. *Staphylococci* usually produce a thick creamy discharge whilst that caused by the streptococcus is thinner and colourless. *B. coli* may give rise to an offensive discharge with a characteristic odour. The vaginal discharges which occur occasionally at the onset of a general infection may simulate any of the characteristic

### Bacteriological Diagnosis

The same precautions should be adopted in collecting material as in cases of gonococcal vulvo-vaginitis.

A large variety of organisms have been found in smears or cultures from vaginal discharge either singly or in combination. The relative frequency of the infecting organisms will very probably vary according to the centre at which a series of cases is studied. For example among seventy one cases examined at the Hospital for Sick Children Great Ormond Street by Dr Wood non-haemolytic streptococci (mostly enterococcus) were recovered from fifty one *B. coli* and a typical coliform bacillus from thirty six anaerobic Gram positive cocci *S. albus* and diphtheroids from a quarter to half the cases while the haemolytic streptococcus was isolated from ten and *S. aureus* from only two patients.

In fever hospitals the most frequent causal organism is the haemolytic streptococcus most of the infections developing as complications of scarlet fever or tonsillitis. Rarely *C. diphtheriae* produces a true diphtheria of the vagina although virulent strains may be present in the vagina without producing diphtheritic infection. Other organisms like the pneumococcus *H. influenzae* Gram negative cocci other than the gonococcus and the tubercle bacillus seem occasionally to be responsible for vulvo-vaginitis. *Trichomonas vaginalis* does not apparently produce infection in the child.

While organisms like the haemolytic streptococcus *S. aureus* and possibly *B. coli* which are known or potential pathogens do frequently initiate infection in a healthy vagina it is unlikely that saprophytic organisms like the enterococcus and diphtheroids do so and their predominance on culture may mean that they have supplanted or masked the original infecting organism. They may however perpetuate an infection arising from other causes.

An important point to which attention should be drawn is the very low infectivity of non-gonococcal vulvo-vaginitis. Familial spread is occasionally reported but epidemics of vulvo-vaginitis in schools and hospitals or indeed the infection of any one child by another appears to be very uncommon. The presence of a focus of sepsis (especially of the haemolytic streptococcus) obviously makes any child an undesirable occupant of a ward or dormitory but there is apparently little danger of the spread of vulvo-vaginitis as such.

### Treatment

The treatment of the non-gonococcal forms of vulvo-vaginitis calls for considerable judgment. Many of these cases are of a very mild character and require little or no treatment except baths and local cleanliness and removal of any causal factor. Indeed the great danger is over-treatment for prolonged swabbing and douching may not only keep up a vaginitis but actually increase it. Prolonged confinement to bed is very harmful; it lowers the general health and leads to masturbation.

The more severe infections should be treated on the same lines as the gonococcal cases including oestrin therapy. There are all grades between these severe cases and the patients with slight persistent discharge. Treatment varies therefore from simple bathing to the complete regime of the gonococcal case.

In a very small number of children the discharge proves extremely persistent and may fail to clear in twelve months or more. Suggestions are made for handling troublesome infections.

### Criteria of Cure

The great majority of cases clear completely after two to three weeks' treatment but it is advisable to keep observation on the child for two or three weeks after the discharge has ceased as recurrences are not unknown. In haemolytic streptococcal

infections the tendency to relapse may last for a considerable length of time.

In view of the alarm caused by any vaginal discharge children allowed to return to a residential school or institution should be examined at weekly or fortnightly intervals for two months after their return.

### ADMINISTRATIVE ASPECTS

This aspect of the problem is of great importance as any authority or organization undertaking the care of children sick or healthy is faced with two serious obligations: (a) to protect non-infected children from the possibility of infection with the disease and (b) to detect, isolate and treat any case of vulvo-vaginitis occurring in a child for whom it is responsible. The administrative measures found necessary to ensure these ends will vary greatly with local conditions and also as between children who are sick and those who are healthy.

For the protection of sick children the writers have suggested certain instructions which have with slight variation been in operation in the London County Council's hospitals for over two years. During this time no spread of the disease has occurred and it is felt that the precautions are adequate. The plan of swabbing all female children on admission to hospital was considered and rejected on the grounds (a) that the Council had such a large number of child patients that the procedure would be burdensome (b) that gonococcal infection is now shown to be extremely infrequent and (c) that it gives no real security and would in no way obviate the necessity for other precautions.

As regards healthy children in the Council's residential schools and receiving homes the staffs are asked to maintain a careful look out for any sign or symptom of the disease. The children's underclothing and bed linen are watched for evidence of discharge and any child considered suspicious is at once isolated and swabbed.

At residential establishments for healthy children the problem of isolation of a suspicious case presents greater difficulty than in a hospital. Many institutions have little or no provision for the accommodation of potentially dangerous material and the staff are naturally anxious to transfer any suspicious child as soon as possible. It has been found however that if too free encouragement is given for the transfer of girls to hospital children may be sent into hospitals quite unnecessarily for conditions which are more physiological incidents in development or for transient and quite unimportant redness of the parts. The handling and examination involved in taking a series of tests from any little girl must of course be undertaken without hesitation if necessary in the benefit of the child or her companion but it is not a light matter for obvious reasons. Experience has also shown that once a diagnosis of vulvo-vaginitis has been made even on the most slender grounds the child is marked out and her record is regarded with suspicion. Hence it is imperative that residential establishments should be certain that there is some definite evidence of vulvo-vaginitis before transferring a child to hospital for this condition. If however there is clinical evidence of vulvo-vaginitis is present an institution should not be expected to keep a child until bacteriological tests have been made and in no case should it be asked to keep a child who needs treatment.

It is the practice of the London County Council to concentrate in St. Margaret's Hospital all cases of vulvo-vaginitis in which a report of the presence of organisms morphologically resembling the gonococcus has been received. Further investigations to confirm the diagnosis are carried out after admission but in the meantime all possible precautions to non-infected children has been observed.

The article ends with a full summary and there are three detailed appendices: (I) The vagina in childhood; Dr R. Cruickshank; (II) Laboratory methods recommended for use in the identification of the infecting micro-organism; (III) Suggested instructions to staffs of hospitals and institutions.

## TUBERCULOSIS ASSOCIATION

## MEETING AT OXFORD

The annual provincial meeting of the Tuberculosis Association was held this month at Oxford under the presidency of Dr S ROODHOUSE GLOYNE

## Tuberculin Testing

On the first day Dr J HEIMBECK (Oslo), opening a discussion on the incidence of tuberculosis in young adults, said that in a survey he had conducted in Oslo he had found that at the age of 20 half the people were still tuberculin-negative. Among the nurses at the Ullevaal Hospital in Oslo all the probationers who were tuberculin-negative at the beginning of their training became positive before completing the three-year period. Among 284 nurses tuberculin-negative on entrance 104 developed tuberculosis, which proved fatal in thirteen. Among 668 tuberculin-positive entrants only thirty-four developed tuberculosis, and none died.

Dr H H BASHFORD (London) related his experience among the Post Office staff. The heaviest incidence of tuberculosis was found in the age group 20 to 30. Of all new cases of tuberculosis only half were ever able to return to work, and of these only a little more than half were working after a period of ten years. Dr C J C FAILL (Bristol) suggested that "summer time" tended to cause young people to play games until late at night, and therefore to make them unduly tired, lowering their resistance to tuberculosis. Dr PETER EDWARDS (Market Drayton) gave figures of tuberculin testing in the nursing and domestic staff at his sanatorium though small in number, they appeared to support those of Dr Heimbeck.

## Extrapleural Pneumothorax

On April 8 a discussion on extrapleural pneumothorax was opened by Mr R C BROCK (London). He had attempted this operation in fifty patients. In six the operation was abandoned owing to the presence of dense mediastinal adhesions, five had died, in the remainder a good collapse had been obtained. More experience was required in the selection of cases. He advocated extensive stripping of the parietal pleura, and then described a procedure he had introduced in which an extrapleural pneumothorax was joined to a lower intrapleural artificial pneumothorax by cautery division of the septum between them. Mr T H SELLORS (London) had also operated on fifty patients, two had died. In four patients tuberculosis developed in the opposite lung. He had also practised the procedure introduced by Mr Brock. When there were massive intrapleural adhesions he excised the area of the parietal pleura to which the adhesions were attached. He considered bleeding the chief complication. Mr TUDOR EDWARDS (London) had performed the extrapleural operation and division of the septum at the same time on fifteen occasions. He considered the results satisfactory. The post-operative management was discussed also by subsequent speakers. The second intercostal space inferiorly was recommended as the best approach for removal of the fluid which often forms in the extrapleural space. Dr L E HOUGHTON (Hendon) said that he was against too much stripping of the parietal pleura.

## Radiological Investigations

On April 9 the paper on progress in radiology, by Dr FELIX FLEISCHNER (Vienna), who was unable to be present, was read by Dr England. It was concerned mainly with Dr Fleischner's original work on atelectasis, and was illustrated with numerous beautiful skiagrams. He maintained that when a bronchus was blocked shrinkage of the lung distal to the block did not always occur, because other forces might keep it expanded. When this happened a transudate which filled the alveoli, developed after the air had become absorbed. There might be partial shrinkage together with an exudate. In these cases

the radiological shadow could be indistinguishable from that of a pneumonic process. Epituberculosis was a typical example of this condition.

Professor A E BARCLAY and Dr K J FRANKLIN (Oxford) gave the results of their recent investigations into the physiology of the lung. The work was done with a radio-opaque dust (so that cineradiograms could be taken) in cats. The cilia of the trachea and bronchi carried foreign bodies to the larynx spirally in a clockwise direction, when viewed from above, at a speed of from 1/2 to 3 cm a minute. Indian ink injected subpleurally was carried to the larynx in fourteen minutes. Dry dust or finely powdered lead glass when insufflated into the lungs never reached the alveoli, it was quickly eliminated from the tracheo-bronchial tree by the cilia. When moist, however, it rapidly lined the alveoli and did not disappear before many days.

## HEALTH OF THE ARMY IN 1936

Although the health of the soldier was satisfactory in 1936, there was an all-round increase in sickness incidence over that in 1935 and the preceding quinquennium, this is attributed in the latest Report on the Health of the Army<sup>1</sup> to abnormal conditions of service, more particularly in Palestine and Egypt. The admission rate showed an increase of 35.6 per 1,000 over that for 1935. In Egypt and Palestine combined there was an increase of 138.9 per 1,000, and in China 152 over that for the previous year. The diseases in the first two countries responsible for this large increase were sand-fly fever (27), diseases of the skin (18), tonsillar inflammations (153) and influenza (136), while "other diseases of the digestive system" (excluding tonsillitis, pharyngitis, gastritis, gastric ulcer, duodenal ulcer, and diseases of the liver) accounted for an increase of 28.7. Most of the sand fly fever occurred in Palestine, while in China influenza (48.9), venereal diseases (47.9), and malaria (28.5) accounted for more than 80 per cent of the increase. There were decreases in rheumatic fever and inflammation of the kidney, offset by increases in hysteria, middle-ear inflammation, pulmonary tuberculosis, epilepsy, valvular disease of the heart, effects of old injury, schizophrenia, duodenal ulcer and flat foot.

## Enteric Infections

In India the admission rate on account of the enteric group of fevers was the lowest yet recorded, this reduction having been effected in spite of an increased incidence of enteric infections in the civilian population. The notable improvement is partly ascribed to greater interest taken in child and family welfare by all Indian units, with the result that many hidden patients suffering from one of these fevers are now being efficiently treated thus eliminating an important source of infection. Moreover since the reduction of this incidence is very similar in both Egypt and India it would seem that the improvement is partly due to introduction of the new TAB vaccine supplied for preventive inoculation by the Royal Army Medical College and the Central Research Institute Kasauli. In India also the number of admissions for dysentery in 1936 was less by 253 than in the previous year, but in Egypt and Palestine there was an increase of 260 partly due to a larger number of troops living for the most part under active service conditions. There were no waves in the incidence in Egypt one in April and the other in November, which were consequent on and ran parallel with the periods of greatest fly prevalence. The dysentery reported from stations at home was without exception a recurrent or an infection contracted abroad. Reports show that the treatment of bacillary dysentery combined with the use of serum where necessary, is universally satisfactory. In Egypt a few cases were treated with bacteriophage with good results but the number treated was too small to permit any useful comparison. Compared with 1935 the clinical group was reduced by 111 which indicates an improved liaison between

<sup>1</sup> H.M. Stationery Office 3s., postage extra

the hospitals and the laboratories but it is remarked that in certain stations abroad the laboratory is situated at a considerable distance from the hospital and that it is this long distance factor which tends to prevent the isolation of the causative organism from the stools. There were only two admissions for amoebic abscess of the liver both of which responded well to emetine treatment.

### Malaria

In India an increased incidence of malaria was reported in the Northern Command and the Burma District with general decreases elsewhere though the climatic conditions favoured the spread of this disease. Its increase in the Northern Command was an aftermath of the Mohmand operations of 1935. During these operations delay action quinine was given to the men in camps which were notoriously malarious. While this had the effect of keeping the men at duty it reacted by producing a larger number of relapse cases and latent fresh infections during the following spring. In addition the breeding season of the Rawalpindi District extended into late November with many admissions during that month. Multan is now the most malarious district its admission rate in 1936 being 176 per 1,000; the reason for this is held to be the changed climatic conditions—increases in humidity and rain fall having become apparent in the areas affected by the new irrigation from the River Indus. Malaria in Delhi was further reduced from 87.5 per 1,000 in 1935 to 71.6 per 1,000 in 1936 in consequence of intensive anti-malarial measures in both civil and military areas in the city. The relapse rate for all India during 1936 was almost half that for 1932 but in the Northern and Western Commands the relapse rate was much higher than in 1935.

### Research Investigations

The situation in Egypt and Palestine in 1936 afforded an opportunity of observing to some extent the protective value of the recently modified typhoid vaccine. Since the strength of troops in these Commands had been almost doubled an increased incidence of typhoid fever was expected. Not only did this not occur however but the case rate for the enteric group of infections was only 0.4 per 1,000 compared with 1.7 in 1931. On the other hand the incidence of these infections among the civil populations in Egypt showed a gradual increase due most probably to improved methods of diagnosis. The year 1936 was considered a bad year for civilians. It would therefore seem that the incidence of these diseases in the Army was favourably affected by the introduction of the recently modified vaccine. The Army Pathology Advisory Committee met in June 1936 when the arrangements for the pathology services of the Army were reviewed and consideration was given to the provision of tetanus antitoxin, leptospirosis in the Army in England, the laboratory diagnosis of glandular fever and the investigation of an influenza epidemic in the Eastern Command. Co-operation with the workers of the Medical Research Council continued including an important trial of the new mouse virus vaccine, a study of the mannitol group of dysenteric organisms and of water purification in the field. Sodium mandelate with ammonium chloride in the treatment of urinary infections due to *B. coli* gave very satisfactory results on clinical trial. Evipanodium gave satisfaction as the anaesthetic for ear, nose and throat surgery, except in enucleation of the tonsils some cases of which showed a tendency to haemorrhage. Specially prepared ascorbic acid tablets were analysed and found to be adequate for the prevention and cure of scurvy.

### Medical Examination of Recruits

In consequence of a falling off in the number of recruits during recent years a War Office committee assembled in May, 1936 to inquire generally into the causes of rejection of prospective recruits to examine the then existing physical standards, and consider the possibility of taking into the Army men below the agreed standards who in the opinion of the medical authorities might reach those standards after a period of special training. The committee agreed that the standards of general health and physique should not be modified

but that the introduction of mechanization and the increase of specialization would permit of an adaptation of certain standards to conform with these conditions. Accordingly the Army was classified for recruiting purposes as (1) the hereditary and foot class (2) mechanized class (3) M.T. class and (4) L or C class. A medical subcommittee then drew up modified physical standards to accord with this classification and it is calculated that when they came into operation on December 1, 1936 there was a saving of 216 recruits, 12.4 per cent of the total in the remaining months of that year. A preliminary experiment limited to men below the standards of weight and/or chest measurement and those suffering from functional defects of the heart was undertaken at the Army School of Physical Training, Aldershot during the last three months of 1936. Of the thirty-three men enlisted twenty-four attained the necessary standard and were drafted for duty in depot sections who only just failed to reach them were subsequently drafted and only two were finally rejected. A special centre was subsequently established for the reconditioning of recruits of this type. A proposal was also put forward for the admission of recruits who were up to standard and in all respects except for some curable defect such as varicose veins or enlarged tonsils and to admit them to hospital for treatment; this was approved.

## Nova et Vetera

### THE EARLIEST ENGLISH PRINTED MEDICAL TREATISE, AND OTHERS

Hard upon the dispersal of the medical books belonging to 'Sion College' comes the announcement of the sale of Sotheby's on May 20 and 21 of an older and no doubt though smaller collection, the historic and superb library from Ham House Surrey. In passing it may be mentioned that the gem of the Sion books Harvey's *De Motu Sanguinis* (first edition) turned out to be in somewhat deteriorated condition and so fetched only £238, probably less than half of what a good copy would have realized. The Ham House library was formed mainly by the first Earl of Lauderdale, his son the first Duke of Lauderdale, the latter's stepson the third Earl of Dysart and chief by the fourth Earl of Dysart who although unpopular with some of his contemporaries had a very distinguished taste in fine and beautiful books. The presence of such a Caxtons is enough to make the mouth of every collector water to say nothing of several of the products of Wynne de Worde and Pynson many of them of the greatest rarity.

The few medical books are of the highest interest and in one or two cases have as well great association value. Particularly is this true of the first edition in French of the *Ortus Sanitatis* printed on vellum in Paris in two volumes about 1400 and specially illuminated in gold and colours by Antoine Verard for Henry VII with the latter's arms. The auctioneers have traced a payment in the royal account books for 1502 of £6 for two books called the garden of health but they state that Verard's price for a vellum copy such as this would be many times higher and there is no evidence that it ever came into the King's possession as throughout the sixteenth century it appears to have belonged to the Landgraves of Hesse; moreover the paper copy bought in 1502 is not actually in the British Museum. It is possibly illustrated mainly with woodcuts or plans but there is a large picture of a human skeleton.

### "The Governable of Helth"

The earliest medical work printed in the English language and the first medical work printed in England is the *Governable of Helth* *Medicina Sancti* published in 1489 by William Caxton, one of our earliest known authors and that is in the Bodleian Library. It is hard to

## Reports of Societies

### PSYCHOLOGY AND GYNAECOLOGY

At a meeting of the Medical Society of Individual Psychology on April 7, with Dr H C SQUIRES in the chair, Mr ALECK BOURNE read a paper on psychological conditions underlying gynaecological symptoms.

Mr Bourne said that one of the most important aspects of clinical medicine was the differentiation of organic diseases from those due to disturbed function. Undue emphasis in the teaching of students was placed on established and even terminal organic conditions, while the clinical states due to disturbed function were often neglected. Disturbed function of the pelvic organs as in other parts of the body, might be due to a habit of life, to prolonged emotional stresses, or endocrine imbalance. Physical signs in adolescent girls, which were almost certainly due to over-stimulation by oestrin, included excessive non-infective leucorrhoea, highly acid vaginal secretions, a high content of epithelial glycogen non-infective erosion, and a soft, easily dilatable internal os uteri. He had coined the word "oestrosis" to describe this syndrome. The question of interest to psychologists was whether the excessive oestrin production was primary or secondary to a mental state arising from sexual maladjustment.

### PROGESTERONE THERAPY

A meeting of the Aberdeen Medico Chirurgical Society was held on April 7, with the president, Dr H E SMITH in the chair, when Dr SUSAN PATERSON (Edinburgh) gave an address on the therapeutic uses of progesterone.

Dr Paterson outlined the current view of the hormonal control of the menstrual cycle and pregnancy, and concluded that the corpus luteum hormone, progesterone, was essential for the maintenance of pregnancy. Its functions were to prepare the endometrium for the embedding of the ovum, to inhibit normal uterine contractions and further ovulation, and to lessen the sensitivity of uterine muscle to pitocin. After dealing briefly with the method of standardization and the dosage, and emphasizing that corpus luteum preparations were inert when given by mouth, she described the gynaecological and obstetrical indications for their use. Under the former heading came certain functional uterine haemorrhages and certain cases of dysmenorrhoea. The former occurred much more frequently from an oestrin stimulated type of endometrium than from a progestational endometrium, suggesting at once the use of progesterone. Pubescent haemorrhages in 80 per cent of cases were non-ovular, and the bleeding might be dangerous, progesterone was eminently satisfactory in tiding the patient over the danger period until normal ovulation occurs and the bleedings cease. Dr Paterson described two personal cases, treated with complete success with 1 mg daily until the bleeding stopped. In metropathia haemorrhagica treatment by a menopausal dose of radium, after diagnostic curettage, was advocated. Dysmenorrhoea due to forceful muscular contractions of a normally developed uterus, subject to uninhibited oestrin sensitivity to posterior pituitary, might logically be treated by corpus luteum. It was characterized clinically by uterine colic starting before the flow and continuing through the first or first and second days of the flow and also, usually, by a rather prolonged and profuse period. Two cases were treated by 2 mg progesterone on the seventh, fifth and third days preceding the period with a good immediate result in each case, but it had not been possible to follow them up.

### Obstetrical Uses of Progesterone

The obstetrical conditions in which corpus luteum had been used included sterility, threatened abortion, habitual abortion after pains, and pre-eclampsia. In sterility

imagine a more desirable acquisition for a medical library than this magnificent folio Bartholomew Glanville's *De Proprietatibus Rerum* Wynkyn de Worde, 1495, is the first book ever printed on paper made in England (at Hertford) this Ham House copy unfortunately lacks five leaves. The first quarto edition of Sir Thomas Elyot's *Castel of Helth* Berthelet 1541 is bound in with Thomas Paynel's translation of the *Regimen Sanitatis Salerni* (same publisher and year) and with the first quarto edition of a book whose full title is *Of the Wood called Guaiacum that healeth the frenche pockes and also helpeth the goutte in the feet the stone pulseve lepie dropsy fallinge euyl and other diseases* made in latyn by Ulrich Hutten Knyght and translated into englysh by Thomas Paynel, Berthelet 1540. Elyot's book first appeared in 1539 in octavo, and Hutten's, too had been previously printed in that form. There is also a Latin copy of Hutten's work *De Guaiaci Medicina et Morbo Gallico* printed at Mainz by Schoeffer in 1531. Bound up with three other non-medical works is Walter Carys *Hammer for the Stone* so named for that it sheweth the most excellent remedie that ever was known for the same, John Windet, 1586. A curiosity is the translation into English verse of Christopher Balistas *Overthrow of the Gout* written originally in Latin verse. The translation is by B G, thought to be possibly Barnaby Googe. It is dedicated to Richard Master, physician to Queen Elizabeth and was published by Abraham Veale in 1577.

### Three Treatises Bound Together

Elizabeth Blackwell's *Herbal* 1739, of which a copy is offered, is naturally overshadowed in importance by a volume which contains three medical treatises bound together they are *The Grete Herball whiche geneth parfyt knowlege and understanding of all manner of herbes and there gracyous vertues also the noble experiens of the vertuous handwarke of Surgery* Southwark, Peter Treveris 1526, Jerome of Brunswick's *Vertuous boke of the distyllacyon of all manner of herbes newly translate out of Duuche into Englysshe* Andrewes, 1527 and the same author's textbook of surgery, with woodcuts of surgical instruments, Southwark, 1525. The only remaining medical book is a French treatise by Charas, 1670, on vipers and remedies for their bites.

### ANNALS OF MEDICAL HISTORY

Of the seven main articles of the second instalment of *Annals of Medical History* for this year three deal with medicine in Virginia and are continued and concluded from the previous number. The memoir of Hunter Holmes McGuire of Richmond Virginia shows the active part which he played in the North and South War and that he was primarily a great physician and incidentally a safe and conservative surgeon, thus illustrating Nicolas Senn's dictum that a good surgeon is a good physician who operates and recalling a somewhat similar aphorism of the late Lord Moynihan. The article on Pioneer Medicine in Virginia contains an account of the tropical work of Walter Reed and of M R Carter on yellow fever. Dr Joseph Kriska describes the Torv Doctors of Georgia under the Britishment Act of 1778. The other articles include a concise sketch of the part played by the Jewish physician in the progress of his people by Dr H A Savitz of Boston, Miss Alice Willcox's collection of medical references in the dramas of John Lyly who spoke of tobacco as our holly hearbe Nicotina and recommended its use in a salve with cooling violets and honey to heal a wound. F T Gardner and C D Lake of San Francisco reproduce with their comments the letter on the usefulness of oliginous warm baths sent by Dr Browne Langrish of Petersfield to the Royal Society in 1747.

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where curettage immediately before a period revealed an endometrium with slight progestational changes but changes not proportional to the time in the cycle treatment by progesterone might be tried in the week of the cycle preceding menstruation with the idea of making the endometrium suitable for nidation. In threatened abortion there was no doubt of the efficacy of progesterone. It acted probably in inhibiting contractions of the uterus and if such contractions had proceeded far enough to cause some haemorrhage comparatively large doses were required—Schering suggested 5 mg on five consecutive days. There was little doubt that habitual abortion was due to lack of corpus luteum hormone but that a deficiency of this hormone was due to a deficiency of vitamin E as Young suggested remained to be proved. Dr Paterson had had five successful cases out of six using 2 mg weekly throughout the first four months with increase to 5 mg at the week of the suppressed menstrual periods and with 5 mg daily for three days if there were haemorrhage or downbearing pains. In sixty-five cases in the literature fifty-seven were successful—88 per cent. Although in the majority of patients after pains could be rapidly relieved by injection of 1 mg progesterone the advisability of suppressing these pains was open to question.

### Pre-eclamptic Toxaemia

Thirty cases of pre-eclampsia had been treated to date with progesterone most of them being severe cases. Care was taken to exclude nephritis. Treatment was restricted essentially to the administration of progesterone but the following basic precautions were taken: (1) a balanced diet of approximately 1650 calories was given, not salt free and not protein free but excluding red meat; (2) in all cases where oedema was marked fluid intake was restricted to less than 40 oz until the fluid output was greater than the intake; (3) when headache was severe luminal was given. Progesterone was given intramuscularly in 5 mg doses daily for the first three or four days and thereafter depending on response, at longer intervals. In certain cases where no response was noted after one day 10 mg were given on the second, third and fourth days. All cases recovered and only one mother developed fits after treatment had started and that on the second day. The following table compares results in severe cases in the year before progesterone was used and in the following year in which it was used.

	Conservative (31)	Progesterone (22)
Developing fits	10	1
Maternal mortality	3	0
Foetal mortality	10	7
Corrected foetal mortality	10 (32%)	5 (17%)

The theory underlying the use of corpus luteum hormone in pre-eclamptic toxaemia was suggested by Robson's experiments on rabbits which seemed to prove that the health of the placenta depended on the health of the corpus luteum and that toxaemia was the direct result of a placenta no longer healthy. Dr Paterson said in conclusion that treatment by progesterone was a substitution therapy; it would not revivify areas of placenta damaged past repair, but it would help to maintain the health of the part of the placenta still functioning. Obviously the earlier the deficiency of corpus luteum was recognized and the corrected the better would be the results and in severe cases of pre-eclampsia conservative measures (rest in bed, attention to bowels, etc.) were necessary to deal with the toxins in circulation. It is this theory was sound it followed that if patients with the earliest signs of pre-eclamptic toxaemia were treated with this form of therapy eclampsia could be practically eliminated as a dangerous complication of pregnancy.

Professor BAIRD expressed surprise at the high percentage of successes with progesterone in habitual abortion. With regard to pre-eclampsia sixty-five cases had been treated without progesterone at Aberdeen Maternity Hospital in 1937 with no maternal deaths and eight foetal

deaths. These results were as good as those achieved by progesterone. If progesterone were to be employed it would probably be most useful at the sixth month in cases with early rise of blood pressure and without albuminuria. Mr GEORGE DAVIDSON, dealing with habitual abortion, questioned the theoretical basis of the principle of giving increased corpus luteum at the time of the suppressed menstrual period. Dr PATERSON in reply stated that this was done not on theoretical grounds but because clinical experience showed that abortion was most likely to happen at the time of the second and third suppressed period.

### SURGERY OF DUODENAL ULCER

At the March meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland with the president Mr A. A. McCONNELL in the chair Mr GARNETT WRIGHT (Manchester) read a paper on surgery and the duodenal ulcer.

Mr Wright began by discussing no different phases through which the surgical treatment of duodenal ulcer had passed during the present century, mentioning finally the dispute into which the operation of gastro-enterostomy for non-stenosing cases had fallen and the recent tendency to replace this operation by partial gastrectomy. He then proceeded to review his own experience of 145 cases treated at the Salford Royal Infirmary, gastro-enterostomy had been carried out in 137. There were three deaths in this series—a mortality of about 2.2 per cent—and ninety-four of the survivors had been traced. Of these about 80 per cent were either quite well or much improved but the incidence of secondary ulcers was rather high, occurring in nine cases altogether, of which four were proved at operation while in the remaining five the presence of a secondary ulcer was surmised on account of either haemorrhage or radiological evidence. In a small series of cases treated medically the results were almost the same as in those cases submitted to gastro-enterostomy—namely about 75 per cent of successes. In spite of the high incidence of secondary ulcers Mr Wright made a strong plea for the operation of gastro-enterostomy since it gave such a high proportion of successful results with a comparatively low mortality and in a comparatively short period of time—an important point in the hospital patient. Gastric ulcer except in the hands of a few experts was associated with a much higher mortality and furthermore did not necessarily prevent the development of secondary ulcers.

Mr Wright further stated that in his hands the after results of such operations as pyloroplasty had not been nearly so satisfactory as those of gastro-enterostomy.

### General Discussion

Mr SETON PRINGLE said that of recent years he had adopted purely medical treatment in uncomplicated cases. Surgery might be necessary in cases which did not yield to medical treatment or for patients who could not tolerate economic results. Following the necessary regime in such patients he did a gastro-enterostomy provided the gastric acidity was moderate and the acidity was high he preferred a partial gastrectomy. In cases complicated by stenosis he believed that gastro-enterostomy was all that was required, cases of haematemesis he treated conservatively.

Professor HENRY MOORE said that about 75 per cent of non-stenosing ulcers could be cured by medical treatment. A course of medical treatment both before and after operation was highly desirable and might be an important factor in the avoidance of secondary ulceration. He had found that if patients with this disease were treated medically Mr HARRY MEADE said that in cases with stenosis he carried out a gastro-enterostomy and in cases without stenosis he carried out a gastro-enterostomy unless the ulcer was eroded. Professor W. S. SARGE said that the importance of realizing that the cause of duodenal ulcer was not known, there were a number of treatments all of which were fairly successful.



## RECENT ADVANCES IN RHEUMATISM

At a meeting of the West London Medico-Chirurgical Society on April 8, with Dr D G RICE-ONLEY the president, in the chair, a discussion took place on recent advances in rheumatism

Dr J F HALLS-DALLY submitted that rheumatism should be regarded as a series of variable and often interchangeable syndromes. The classification he suggested was (1) acute or subacute rheumatism, (2) chronic non-specific arthritis, which included (a) rheumatoid arthritis (atrophic) and (b) osteo-arthritis (hypertrophic), and (3) non-articular forms. Acute rheumatism had certain constitutional peculiarities. Untreated, it was a self-limited malady. If treated in the accepted fashion with salicylates, it yielded to these far more readily than did any other condition in the rheumatic group. Moreover, it was not exclusively an affection of the heart, of the joints, or of the nervous system, for at any time it was capable of involving any of these structures. The real explanation of the similarities between acute rheumatism and rheumatoid arthritis might be found in the assumption that the type of reaction of the body tissues to infection depended on the formation in the blood—not in the tissues—of sufficient antibodies. If these were present in adequate numbers rheumatic fever cleared up, but if there had been insufficient antibody formation, transition into a state indistinguishable from rheumatoid arthritis took place. Rheumatic infection and rheumatoid arthritis were thus more related to one another, as representing variations based on a similar aetiology, than to osteo-arthritis, which he placed in a separate category. Though something was known of the basic as well as of the contributory factors in rheumatism, little was known, and nothing definite had been proved, as to the infective factors. The speaker reviewed the position of research in relation to rheumatoid arthritis and osteo-arthritis. A biochemical investigation of the urine in his experience was of great value in dividing all cases of chronic rheumatism into two main metabolic types. The alkaline urinary or metabolic deficiency type was related to rheumatoid arthritis, and the acid or metabolic excess type to osteo-arthritis or arthrosis. He discussed briefly preventive, general, and special treatment.

## Methods of Treatment

Dr W S C COPEMAN showed a cinematograph film illustrating the typical appearances in chronic rheumatism, with some indications of the technique and results of treatment. Discussing modern advances in treatment, Dr Copeman placed first physical medicine, and after this gold treatment, which in its limited sphere in rheumatoid arthritis was a major advance. Next came the serial plaster treatment of rheumatoid arthritis, originating from Boston then the postural methods of Goldthwait and Osgood, manipulations, and finally the injection of novocain and saline into the tender areas of fibrositis to which pain was referred. The history of the organization of the treatment of rheumatism, he said, was recent, not really starting until 1930, when the British Red Cross Society opened its clinic in London. Three years later the Minister of Health allowed physical treatment as an additional benefit under the National Health Insurance Act at approved centres, but to-day there were only three such centres—in London, Sheffield, and Aberdeen.

Dr C B DYSON introduced the subject of the serology of acute rheumatism. He described the bacteriology of rheumatoid arthritis as a 'complete fog.' In about 85 per cent of all cases of rheumatoid arthritis there were agglutinins to a significant titre for the haemolytic streptococcus and yet in these cases the streptococcus was not found as a significant infection. But even if the organism was a secondary invader its presence could do much harm and its removal much good to the patient. The complications of measles to take a parallel example, were not due to the primary virus but to the secondary invaders.

## Local News

## ENGLAND AND WALES

## Hospitals Day, 1938

The combined hospital flag days in London for 1937 produced a grand total of £32,569, representing an increase on the total annual income which the hospitals concerned used to derive from their individual flag days. When the plan was first started, at the suggestion of the Chief Commissioner of Police for the Metropolis, seventy seven hospitals joined in, and 108 participated during 1937. This year 135 hospitals are combining. While the special hospitals are to collect in October, the other hospitals will make their collection on Tuesday, May 10, in Inner London and on Saturday, May 14, in the outlying areas. Already Lord Luke, chairman of the London Hospitals Street Collections, has received promises of help from local public authorities situated in the Metropolitan Police District, Messrs W H Smith and Sons, many cinema theatres, hotels, business houses, markets, and the main railway companies. All suggestions and offers of service should be sent to Lord Luke at the headquarters of the Central Committee, 36, Kingsway, WC2.

## Central Midwives Board

At the April meeting of the Central Midwives Board for England and Wales it was announced that Sir Comyns Berkeley, M.D., F.R.C.P., F.R.C.S., had been unanimously re-elected chairman for the year ending March 31, 1939. The vacancy in the membership of the Board has been filled by the appointment of Miss G A B Cameron (public health department, Newcastle upon-Tyne). The remainder of the Board, all of whom have been re-appointed until March 31, 1939, consists of Councillor R W Brosch, J G Buchan, M.D., Miss K V B Conn, W Allen Daley, M.D., D.P.H., Mr H A de Montmorency, Miss E E Greaves, Eardley Holland, M.D., F.R.C.S., F.R.C.P., Miss A A I Pollard, Lady Richmond, Miss K J Stephenson, and Arnold Walker, M.B., F.R.C.S. With regard to the question of examination under the new training and examination rules of the Board it was resolved that the first examination under the new rules, which is, to all interests and purposes, the same as the examination under the existing rules, should be conducted by doctors as at present, but that, having regard to the nature and object of the second examination under the new rules, such examination should be conducted jointly by doctors and State certified midwives.

## Orthopaedic Clinics for Yorkshire

A meeting was held recently at the General Infirmary at Leeds to forward the work of the Yorkshire Association for the Care of Cripples. Commander Henderson, of the Wingfield-Morris Orthopaedic Hospital, Headington, near Oxford, dwelt on the need for early treatment of all orthopaedic cases, and said that by the establishment of local clinics a large number of patients could receive skilled treatment without necessarily entering a hospital as in-patients or having to make long journeys for out-patient attendance. It was a great advantage to the patient and to the hospital that surgeons and nurses should visit the smaller towns and rural areas instead of the patients all crowding into one building at stated hours for special treatment. The clinics were in effect scattered out-patient departments of the hospital, but, not being concentrated in one building, they could widen the scope of their work. Miss Miller, organizing secretary of the Yorkshire Association for the Care of Cripples, outlined the work it hoped to do in the county by extensions to existing hospitals.

and the establishment of associated after care clinics. The next step would be to build another orthopaedic hospital in the south of the West Riding, and to found a training college for the whole of Yorkshire. Dr J. Johnstone, Jervis medical officer of health for Leeds, said that the enlarged Thorp Arch Orthopaedic Hospital when completed would be the hub of a system the spokes radiating into all parts of the county.

### LCC Hospital Expenditure

The estimated expenditure on the hospital services of the London County Council in the year 1935-6 is £630,981, and the estimated income £536,625. The proposals which have already been approved for the further development of the consultant and specialist service at the hospitals involve an increase of about £20,000. The total cost of this service is upwards of £40,000 a year. The new domiciliary midwifery service accounts for an increase of about £41,000 in the estimates and increased charges for tuberculous patients account for £22,000.

### Recognition of LCC Hospitals

More than a year ago the Royal College of Surgeons of England agreed to recognize sixteen of the general hospitals of the London County Council for the purpose of qualification for admission to the final examination for the Fellowship of the College. The same hospitals have now been recognized by the Examining Board in England set up by the Royal College of Physicians of London and the Royal College of Surgeons of England for the purpose of the regulations for obtaining the Diploma in Anaesthetics (D.A., R.C.P. and S. Eng.). In addition seven more of the council's general hospitals making a total of eighteen have been granted recognition by the British College of Obstetricians and Gynaecologists as establishments at which the medical staff may qualify for candidature for the Diploma or Membership of the College.

### Leprosy in the British Empire

The annual general meeting of the British Empire Leprosy Relief Association took place at the India Office with Viscount Halifax in the chair on April 26. Sir William Peel, chairman of the executive committee in presenting the annual report for 1937 said that there were to-day at least two million lepers in the British Empire and in spite of the combined efforts of local governments, missionary bodies and the Relief Association which worked in co-operation with the H. V. H. little had been achieved in checking the incidence. In some colonies it was believed to be tending to increase. Even in colonies where much was being done to care for and treat the leper little had been achieved in regard to prevention. Some of the more prosperous colonies such as Malaya and with the association's help Nigeria were doing a great deal to combat the disease. In Hong Kong progress had been retarded owing to economic conditions. Valuable research work was being carried out at Calcutta in co-operation with the School of Tropical Medicine and the Indian Research Fund Association under the direction of Dr John Lowe. In Madras alone during the first nine months of last year there were nearly 600,000 attendances for treatment at the various centres. Sir Cuthbert Sprawson, retired Major General I.M.S., a new member of the executive committee gave an address in which he enlarged on the necessity for educating the public including the public of the country whose natives suffered from leprosy. The people in those countries he said might be uncultured and ignorant but they had sufficient natural common sense to understand the nature of the danger when it was explained to them and to appreciate the good intentions of the association's workers. It was interesting in the same connexion to consider how leprosy disappeared from England in Plantagenet and Tudor times. Various factors were concerned no doubt but the principal one he thought was the great interest

in leprosy which then existed among all sections of the population. This was shown in the establishment of about 200 leper hospitals in an age when hospitals were not common institutions. It was plain that the whole country was aroused and set itself upon a leprosy campaign attaining a surprising success when the deficient knowledge and lack of personal hygiene were considered. It was important now to arouse an interest of this nature throughout the affected parts of the Empire and the mother country. Sir Cuthbert described his experience in conducting a leprosy campaign in the Madras Presidency and the need for the enlistment of enthusiastic social workers some of them perhaps recovered patients who were able to demonstrate to the affected people that someone was taking an interest in them and so encourage them to co-operate in the necessary measures for their own good and the good of the community. Leprosy had raged in some places for so long that there already existed a tribal tradition and an understanding though imperfect as to what should be done. In the Laccadive Islands and in the Island of Minico the lepers were in a voluntary segregation sent to one end of the island on a peninsula where they lived happily in their manual occupations. It was necessary to foster such native public opinion in all infected countries and to organize it on proper lines. It was not within the power of the association to do it directly among large bodies of people but by approaching the governments it should be possible to secure that the desired propaganda was conveyed to all natives.

## SCOTLAND

### Edinburgh Orthopaedic Clinic

At the annual meeting on April 4 of the Edinburgh Orthopaedic Clinic Mr Robert I. Stirling said that this clinic started in 1926 and was formally constituted in 1931 for the benefit of people with limited incomes who required massage, ultra-violet ray treatment and other forms of physiotherapy but who were unwilling to avail themselves of free service in hospitals. The clinic was first started especially for the benefit of such persons who were capable of continuing their employment if treatment could be given after working hours. Some of the patients suffered from rheumatism, some came to the clinic after domestic or industrial accidents or after operations, many came with early static or postural irregularities for which successful preventive measures were of great economic importance. In some instances where the patient could not attend the clinic treatment was carried out in his home. The report showed that during the past year 605 patients had started treatment and 10,296 treatments had been given. Forty-eight patients had been visited during the year, including 917 visits. After-care involving 1,222 treatments had been given to thirty-six patients from the Princess Margaret Ross Hospital for Crippled Children. The clinic's existing premises were proving too small for the steady increase in the number of patients and the committee was at present considering the acquisition of new and larger accommodation.

### Prevention of Blindness

The W. H. Ross Foundation for the Study of the Prevention of Blindness was opened on April 20 at 20 Lauriston Place, Edinburgh, by Mr W. S. Douglas, Secretary to the Department of Health for Scotland. Mr Ross, who has succeeded to the total blindness fund since his eyesight failed in 1923, has endowed this research foundation at a cost of £20,000. In 1937 he deposited his sum with interest at the Bank of Scotland, which as well as the interest from an endowment was to be applied to the furtherance of investigations into the causes of blindness. Dr A. H. H. Sinclair, the

man of the trustees, said that they would not only investigate the prevention of actual blindness but would study all forms of deterioration of sight and the enhancement of the visual function. Investigations were already in progress which had entailed the examination of 700 coal miners and 200 shale miners, and work was proceeding with reference to glaucoma. The work was dependent on collaboration of the practitioners of Edinburgh and the good will of ophthalmologists throughout Scotland, and valuable help had been obtained from the staff of the eye department of the Royal Infirmary. It was hoped that Glasgow and other leading ophthalmic centres would eventually give practical help to this cause. The Department of Health for Scotland was also helping in regard to statistics of the causes of blindness. Professor A. J. Ballantyne, Glasgow, said that individual effort could not solve ophthalmological problems, which offered a very wide field for organized research, and the Ross Foundation would find its greatest sphere of usefulness in team work.

#### Aberdeen Medical Curriculum

The General Council of the University of Aberdeen, at a meeting on April 16, gave general approval to a proposal by the Senatus to add two terms to the present curriculum, thus extending it to seventeen terms. The draft of the new curriculum, which still remains to be adjusted in details, assumes that all students will start medical study at the beginning of the winter term, and in the final year certain special classes will extend over the summer vacation. Dr. Thomas Fraser, in moving general approval of the draft scheme, expressed the hope that the important question of extra-mural teaching would be considered, and he appealed for more attention to child welfare. He also considered that three and a half months' holiday in the summer vacation was too long, and that some of this time might be spent in hospital under supervision. Professor Campbell referred to arrangements that had been made for having a students' residence in the hospital centre at Forresterhill so that the students might take full advantage of clinical instruction in the various hospitals which had been erected there under the joint hospitals scheme.

#### Fife Medical Officer of Health

The staffing committee of the Fife County Council has appointed Dr. George Matthew Fyfe as medical officer for the county to succeed Dr. Pratt Yule, who is retiring. Dr. Fyfe graduated M.B., Ch.B. at Aberdeen University in 1920, and took the D.P.H. in 1925. For some three years he acted as a Carnegie research assistant in the physiology department of the University, and as assistant medical officer in the clinic to the Ministry of Pensions at Aberdeen. In 1923 he was appointed assistant medical officer of health for Aberdeen, and organized a clinic at the City Fever Hospital. Three years later he became medical officer of health for St. Andrews and bacteriologist to the James Mackenzie Institute for Clinical Research. Following changes under the Local Government (Scotland) Act 1929, he became in 1930 a deputy medical officer of health for the county of Fife, a post which he still holds.

#### "Neo-Hippocratism"

Dr. P. K. McCowan, physician-superintendent of the Crichton Royal Institution, Dumfries, states in his annual report that the doctrine of neo-hippocratism, or constitutional medicine, has been permeating medical practice during the last twenty or thirty years, and is a return to the basic principles laid down by Hippocrates, with his emphasis on the constitution of the individual patient, including his mental and physical make-up. Neo-hippocratism asserted that we could no longer regard the cells, tissues and organs of the body as separate units, the real biological unit being the individual. Physiology, with its chemical integration through the endocrines and its

nervous integration through the vegetative and central nervous system, had already shown that any smaller unit was an abstraction. Even in the most apparently local disease there was a disturbance through the whole individual, with biochemical changes in the fluids, changes in the nervous system, and psychical changes. These were not merely evidence of disease, but represented the result of a struggle in which the patient mobilized all his resources. The mere diagnosis of disease was therefore not sufficient, but a thorough knowledge of the body and mind of the patient was a necessary preliminary to treatment. To be consistent, treatment should agree with the constitutional principle, aiming at helping the patient's constitution in its struggle. In psychiatry the methods available to help the physical or mental resources of the patient included psychotherapy, physical medicine, heliotherapy, diet, occupation and recreation, endocrinology, and the judicious use of sedative drugs and of drugs acting on the sympathetic nervous system. All these methods of treatment would repay further research. Throughout the history of medicine two principles of treatment were found to crop up in connexion with little-understood diseases—the nihilistic and the chirocistic. The former favoured a negative policy, leaving everything to nature, and was very popular in the mid-nineteenth century, on the basis that curable diseases, if left to run their course, were likely to improve in the absence of needless meddling. The chirocistic principle—called after Chirac, a French physician of the eighteenth century—consisted of excessive intervention, which took the form of repeated bleeding, excessive purgation, and the use of strong drugs; it was the very antithesis of modern constitutional medicine. They must be careful not to transgress the constitutional principle in psychiatric practice, and unless such forms of treatment as hypoglycaemic shock and fits induced by cardiazol in the treatment of schizophrenia were ultimately shown to be in accordance with this principle, their present popularity was likely to be short-lived. It had been found that kindness and individual attention were preferable to fear in the education of the young, and this psychological lesson was equally important in psychiatry.

#### Edinburgh Postgraduate Courses

The syllabus of the postgraduate courses in medicine to be held in Edinburgh during the summer contains particulars of the instruction obtainable in July, August, and September. From July 11 to 29 there will be a course in obstetrics and gynaecology at the Royal Maternity Hospital and the gynaecological wards of the Royal Infirmary, fee £10 10s. A general practitioners' course will be held from August 15 to September 10, fee £10 10s for four weeks or £6 6s for two weeks. A general surgical course will be held concurrently at the same fees. An eight-weeks course on internal medicine will be held from October 17 to December 10, fee £15 15s. This course will be conducted by the honorary staffs of the Royal Infirmary and various special hospitals, and graduates will be attached in groups of four to the charges of the honorary physicians for individual practical and clinical work. In addition to these courses special instruction in individual subjects, such as diseases of the blood and of the nervous system, urology, anaesthesia, neurological surgery, etc., may be taken by graduates specially interested. Graduates may obtain the syllabus from the secretary of postgraduate courses in medicine, University New Buildings, Edinburgh.

On the occasion of the eleventh congress of the German Society for Investigation of the Circulation recently held at Bad Nauheim, Professor Hess of Zurich was awarded the Carl Ludwig medal and Professors Spalteholz of Zurich, Jaksch of Prague, Geheimrat Aschoff of Freiburg and Professor Hering of Kiel were nominated honorary members of the Society.

## Correspondence

### Classification of Adventitious Sounds

SIR—Examiners in medicine realize the confusion in the minds of candidates caused by the different terminologies used by their teachers. It would be a great help if we could all use the same terms. Could we not agree for instance to abandon the misleading terms 'dry' and 'moist' when applied to rales and substitute 'rhonchi' and 'rales' respectively? 'Rhonchi' would then be described as sonorous or sibilant according to whether they were produced in larger or smaller tubes. 'Rales' would be divided into bubbling (non consonating non-crepitant) and crackling rales (consonating crepitant) and each variety would be subdivided into coarse medium and fine. Could we not further agree strictly to confine the term 'crepitation' to the finest of all rales the hair-like crackling sounds heard in early pneumonia collapse and oedema which signify that the parenchyma of the lung is involved? Too often this term—or more briefly 'creps'—is used indiscriminately for any kind of rales. This classification appears to be the one most used and it is given in several standard textbooks. It is simple and each sound corresponds to a definite physical condition of the lung.

Candidates are also confused about the varieties of breath sounds. The finer distinctions can be left to the experts, but it seems to me that students should at least be expected to recognize vesicular breathing, vesicular breathing with prolonged expiration, broncho-vesicular breathing and the two varieties of bronchial breathing—tubular and cavernous. A simple explanation of the physical laws governing the production of sounds by fluid passing through tubes of varying calibre followed by a description of the methods by which each of the various structural alterations such as consolidation, emphysema, asthma, oedema, cavitation, etc. modifies the sounds would enable students to make correct deductions from physical signs and visualize the anatomical basis for the sounds. Many candidates do not see any contradiction in stating that they have found vesicular breathing with crackling rales, bronchial breathing over an emphysematous lung or whispering pectoriloquy with normal breath sounds. The modern student of medicine has a sufficiently difficult task without making it more difficult by the present confusion over physical signs.—I am etc.

Birmingham April 18

W H WYNN

### Origin of Cancer

SIR—The contribution of Dr W Cramer on the origin of cancer in the *Journal* of April 16 (p 829) was of absorbing interest and puts the problem before us in the clearest possible manner. What is now needed is an explanation of the sudden change which occurs in a cell or a small group of cells in a pre-cancerous area endowing it with the power of continuous growth. I have long been impressed with the analogy between this sudden change in the rate of growth and behaviour of cells and that equally sudden change which occurs in a colony of protozoa when conjugation takes place between two cells. The reproduction of the members of the colony by cell division has been slowing down, obvious signs of senescence and degeneration have appeared, the death of the whole colony is threatened and then the

whole picture is altered by the conjugation of two of these senescent cells and a new race of young and vigorous cells arises with a vastly enhanced rate of reproduction.

The only instance of conjugation in normal human or animal physiology is that between spermatozoa and ovum and it endows the resulting zygote with sufficient reproductive impetus to carry on cell-division at a gradually reducing speed until the final exhaustion and death of the organism. But conjugation occurs among the cells of malignant growths and was described by Basnford who observed it as identical with the process of conjugation seen in many protozoa. The cells of malignant growths therefore in this respect at least have reverted under the stress of long continued irritation to an ancestral type and have resumed the habit of reproductive alternation between fission and conjugation. Is not the sudden change on which Dr Cramer lays stress the moment of the first conjugation? Conjugation alone is sufficient to explain the peculiar powers of growth and infiltration of cancer cells and explains also their apparent immortality through transplant after transplant. Reversion or highly specialized zoological types to primitive prototypes under adverse environmental conditions is of course well known. The development of cancer in a tissue which has been long under stress is from this point of view a triumph of the cell against the threat of extermination.—I am etc.

Ashton-under-Lyne April 19

J V FIDDLA

SIR—It is to be regretted that in his otherwise very convincing article on the origin of cancer (*Journal* April 16 p 829) Dr W Cramer should make one statement that surely must be challenged on purely statistical grounds. He would seem to conclude (pp 83-4) from the fact that 99 out of 155 women (65 per cent) with cancer of the buccal cavity and oesophagus have a coincident simple achlorhydric anaemia that this is an abnormally high rate. It may be or it may not be. For he gives no evidence that among 155 women with say grey hair an even higher proportion than 65 per cent may not have a similar anaemia. However Dr Cramer then goes on to a quite (presumably) from the facts he has quoted that in two-thirds of the patients suffering from this type of anaemia one may expect the subsequent development of cancer in certain sites—that is buccal cavity and oesophagus—if treated not treated for their anaemia. Surely not? Not even if all the patients with that type of cancer suffer from this form of anaemia must two-thirds of these with the anaemia necessarily suffer from that type of cancer. What is the proportion of women over the age of 40 years who suffer from simple achlorhydric anaemia?—I am etc.

London SW 19 April 22

G I WATSON

### Prevention of Cancer

SIR—The important papers by Dr W E G (March 12 p 331) and Dr W Cramer (April 16 p 829) and the leading article of April 16 (p 855) provide constructive guidance to the cancer problem as it arises. Observe the stress laid by Dr Cramer on the prevention of realizing that cancer is a preventable disease. The recognition of cancer as a preventable disease is in my opinion one of the most important steps in scientific cancer research. He bases his argument on the observed fact that most cases of cancer are preventable but is always preceded by a long period of incubation occupying a considerable fraction of the span of the life of the species, during which the tissue in which the

phenomena of malignancy eventually develop undergoes definite pathological changes 'In certain tissues,' Dr Cramer continues, 'such as the skin the tongue, and the vulva—tissues readily accessible to inspection—the existence of pre cancerous conditions has long been recognized by clinicians, although pathologists have not always agreed that these are special examples of a general phenomenon applicable to the vast bulk of the cases of cancer occurring in all organs'

The growing acceptance of the creed that cancer does not attack a healthy organ or tissue is encouraging, once this is accepted, the prevention of cancer becomes practical politics. In regard to surface cancers—of the skin, lips, tongue, etc.—prevention is agreed to be a matter of avoiding habitual irritation by pipe-stems, jagged or septic teeth, hot drinks, etc., it is not a long leap to the conclusion, as Dr Cramer points out, that internal cancers could be prevented by similar or corresponding means. In my presidential address to the Hunterian Society on stasis and the prevention of cancer (*British Medical Journal* December 25, 1920, and Chapter XX of my book, *Chronic Intestinal Stasis*) I discussed this matter and showed, conclusively as I thought, that cancer in every situation occurred only after long periods of chronic disease of the affected organ or tissue. Proof that cancer is not inevitable is afforded by the well-known observations of Sir Robert McCarrison among the people of Hunza (see, for instance, his article in the *Practitioner* January, 1925). He writes

Gastro intestinal complaints—dyspepsias, gastric and duodenal ulcers colitis, and appendicitis—are as uncommon amongst them as they are common elsewhere. Even cancer is so rare that in nine years practice I never came across a case of it. There can be no doubt that their freedom from disease is largely due to the food they eat and the health-giving life they lead in a bracing climate.

A statement often repeated is that "a million people can't be wrong", this is grotesquely untrue. Not a mere million, but a thousand million people can be, and are, wrong as regards diet. If anyone doubts this, let him mark the complete confirmation afforded by Denmark during the war, this was no less than a large-scale demonstration of the effects of strict dieting on the health of a nation.

Shortage of food was so severe that strict rationing was necessary: this was entrusted to Professor Hindhede who was given dictatorial powers. Briefly he placed Denmark on a diet consisting of coarse whole rye and whole-wheat bread containing a large amount of bran, with small rations of skimmed milk butter margarine potatoes, and a very small amount of meat (Spirits, tea, and coffee were practically unobtainable). On this Spartan diet remarkable results were obtained: the death rate for the whole country fell to the lowest level ever seen in any civilized country—namely, 10.4 per thousand. Then came the epidemic of Spanish influenza that devastated Europe. Denmark did not escape but the death rate from influenza was far lower in Denmark than in any other European country. After the war when rationing was no longer enforced the Danes gave up the healthy diet imposed by the war, with the result that the death rate soon rose to pre war figures.

The way to the prevention of cancer is perfectly simple and obvious in itself, but is made extremely difficult because it entails an entire revolution in the habits, especially the feeding habits of the civilized world. It should be possible for those in authority to ensure a healthy natural diet for the entire nation but it would entail very severe discipline on the part of the people and a dictatorship with unlimited authority to control or suppress undesirable products. Mussolini in one of his first edicts

banned white bread and directed that the nation's bread be made from a mixture of whole-meal grains. A similar edict would have to go forth in this country, but equally important and far more difficult would be the drastic curbing, if not the entire prohibition, of those vast industries that fill shop windows and restaurant counters with unwholesome dainties—for example, those made from concentrated sugar, especially sweets, chocolates, and sugary cakes and pastries. The extensive advertising of foods and drinks that can be shown to injure the organs and tissues, especially the digestive organs, would not be allowed, concurrently, every measure would be adopted to persuade the people that the craving for sweetmeats and chocolates is a pernicious one, that it should be conquered, and the palate should be re-trained to enjoy the delicate flavours of natural ripe fruits.

The human race would be healthy on the natural diet for which it was evolved, a return to it may seem Utopian, yet it will have to be faced, and the sooner the better. The firms that unload unwholesome products on the public must transfer their activities to more health giving ends. I am convinced that the result would be an amazing improvement in the nation's health and would reduce the incidence of cancer to a sporadic case here and there, and not, as some seem to expect, merely transfer its incidence from one organ to another. The Government's scheme for ensuring national fitness will do no more than touch the fringe of the matter if it does not include a very strict supervision of the nation's diet, so as to bring it back to the natural one for which the digestive organs are intended—I am, etc.,

London, W 1, April 18

ALFRED C JORDAN

### Carcinoma of the Palate

SIR—Dr John R Nuttall's paper in the *Journal* of April 16 (p 839), drawing attention to the relation between neoplastic lesions of the palate and those of the maxillary antrum, will do much to effect earlier treatment of these cases. When the antrum is not completely filled by new growth my method (*Journal* July 10, 1926, p 38) of injecting lipiodol into the antrum before x-ray examination usually outlines the neoplasm successfully. Neoplasms of the antrum at times are missed by the rhinologist because he has drained an antrum, which he has presumed to be simply the seat of sepsis, by the intranasal method. The Caldwell-Luc or Denker procedures would have prevented this failure—I am, etc.,

Manchester April 17

W BRYCE MCKELVIE

SIR—Dr John R Nuttall in his article in the *Journal* of April 16 (p 839) draws attention to the fact that in quite a large proportion of patients suffering from carcinoma of the roof of the mouth the disease has already involved the antrum, indeed the buccal lesion may be merely an extension of an antral growth. All the cases referred to have evidently been treated by irradiation. Before treatment investigations were carried out in order to ascertain whether or not the antrum was involved some reliance was evidently placed on what is called the needle test. This can be of no value in estimating the extent of the antral involvement, and, moreover, it might lead to dissemination of the disease. During a surgical operation it is always possible to discover the extent to which the disease has invaded the antral walls, but obviously it is generally impossible to say whether it originated in the mucous membrane of the antrum or in that of the alveolus. By a technique in which surgical and electrocoagulation are combined, all tumours which

are reasonably localized and some which are rather extensive, can be dealt with the risk to the patient being practically negligible. In my opinion surgery without irradiation is much more likely to lead to permanent freedom from the disease than is irradiation without surgery, although in some cases the two methods may be combined with great advantage to the patient.

One of the merits of a surgical procedure is the large opening which results from removal of generally the greater part of the roof of the mouth on the affected side. Through the resulting opening the walls of the operation cavity can be periodically inspected and if a recurrence takes place its position can be located with some certainty and suitable treatment adopted. The opening much facilitates should such treatment be thought desirable the local application of radium. Even in cases where the disease does not appear to have affected the hard palate a portion of the roof of the mouth should be removed if only to render thorough after inspection of the region more easy. The defect in the palate can easily be filled up by a suitable dental appliance. The published records of treatment by irradiation do not encourage me to abandon surgical measures which I have employed for the last twenty five years and which owing to improved technique are giving much better results than were formerly obtainable—I am, etc

London W1 April 21

NORMAN PATTERSON

### After-effects of Modern Treatment of Carcinoma

SIR—Mr Percy Furnivall's account of his treatment by radium and x rays and the after-effects (*Journal* February 26 p 450) has brought forth a goodly correspondence in your columns. He has done a service in stating his experience, and all interested will wish him a speedy and complete recovery.

In this letter I am concerned not with the dosage of radium and x rays but with the medical treatment of the patient. Apart from the treatment of pain it any and general considerations for the patient's comfort I have found that a great deal can be done towards well being and recovery by a careful watch on the blood condition and the administration where anaemia exists in however small degree of liver extract with perhaps iron in an easily assimilable form. My attention was first drawn to this subject by an account in the *Journal* about four years ago in which Dr J H Douglas Webster described the successful treatment of x ray sickness by intramuscular injections of liver extract. Also there appeared about the same time in the *Epitome of Current Medical Literature* a description of similar good results from a Continental source. But besides this primary form of irradiation sickness which usually passes off in a day or two there is the delayed type in which real ill health persists more or less for a considerable period of time.

The formed elements of the blood are all affected by radiations the erythropoietic tissues less than the leucopoietic but the red cells and haemoglobin may be severely affected where some degree of anaemia is present previous to radium and x ray therapy.

In the patient suffering from carcinoma and in a debilitated state of health probably following operation and loss of blood an anaemia already exists. Hence the necessity for a blood count and the administration of liver extract and iron before radiation it required and certainly during treatment and for some time afterwards. During the last few years I have given these patients according to their degree of anaemia and debility capsules

containing liver extract with a trace of iron and vitamin B much to their benefit. Contraindication to this treatment may be found in a very few cases—I am etc

Hove April 16

J M ANDERSON M.D.

SIR—Mr Musgrave Woodman's letter (*Journal* April 16 p 871) proposing team work shows a way in which radiotherapy may be carried out efficiently and workers may assist materially in avoiding the disastrous after-effects which have been described in the recent correspondence. The most distressing after-effects would appear to have arisen when radium has been given in conjunction with x ray therapy and therefore the radiologist should be included in the team in order to ensure co-operation between the radium and x ray therapists.

At the regional radium centre at the Royal Hospital Wolverhampton team work in radiotherapeutics has been the rule during the past eight years. Radium therapy is controlled by a radium committee which from its beginnings now consists of all members of the staff who use radium including the pathologist and radiologist. This committee meets weekly and all new patients to whom radium treatment is proposed are examined and after consultation the patient is treated by the member of the staff introducing the case. All old cases attend these meetings for examination and follow up study. No patient receives radium treatment unless he or she has been brought before the radium committee except in cases of emergency such cases being reported at the next meeting. Radium therapists may object to loss of independence by this procedure but in this hospital no objections have been raised and the conditions have been willingly and loyally observed. It is considered that facilities for consultation and the opportunity of seeing a number of cases throughout the course of their treatment by different methods more than compensate for any loss of individuality. Throughout the course of his disease the patient is treated by a team and the dangers of complications from irradiation are minimized especially in those cases in which the application of radium is followed by deep x-ray therapy—I am etc

G E DAVIS

Chairman Radium Committee Royal  
Wolverhampton April 25 Hospital Wolverhampton

### Control of Sulphanilamide Treatment

SIR—Under the above heading Dr W J Honmann (*Journal* April 23 p 923) suggests that white cell counts in patients under treatment with sulphanilamide might all be undertaken as a routine so that some indication may be given of possible toxic effects before rather than after the event. The suggestion that such counts would give the desired warning has been made before in regard to this and other drugs but in reporting a fatal case (*Journal* July 17 1937 p 105) I drew attention to the fact that serial leucocyte counts had given no warning of impending agranulocytosis. Similar observations appear to have been made in other fatal cases. Test doses of an antidote in some recovered cases apparently due to the leucocytes have however shown granulopenic reactions. No effect of the procedure may be useful in some instances. No effect of the amount of labour involved in carrying out serial leucocyte counts in all patients receiving drugs producing agranulocytosis usually renders such a proceeding impracticable. Davis and Frisell (*J Lab Clin Med* 1937 23 107) reported observations on the leucocytes in a series of thirty-two cases treated with amiodip and in none did they observe any important effects. This interesting suggestion

might be due to the fact that treatment was always stopped on the occurrence of any symptoms of toxicity such as indigestion, lack of appetite, or dizziness. The value of such a method is doubtful, but it would at least be more practicable than routine leucocyte counts—I am, etc,

Royal Infirmary, Bradford, April 24

C J YOUNG

### First Mention of Sulphonamide

SIR—Recent correspondence in your columns prompts me to call attention to what I think has been overlooked by workers on the chemotherapy of sulphonamides. I refer to a suggestion made as long ago as 1919 by Heidelberger and Jacobs, who published a series of papers on "Syntheses in the Cinchona Series," of which the third was called "Azo Dyes derived from Hydrocupreine and Hydrocupreidine" (*J Amer chem Soc* 41, 2131). In this paper they describe the preparation of the meta- and the para-phenylazo-derivatives of hydrocupreine, and refer in passing to the preparation of *m*- and *p*-aminobenzene-sulphonamides, both of them substances already known. The point of historical interest is that these authors wrote (p 2132) "Many of the substances described in this paper were highly bactericidal *in vitro* a property which will be discussed in the appropriate place by our colleague, Dr Martha Wollstein."

A search of the literature between 1919 and the present day having failed to reveal any publication by Dr Wollstein, I communicated with Professor Heidelberger last summer on the matter. He was good enough to explain that they had been unlucky in their choice of substances to investigate, for "the bactericidal power of the sulphonamido-azo-hydrocupreines was not as high as some of the other substituted dyes, nor were the animal experiments encouraging." Professor Heidelberger added that he could not recall whether any therapeutic tests were ever carried out with this dye. Dr Wollstein's work was brought to an end, and no account of it was ever published. It is true that no reference is made, in the words of Heidelberger and Jacobs quoted above, specifically to the simple sulphonamides, or to their azo-compounds with alkaloids, and it would probably not be claimed by these authors that they had actually forecast the bactericidal properties of the sulphonamides. Nevertheless, the passage quoted does suggest the possibility of further chemotherapeutic studies and one cannot help wondering whether some of the subsequent work may not have been inspired by this paper, which was published from the Rockefeller Institute. The inspiration must, in that event, have been subconscious for it has not been possible to find in the publications of German investigators any reference to the work of Heidelberger and Jacobs. Professor Heidelberger himself believes that some reference was made in one of the earlier papers by the French workers, but I have not been able to trace this—I am, etc,

A L BACHARACH MA, FIC

Greenford Middlesex April 21

### Is it Influenza?

SIR—Is it possible that influenza can at times show atypical attacks which breed true to type in the form of an epidemic or must the symptoms always be classical for the diagnosis of influenza to be made? We are often told for instance to beware of labelling cases of early tuberculosis as influenza but what is one to call such a collection as the following?

There has been here this last winter an epidemic of catarrh of the upper air passages characterized by in-

sidious onset and great resistance to the usual forms of treatment, and even to well-tryed palliatives. Tracheitis has been the most outstanding feature, but there has often occurred as well a pharyngitis involving the soft palate but leaving the tonsils almost unaffected. The typical appearance was as if a streak of red paint had been placed upon each anterior pillar, and the accompanying subjective feeling was of a most annoying tightness in the throat, without actual difficulty in swallowing. The nasopharynx and even the middle ear have also been involved fairly often. These symptoms, besides being insidious in onset were liable to fluctuations from day to day, so that it was difficult to say when a patient had really recovered. There was no prostration, and yet many people found it impossible to continue their work while the disease was at its worst. Many showed no rise in temperature.

The symptoms do not sound very striking on paper but it has been obvious that all the cases belonged to a definite disease entity. It has usually been dubbed "influenza" on certificates, but when compared with the epidemic of the preceding winter it seems to have been misnamed. As was seen in the first epidemic, and in sporadic cases, influenza strikes with dramatic suddenness, but victims of this epidemic have succumbed slowly and protestingly, and they have not been prostrated rather have they been annoyed at the disconcerting disability produced by seemingly trivial symptoms. The intractability of the cough, etc, have been mentioned as features of influenza, and in this respect the disease can lay claim to the name. But the usual depression of convalescence has been lacking, and this is always emphasized in true influenza. I have not made a count of the total number of cases I have seen, but I am convinced they have been as many as the typical influenzal ones the year before, so that the term "epidemic" is permissible, I think. And it will be obvious that enough cases have been seen for one to feel certain of the facts.

I believe that there has been here a new infectious disease of the upper air passages, if not, then the usual descriptions of influenza must be revised to include such epidemics as this—I am, etc,

Redruth, Cornwall, April 22

L A RIDDELL

### Influenza, a Misused Term?

SIR—Claiming that the causative organism of influenza has at last been discovered and that the study of the symptoms of 120 patients, chiefly in the hospitals of the defence services, has established its symptomatology, the Medical Research Council in its annual report seeks to criticize the popular use of the term "influenza."

There is a heterogeneous mass of ailments in general practice which go by the name of minor maladies. It is the periodic exacerbation of certain of these maladies which has been called epidemics of influenza. Save for the numbers affected there is nothing unusual about the ailments of these periods; what relation, therefore, if any, have these exacerbations to the illness described in the annual report as the "real epidemic influenza?"

Following the pandemic of 1918-19 a report was issued by the Ministry of Health. It contains a description of the symptoms of that pandemic, and the writer stated that he was not prepared to call it "influenza." It is worth studying again, for the summer and winter epidemics according to the writer, "presented very different clinical features. Which of those was the real epidemic? Certainly the graver winter epidemic looks more like that condition which in the MRC annual report is described as 'febrile catarrh,' and one should note that among



the symptoms of the Council's real epidemic influenza there is now no mention of the dreaded blueness of that period

I possess a day-to-day record of the symptoms of new patients as they presented themselves during the 1922 epidemic and there is an obvious variation in the symptomatology of the epidemic as between its initial and terminal stages. As the patients affected presented no fixed symptomatology that epidemic must fall from grace. I cannot write of the next three epidemics in any definite detail but during those periods it became more apparent than ever that the well-tended healthy type or individual was the readiest sufferer. Sir William Hamers observations in regard to types led to the analysis of the 1922 epidemic which is used above and the sequence of the clinical signs revealed in that analysis induced me to study the 1936 epidemic from a new view point. There was the same variation in symptomatology but it was evident that this variation was related to a different type of individual affected at different stages of the epidemic. Therefore the 1936 epidemic fails also to have been a real epidemic of influenza. Isolated cases of illness described in the report I have often seen but never enough at any one period to deserve the name of epidemic. Furthermore, it can be demonstrated in any epidemic that if the minor malady is properly handled when it appears in a household deaths and complications are negligible.

If the symptomatology of segregated individuals is different from the symptomatology of individuals in ordinary life during similar periods then it raises many interesting conjectures. Some of these can have a bearing on the bacteriology of the condition. I am not interested in influenza from this standpoint because I still fail to see that it can have any practical value (can we vaccinate a population?) but as the accusation of misuse of the term comes from this angle I would like to draw attention to a discrepancy in the report.

If reference be made to the articles in the *Journal* of September 11 1937 (pp 513-516) by Drs C. H. Andrews and C. H. Stuart Harris—and it is on their work that the Medical Research Council relies to a great extent for its information—it will be noticed with regard to the so-called febrile catarrhs that the statement "influenzal virus was not recovered" is converted into "influenzal virus is not concerned." There still remains a possibility therefore that influenza may be found after all to cover many different manifestations. It is not from any desire to criticize any research work nor to trouble the Council with my own but the Council can have little idea of how such premature assertions can affect panel doctors. The report will come before the Ministry and another formula will be devised to tighten the certification of incapacity, and unless the panel doctor is prepared to face an inquisition the term "influenza" must go. In spite of that there is a connecting thread running through the whole problem of minor maladies whether it be concealed under a conglomeration of names or indicated by one—I am, etc.

Halifax April 23

A. GARVIE

### Calcium and Phosphorus Deficiencies

SIR,—In the paper by W. E. Gaunt, J. T. Irving and W. Thomson in the *Journal* of April 9 (p. 770) the statement is made that numerous experiments with large animals have demonstrated that calcium and phosphorus lack is a common cause of deficiency disease retardation of growth and low viability in young at birth. As the main authority for this statement the papers of Elliot Crichton and Orr (1922) and Elliot and Crichton (1926)

are cited. In the former paper it is alleged that rickets is due to a lack of calcium in the diet and that the disease can be prevented or cured by raising the proportion of calcium in the ration to that of the phosphorus. During the years 1922-6 I had the opportunity of closely observing in the piggery attached to the Rowett Institute (which had an annual population of hundreds of susceptible pigs) the effect of this balancing of the ration of the calcium to that of the phosphorus. Rickets as a natural disease occurs most often in January and February (owing to the lack of sunlight) and in the stock just alluded to fed on this balanced ration during January and February of these years hardly a pig which could be the subject of the disease escaped it.

The second paper cited has reference to the effect on young sheep of adding calcium to a ration deficient in this substance. I refrain from discussing the merits of this contribution but I have in my possession complete protocols (which were and are available to all workers in the Institute) of too much more elaborate and detailed experiments of the same type carried out at a later date in the Rowett Institute under essentially the same supervision. The first of these experiments is designated in the official record as "sheep experiment No. 8" and was conducted during the autumn, winter and spring of the year 1928-9. It is recorded that the group on the basal ration with calcium "adjusted" by the addition of calcium carbonate showed marked bent leg stiffness, going off legs, walking with difficulty, loss of weight and loss of health. As evidence of the two latter conditions one notes that at a time when in other groups as many as six animals were being sold at prices ranging from 36s. 9d. to 47s. 3d. each only two out of this group were saleable and for these 26s. 9d. per head was obtained.

The second experiment is termed officially "Garrochoran sheep at Rowett Institute experiment 1" and was carried out during the autumn, winter and spring of the year 1931-2. In this case group 3 in which the basal ration was balanced with calcium carbonate showed stiffness and bent leg while the weights of the animals and the calcium in the blood (ranging from 0.63 to 0.75 mg. per 100 ml. from March 10 to March 17 1932) were of the same order as those in the sheep fed on the basal ration.

It seems to be the opinion of Gaunt and his co-workers that the addition of calcium salts (their views on the additions of phosphorus salts are not quite clear) to the "survey diet" (human) greatly improves this diet as tested on rats. Unless rats have a metabolism differing from that of the other animals experimented on this result is completely out of harmony with those obtained in the pigs above referred to in the pigs discussed in my paper in the *Journal* (1933 2 399) in the sheep of experiments 8 and 1 and in chickens (McGowan and Emslie *Biochem. J.* 1934 28 1.03). The crucial factor in these cases is of course vitamin D which is not mentioned in the paper under discussion—I am, etc.

J. P. MCGOWAN

Aberdeen April 21

### Abuse of Ephedrine

SIR,—As a fairly frequent sufferer from common colds it was with some interest that I read Dr. R. R. Fergus's letter on the abuse of ephedrine (*Journal* April 16 p. 874). My rhinorrhoea ordinarily lasts a fortnight and has exceeded this time on one occasion only. This was when I made use of an oily preparation containing ephedrine and the rhinorrhoea persisted for over a month, my nasal mucosa remaining congested during this time.



and the airway becoming intermittently blocked I am therefore of a mind with Dr Foote when he suggests that such preparations may damage the nasal mucosa. I do not agree, however, that inflammation of the antra is the usual end-result. On the contrary, I think that the occurrence of pain in the sinuses—frontal, maxillary, or ethmoidal as the case may be—is the main indication for the use of oily preparations containing ephedrine. As there is a risk of damaging the mucosa in some individuals, I give the preparation once or twice daily only in these cases according to the result. I also instruct the patient, when he has finished instilling the drops, to adopt for a short time such an attitude as may be consistent with the drainage of the sinus which gives rise to the discomfort. I have used this treatment with success in some cases where a family history of antral trouble was given. The extent to which the mucosa of the sinuses inflames during the average common cold is not accurately known, for the disease is not lethal. It seems to me unlikely that the intranasal instillation of vasoconstrictors leads to their introduction into the sinuses in such quantity as may directly affect the mucosa one way or the other. On the other hand, the shrinkage of the membrane in the neighbourhood of the ostia is probably beneficial, promoting free drainage if the application has been made successfully—I am, etc.,

Grangemouth April 19

J M HENDERSON

SIR,—In your issue of April 16 Dr R. R. Foote suggests that his experiences may call forth some confirmatory evidence. May I hope that you may find space for the following?

The artificial production of vasoconstriction and the drying-up of the secretions is contrary to nature. The moisture secreted by the mucous lining of the walls of the nose is essential for the normal hygiene of the respiratory passages. The sudden increase caused by irritating particles or by the common cold must be recognized as a cleansing flow to be encouraged and followed by the clearing blow. In no case can it be safely inhibited. Repeated attempts to desiccate the surface will result in a sort of tanning process, with loss of sensitivity so that the call to clear is not recognized even if it comes. Then again, the vitality of the cilia is diminished or lost for they cannot survive on a dry surface. Oily emulsions, too, impede their action. The temporary relief that comes from the widening of the airway as the mucous membrane shrinks is so welcomed by the victim that he almost naturally tends to make it permanent. When that has been accomplished the foreign matter accumulates. The germs cease to be disturbed and routed out so that they flourish and multiply in the incubator-like cavities. The toxic products are scattered as they form infecting the neighbouring structures or the blood stream.

The germicidal properties of the nasal, as of the lacrimal fluids are of the utmost importance for the general welfare—I am, etc.,

OCTAVIA LEWIN, M B, B S Lond

### Auricular Fibrillation in Cardiazol Treatment of Schizophrenia

SIR—The following case appears worthy of note

The patient an intelligent man of 33 formerly an engineer, had been suffering from catatonic stupor since 1931. He was resistive negativistic mute and destructive. His habits were degraded and he was incontinent of urine and faeces and coprophagic. It was decided to include him in a series of cases suitable for cardiazol convulsant therapy. A physical examination showed no abnormality and there was nothing significant in the history. Preliminary investigations of the

blood bromide, blood urea and urine were carried out according to routine. These were all found to be normal. The blood pressure was 120/85 mm Hg. On March 23, 1938 at 11.30 a.m., he was given an intravenous injection of 5 ccm. of a 10 per cent solution of cardiazol into the right antecubital fossa. A major convulsion followed immediately with tonic and clonic phases. The patient appeared rather paler than usual and frothed a good deal through his nose. His pulse had become irregular in rate and volume, and showed the characteristic features of auricular fibrillation, the rate was about 90. The heart was not enlarged. Injections of digitalin and strychnine were given, followed by tr. digitalis by mouth. The heart continued to fibrillate for twenty-four hours the rate varying between 64 and 118, but was usually between 70 and 90. The digitalis mixture was discontinued and the pulse remained regular and has been so ever since.

On March 26 he passed some blood and mucus per rectum with a great number of threadworms, no more have been passed since then. A blood count revealed no abnormality. The red cell count was 5,350,000, haemoglobin 100 per cent, colour index 0.93, the leucocyte count was 7,800 and there was no eosinophilia, the diameter of the red cells was  $7.3 \mu$ . His weight has varied from 11 st to 7 st. At present it is 9 st 8 lb. It was not considered advisable in the circumstances to continue with the cardiazol injections—I am, etc.,

Cefn Coed Hospital, Swansea, April 11

S H LUBNER

### Chronic Littritis

SIR,—Might I finally sum up my views as to the mechanics of hand syringing applied to the urethra? In the experiment reported by Dr Sydney M. Laird (*Journal* April 9 p. 816) the pressure recorded by the manometer is in the case of the douche a close approximation to that applied to the urethra, but in the case of the syringe, by reason of Bramah's principle, the level of the manometer will depend on the relation between the cross section of the syringe and that of the tube, as well as on the force exerted on the piston. Dr Laird applied a ligature to represent the contracted sphincter of the urethra. Under natural conditions the anterior urethra when this sphincter is contracted forms with the syringe a closed system, without the relief afforded by the side tube in the experiment. When the system is filled with fluid—which is of course incompressible—the force tending to drive fluid into the glands of Littre is  $NP + E$  lb per square inch (where  $P$  is the pressure applied to the piston, and  $E$  the elastic recoil of the peri-urethral tissues both measured in lb per square inch), in the case of the douche at a height of 3 ft this force cannot exceed 12 (hydrostatic pressure) +  $E$  lb per square inch. Since a pressure of more than 12 lb per square inch can easily be exerted on the piston it is clear that more force can be applied with a syringe than with a douche. It seems to be true that with a relaxed sphincter the pressure produced by a syringe will be even lower than that produced by a douche, but it is easy to see that in either case the pressure will be low by reason of the comparatively free flow into the bladder.

In actual practice the properly instructed patient relaxes the sphincter when using a douche, and even if he fails to do so the resultant pressure is low and has a maximum value fixed by the height of the douche. The syringe is commonly used by the ignorant who do not know how to relax the sphincter, nor the importance of doing so, it is also probably easier to acquire the art of relaxing the sphincter when it is subjected to continuous but low pressure than when brief but forcible pressure is applied. I submit, therefore, that the contention that the hand syringe can produce excessive intra-urethral pressure

is maintained but I must also apologize for certain obvious fallacies in the reasoning which I previously advanced in support of this conclusion—I am etc

Salford April 25

R C WEBSTER

SIR—This correspondence on the aetiology of chronic litritis between Dr R C Webster and myself has already encroached considerably on the space in the *Journal* and therefore, I cannot comment on Dr Webster's remarks concerning ear maintenance ear syringing and infiltration anaesthesia (*Journal* April 23 p 921). All are irrelevant to the discussion as it is manifest that the irrigation obtained by the patient using a hand syringe is not comparable with that possible when an independent operator is conducting the manoeuvre. In conclusion may I express the hope that this correspondence far from detracting from the very real value of the major part of Dr Webster's original paper (*Journal* February 26 p 448) has actually focused increased attention upon it—I am etc,

Liverpool April 23

SYDNEY M LAIRD

\* \* This correspondence is now closed—ED *BMJ*

### Pasteurization of Milk

SIR—I have received several letters suggesting that my part in the milk controversy is animated by a financial interest in a certain milk supply company. As that may influence some of those interested I wish at once to say that I have not one penny invested in any such company and never had much to my regret. I have no axe to grind. Like Dr C O Hawthorne (*Journal* April 23 p 917) I do not think that the theory that pasteurization of milk has any appreciable influence on fertility is of any importance when weighed against the necessity for a clean and germ free milk supply. The buck and doe test cuts no ice; this can be said of most tests. A healthy nation even supposing it should be slightly less fertile is far and away a sounder proposition than a large nation whose stamina is undermined by a contaminated milk supply. The fall in the birth rate is not, as we know well, dependent on diet but on those preaching a gospel of birth control—whether rightly or wrongly does not enter into this discussion.

Neither Certified Grade A nor Grade A T T milk is safe as they all contain living active bacteria. Cows tested for tuberculosis to day may be negative but the same cows tested in three months may be positive. During that interval milk from these cows has been supplied to the public. Therefore there is no definite guarantee that milk from a T T herd is free from tubercle bacilli unless and until it has been pasteurized.

I give place to no one in my desire that milk producers and farmers should have all the encouragement and help that it is possible to give them, but that does not override a greater desire to see being built up a healthier and sounder nation than we have to day. Of course an ideal milk is a raw milk, provided such can be produced that is clean pure and uncontaminated. To this day such a milk has never been procurable.

To the question put to me in the letter by Lord Rowallan (April 23 p 918) regarding the pathogenicity of *Bact coli* it must be quite evident from my letter that I regard all *Bact coli* as pathogenic. I regret that I do not quite grasp what is the meaning of the request for experiments to decide the relative growth in raw and pasteurized milk of pathogenic germs which have passed successfully through the process. What process is referred to? If pasteurization is meant no pathogenic germs

have successfully passed through the process. Any such found in pasteurized milk subsequently to pasteurization have been introduced after the cap has been interfered with. Pasteurization does not prevent subsequent contamination if the milk is improperly handled or stored.

The question of a national milk supply resolves itself into this: What class of milk is likely to be most beneficial to the general health and stamina of the nation? Is to be raw milk containing living active pathogenic bacteria even if the fertility and vitamin ratios are unimpaired or pasteurized milk which is clean and germ free but which may be slightly deficient in its vitamin and fertility balance? The answer is self evident—I am etc

London SW 16 April 23

JAMES KIRKLAND

### Distress in China An Appeal

SIR—It is difficult if not impossible for people in this country to realize the extent and severity of the destitution and physical suffering of many thousands of the Chinese resulting from the present hostilities. Recent events in Europe together with the remoteness of China have also distracted attention from the catastrophe in the Far East. During the last five months we have received the most urgent appeals for help and have brought them to the attention of the excellent organizations that are doing everything possible to mitigate the distress in the provinces of China where suffering is greatest. The answer has invariably been the same. Every penny that comes in is pledged in advance to support the relief schemes already in operation—we cannot consider any new commitments.

A letter dated February 7 1938 coming from Dr C Y Wu Director of the Chinese Red Cross, Hong Kong Bureau contains the following passage:

We are still urgently in need of the more valuable supplies such as surgical instruments sera adrenaline calomel coramine ferrous carbonate 0.3 gramme ferri et ammon citrati rubber gloves Thomas splints oil cloth gauze and gauze bandages 6 inches by 3 yards autoclaves anaesthetic machines and burners instrument sterilizers rubber tourniquets and tubercle Funds are also urgently needed to finance our field units. Each unit consists of five surgeons and fifteen nurses and orderlies. We now have thirty-nine such units operating at the various fronts and it requires a tremendous cost of medical and surgical equipment—700 dollars to support one unit for six months. I hope you can assist in this matter.

It seems to us that this appeal should be addressed direct to the profession in this country. Here is one of the specific where a small gift in money or in kind will surely be turned to account. Some may feel that whatever is collected will be no more than a drop of relief in a vast ocean of suffering. This is not the view of those who are caring for the victims of war and famine in China.

The signatories of this letter are prepared to take personal responsibility for receiving and transmitting all gifts from the medical profession to Dr Wu in Hong Kong and it is our earnest hope that you will have a good deal of work to do. The address for reception of gifts of all kinds is the China Institute 91 Gower Street London WCI—We are etc

MILLAIS CULPIN  
O.C. Sec. of the Chinese Red Cross  
W. C. W. NING  
Late Prof. of the Chinese Red Cross  
H. J. SEDLON

London WCI April 1938

## Obituary

### SURGEON VICE-ADMIRAL SIR ROBERT HILL, KCB KCMG FRCS

Surgeon Vice Admiral Sir Robert Hill, R N (ret), who died at Henley-on-Thames on April 18, was Principal Medical Officer of the Grand Fleet during the last two years of the war, and Director-General of the Medical Department of the Admiralty from 1919 to 1923, in which year he retired from the Service.

Born on July 25, 1865, the son of Dr Samuel Hill,

he was educated at the Middlesex Hospital, and took the MRCS, LRCP and LSA in 1888. He was elected FRCS Eng in 1923, and also received the honorary FRCS Ed. Entering the Navy after qualifying, in a varied and interesting career he served in the *Ophir* during the Royal colonial tour of 1901, in HMS *Renown* when King George V and Queen Mary, then Prince and Princess of Wales, visited India in 1906, again in 1911-12 he was with Their Majesties in the *Medina* on the occasion of their voyage to India for the Durbar. During the war he served in the North Sea, and from 1916 to 1919 was Principal Medical Officer of the Grand Fleet. In 1919 he became Director-General of the Medical Department of the Royal Navy, and held that post for four years. He received the MVO in 1906, in 1912 the CVO, in 1918 the CB, in 1919 the KCMG, and in 1922 the KCB.

He also received the Distinguished Service Medal of the United States Army and the second class of the Russian Order of St Stanislaus. In 1923 he was appointed Honorary Surgeon to the King, and in 1926 received a Good Service pension, left vacant by the death of Sir Henry Norbury.

After his retirement Sir Robert Hill lived for some years in London at Whitehall Court. In 1929 he went to reside at Henley where he took an active interest in local affairs. He was vice president of the Henley Branch of the British Legion and at one time president of the Henley Golf Club. He was also a director of the Star and Garter Home at Richmond. Queen Mary never lost touch with him and the last letter he was able to understand was one from Her Majesty written only a few days before his death, which gave him the utmost

pleasure, she wrote to him every Christmas. He never married, but had a very large circle of close friends.

The funeral on April 22 at Remenham Church, near Henley, was attended by the First Sea Lord, Lord Chatfield, the Medical Director General, Surgeon Vice Admiral P T Nicholls, Admiral Sir John Green, and Surgeon Rear-Admiral H C Whiteside.

Sir Humphry Rolleston writes:

Robert Hill was a keen athlete, especially as a Rugby football player at the Middlesex Hospital, and this was one of his special qualifications for the post of staff surgeon at Osborne College when it first opened. There he had a busy time, for many of the cadets who had not previously had some of the infections of child

hood were attacked by measles and so forth, thus causing much anxiety among their parents and some undue public notoriety. An epidemic of conjunctivitis, common in all schools, was very seriously taken as "pink eye," and ingeniously if erroneously, ascribed by the public to the stables of the Osborne dormitories over or close to the stables of Queen Victoria at Osborne House, the connexion with horses was that an outbreak of so-called pink eye among horses in South Africa had occurred in the Boer War.

Hill held many appointments. In 1907 he was appointed operating surgeon at the Naval Hospital, Bight, Malta, and at the outbreak of war was in medical charge of the Marine Depot at Deal, where cases of cerebrospinal fever occurred early in 1915. In 1916 he became Principal Medical Officer to the Grand Fleet, being on the staff

of the Commander-in-Chief, first Lord Jellicoe in the *Lion Duke* and later Lord Beatty in the *Queen Elizabeth*. He had been awarded accelerated promotion at an earlier period in his career, and as he was not appointed to any of the main Royal Naval Hospitals—Haslar, Plymouth, or Chatham—after the war, but was promoted Director-General of the Medical Department of the Admiralty with the rank of Surgeon Vice Admiral (1919-23), he was retired early, before the age of 60. But he then freely gave his services to the Red Cross and to other charitable objects, especially for ex-Servicemen.

An able surgeon and efficient administrator, with an extremely friendly, cheerful, and approachable personality, who often kept in touch with former patients, he had troops of friends whom he was always delighted to see and to help. He deservedly received many honours.



a clubbable companion and was much in request on the committees of the Army and Navy Club. For some months he had been in failing health and his appearance had made his friends anxious.

### JOHN BRIGHT BANISTER MD

FRCP FRCSEd FCOG

Senior Obstetric Physician, Charing Cross Hospital

Mr J Bright Banister, the well known London obstetrician and gynaecologist, died suddenly on April 16 aged 55. His principal appointments were those of obstetric physician and lecturer on obstetrics and gynaecology at Charing Cross Hospital and chairman of the Medical Committee, surgeon to the Chelsea Hospital for Women and consulting obstetric surgeon to Queen Charlotte's Maternity Hospital.

The eldest son of Howard C Banister of Tunbridge Wells, he was born at Blundellsands on April 3 1880 and from Merchant Taylors School Crosby, Lancashire went to Jesus College Cambridge and gained honours in the Natural Sciences Tripos of 1901. He then entered as a medical student at Charing Cross Hospital and after taking his M.A. qualified as L.S.A. in 1906, two years later he graduated in medicine at Cambridge, proceeding MD in 1909. He obtained the FRCSEd in 1913 and was elected a Fellow of the Royal College of Physicians of London in 1928, having held the membership since 1910. At the foundation of the British



College of Obstetricians and Gynaecologists in 1929 Banister was one of its first Fellows and he became later a member of the Council. His career in that specialty began in the post of resident obstetric officer at Charing Cross Hospital in 1907 after he had been house surgeon and house physician there. This was followed by experience as registrar and pathologist at Queen Charlotte's registrar at the Chelsea Hospital for Women and obstetric registrar and tutor at Charing Cross and afterwards as a member of the visiting staff of all three institutions. He was also gynaecologist to the Prince of Wales Hospital, Tottenham from 1912 to 1924. At various times he examined in midwifery and diseases of women for the Universities of London, Cambridge and Aberdeen for the English Conjoint Board and for the Central Midwives Board. He served in France and Egypt during the war as *medecin en chef* Anglo-French Hospital Le Treport and as surgical specialist No 17 British General Hospital Alexandria. Besides his long association with three large London hospitals Banister was honorary gynaecologist to the Northwood Memorial Hospital and the Norwood Cottage Hospital and obstetric surgeon to the Florence Nightingale Hospital in Lisson Grove. At the Bath Meeting of the British Medical Association in 1925 he served as honorary secretary of the Section of Obstetrics and Gynaecology and ten years later was vice president of the same section at the Melbourne Meeting. He had also been vice president of the Obstetrical Section of the Royal Society of Medicine. In addition to many papers in the medical journals Banister was part author of *Queen Charlotte's Textbook*

of Obstetrics and author of a *Manual for Midwives* which has gone through several editions.

At the memorial service in St Martin in the Fields on April 20 the Council of the British Medical Association was represented by Sir Ewen Maclean, President of the British College of Obstetricians and Gynaecologists.

Mr Victor Bonney writes:

The death of John Bright Banister deprives the profession of a fine gynaecologist and obstetrician and a most genial and lovable man. He and I first became acquainted in 1909 when he came to Chelsea Hospital for Women as registrar. Those who only knew him of later years will be surprised to learn that at that time he was a quite slender youth looking less than his age. His duties as registrar were so well carried out that when a vacancy on the honorary staff occurred in 1913 he was elected junior assistant surgeon. The war came horribly afterwards and during those troublous years I saw but little of him as our paths diverged. But after it was over and the non-war staff had come together again the recognition that a period of collegialship on which I shall always look back with pleasure.

Besides being on the staff of Chelsea Hospital for Women Banister was also attached to Charing Cross and Queen Charlotte's Hospitals and other smaller institutions and his reputation steadily grew until he became one of the best known exponents of gynaecology and obstetrics in Great Britain. As a surgeon he was gifted with what is sometimes called a beautiful pair of hands, dexterous and gentle with the result that he carried through the most severe operations with a minimum of shock to his patient. By temperament he was always cool and steady, difficulties did not discourage him and he unforeseen left him unweary. Beyond his professional attainments he will be missed for his personal qualities of good humour, kindness and generosity. No man has ever been freer of envy and uncharitableness. Finally I would pay tribute to his fine courage which enabled him knowing the menace to carry on steadfastly till the end.

Two junior colleagues (F C and C D R) write:

An inspiring leader has been called to our midst at a time when our profession is in serious need of guidance.

J B was a great man and a very great gentleman. There are many of us who will sorely miss his personal encouragement, his wisdom and his ready sympathy. He never spared himself in working for others although the calls upon his time and energies were unbounded. His capacity for generous endeavour seemed unlimited and in every situation his control was perfect. It is not long since he himself quoted Shelley's lines in writing of his old chief, Arthur Giles:

Man who man would be  
Must rule the empire of his clime in it  
Must be supreme establishing his throne  
On vanquished will quelling the anarchy  
Of hopes and fears being first of love

And now it falls to our sad lot to reflect that a great chief was so animated throughout his honourable career. It is often said of a man who is dead that he never fails of anyone. In the case of Banister this is a true statement whatever the conditions. Never really to be a shroud though a cruel judge of human nature. Perhaps he suffered too much too gladly. For that he will be missed in the hereafter but to him is a virtue that is up to take its toll on earth. However over a dead he may have been—and at times he must have felt despair and tired—he always took the trouble to understand people and

their moods, and to encourage every individual with whom he came in contact, whether an exacting patient or an argumentative colleague. In this respect gynaecological and obstetric practice is a particularly trying pursuit; reason alone rarely prevails. Quite apart from his technical skill, he was a man of profound clinical judgment, he had insight and that flair, born of imagination and experience, which is given to very few in these days of medical confusion. He was an inspiring teacher and a remarkably fair examiner, beyond that he was a healer in the very best sense of the word. This is a rare combination. Banister's advice and opinion will be sorely missed in the council chamber of the British College of Obstetricians and Gynaecologists and the Central Midwives Board, and in the Court of the Society of Apothecaries. He exercised his great talents in many capacities, wherever he served, he served with the utmost distinction and with all his heart and soul. Some of us will feel his loss most keenly at the Chelsea Hospital for Women, where, as senior surgeon, an ideal chairman, and a never-failing friend, he ruled and directed with dignity and an entire absence of friction. 'J B' was a good and sincere Mason, an officer of Grand Lodge. There are thousands within and without the ranks of Freemasonry who will mourn his death.

[The photograph reproduced is by Elliott and Fry, Ltd.]

#### J G COOKE, OBE, MB, CHB

By the death of Dr John Galwey Cooke, at the age of 78 years, Londonderry and the North of Ireland generally has lost a medical man of outstanding ability and personality. Dr Cooke belonged to an old South of Ireland family; his father, the Rev Ambrose Cooke, being rector of Thomastown in Co Kilkenny. He received his medical education at Trinity College, Dublin, where after receiving the degree BA he graduated in medicine in 1887 with the degrees of MB, ChB. After acting as house-surgeon for some time and obtaining the LM of the Rotunda Hospital he accepted the post of resident assistant surgeon to the Londonderry City and County Infirmary under the late Sir William Miller. On the death of Sir William Dr Cooke was appointed surgeon to the hospital—a post he filled with distinction until his resignation in 1920.

He was always keenly interested in his profession, and took an active part in everything pertaining to its welfare. He was a Fellow of the Royal Academy of Medicine in Ireland and an ex-president of the Londonderry Medical Society. He was deeply interested in the affairs of the British Medical Association having acted as honorary secretary to the Derry Division for over thirty years and having been a president of the former Ulster Branch, and in earlier years secretary, vice-president, and president of the Londonderry and North-West of Ireland Branch. It was during the great war that Dr Cooke's energy, organizing ability and sympathy got full scope, for during this period shipwrecked and injured sailors were constantly being brought to the hospital in Derry for treatment and care. For the magnificent work he did so truly and generously at this time he received the OBE—an honour to which he was well entitled.

With his passing yet another of the good old school of doctors has gone—a type that is, unhappily, rapidly diminishing. Dr Cooke will always be remembered by those who were privileged to be numbered among his friends for his kindness, his courteousness and his genuine sympathy. He is survived by his sister, to whom the sympathy of a large circle is extended.

#### W H DOLAMORE, FRCS, LDS

We regret to announce the death on April 19, at the age of 74 of Mr William Henry Dolamore, a distinguished member of the dental profession who did much to strengthen its position and increase its value to the public. Entering as a student at the Royal Dental Hospital, Leicester Square, he won the Saunders scholarship in 1888 and obtained the LDS. He then studied medicine at St Mary's Hospital, and after qualifying MRCS and LRCP in 1892 was appointed dental surgeon to the London Hospital. He was a member of the staff of the Royal Dental Hospital for more than thirty years, and returned to St Mary's Hospital as dental surgeon. From 1912 to 1922 he was a member of the Board of Examiners in Dental Surgery of the Royal College of Surgeons of England, and in recognition of these and many other services he was elected FRCS in 1933. He had also been external examiner in dental surgery for the Universities of Liverpool and Leeds. Mr Dolamore did invaluable work early in the first decade of the present century as honorary secretary of the British Dental Association, and in 1915-18 was president. When the Dental Board of the United Kingdom was set up in 1921 under the Dental Act of that year the Minister of Health appointed him a member, and three years later, when that office lapsed, he was elected to the Board by qualified dentists in England and Wales, retiring in 1934. Throughout the whole period of thirteen years he was treasurer of the Dental Board and an additional member of the General Medical Council under the Dentists Act, 1921, appointed by the Privy Council. Mr Dolamore joined the British Medical Association in 1895, and was vice-president of the Section of Odontology at the Annual Meeting in London in 1910.

Supplementing our obituary notice of Dr JAMES GODDING (April 16, p 875), 'T B B' sends the following tribute: 'I had every opportunity of appreciating his worth as a man and his very high degree of administrative ability when he was in command of No 17 General Hospital, Alexandria, Egypt, in 1917 and 1918. I was ADMOS at Alexandria throughout the war, and No 17 was the largest of our general hospitals there. From an establishment of 2040 beds it had expanded to 3,500 beds, and remained at that figure during the period of Godding's command. Never had I a moment's anxiety as to the successful, smooth, and efficient working of that very large unit while he was there. His training as a barrister and his medical work in various offices, including that of coroner at the Port of London, were invaluable in the administration of this very large and important war hospital. The GOC Alexandria fully appreciated his value, and on several occasions when he had a difficult court martial or a complicated court of inquiry on hand he would tell us that he must borrow Godding again to be president as he was far the best man he had in his command for the job. It can have fallen to the lot of few medical men to command a battalion in France and Egypt with distinction, and then to administer a hospital of this size with such signal success as to earn four mentions in dispatch. I am sure that all members of the staff of No 17 GH will join with me in mourning the loss of a true friend and a very exceptional personality.'

Dr HARRY STARK of Stoke Newington, London, died on April 19 as the result of septic blood infection contracted from a patient. He had been under treatment for several weeks at the Royal Northern Hospital. Born in 1902 Dr Stark was a student at St Bartholomew's Hospital and qualified MRCS, LRCP in 1929. At St Bart's he had been casualty medical officer and clinical assistant in the ear, nose, and throat department. He also served as house physician, house surgeon, and resident.

medical officer at the Royal Waterloo Hospital for Children and Women. He was a member of the City Division of the British Medical Association and had practised for some years at Stoke Newington Common holding the posts of assistant school medical officer under the L.C.C. divisional medical officer for the British Home and Hospital for Incurables and medical officer in charge of the Leistonstone Children's Homes. Dr Stark's untimely death at the post of duty has caused grief to all his patients.

Mr CHARLES EDWIN TRUMAN M.R.C.S. L.D.S. for more than thirty years surgeon-dentist to the King's Household died at Upton Slough, on April 14 aged 88. His early education was at Geneva. From Eton he went to Caius College Cambridge to study medicine and thence to St Thomas's Hospital. He graduated B.A. in 1871, proceeded M.A. in 1874 and took the M.R.C.S. diploma in 1875. He then studied dentistry at the Dental Hospital in Leicester Square becoming L.D.S. in 1881 and soon afterwards was appointed to the staff of that institution. Mr Truman was also for many years surgeon-dentist to St Thomas's and on his retirement was elected to the consulting staff and made a governor of the hospital.

Dr EDWARD ERNEST NORTH SLURRIDGE who practised for many years at Knutsford Cheshire died on Easter Sunday at Saffron Walden aged 73. In recent years his sight had failed so that he could not read or write. Dr Slurridge graduated B.A. at Cambridge in the Natural Sciences Tripos in 1886 and after further medical study at St Bartholomew's Hospital took the M.B. and Ch.B. degrees in 1891. Before settling in general practice he was house physician at Barts and assistant house surgeon to the Norfolk and Norwich Hospital. At Knutsford he had been medical officer to the Post Office and a member of the medical staff of the War Memorial Cottage Hospital. He joined the British Medical Association in 1892 and only gave up membership a few months ago.

News has been received in England of the death on March 28 in Cape Town after a short illness of Dr HENRY BRYAN DENSHAM of Stockton-on-Tees, where he had practised for many years before retirement and was consulting surgeon to the Stockton-on-Tees Hospital. Dr Densham was born in 1863 and received his medical education at Bristol and Edinburgh graduating M.B. Ch.B. in 1887. He joined the British Medical Association in 1892 and had long been a member of the Stockton Division. When the Association held its Annual Meeting in Newcastle-upon-Tyne in 1921 he was vice president of the Section of Proctology.

We regret to announce the death at Quinta do Val Madeira of Dr MICHAEL GRABHAM who was president of the Jamaica Branch of the British Medical Association in 1926-7 and had been a member for forty-seven years. He was the elder of the two sons of Michael Comport Grabham M.D. F.R.C.P. the patriarch of Madeira who died three years ago at the age of 95 and his mother was Mary Blandy, a member of the well-known family in that island. He studied medicine at Cambridge and St Thomas's Hospital graduating M.B. B.Ch. in 1891 and taking the English Conjoint diplomas in the same year. Dr Grabham practised for many years in Jamaica before returning to Madeira.

The annual malaria control course for laymen (engineers, planters, etc.) will be held at the Ross Institute of Tropical Hygiene (Keppel Street W.C.1) beginning Monday June 27 at 10 a.m. It will be under Sir Malcolm Watson, director of the Institute and will last five days. The course is free and applications to attend should be sent in as early as possible to the organizing secretary at the above address.

## Medico-Legal

### IRREGULAR RESTRAINT OF DEFECTIVE

The certification of mental defectives does not often raise legal questions of the same magnitude as the certification of persons of unsound mind, but the liberty of the subject is safeguarded with equal strictness. The Mental Deficiency Act 1913 provides that when a defective is certified the order under which he is sent to an institution or placed under guardianship shall expire at the end of one year from its date unless it is continued in the way which is laid down. At the end of the year the Board of Control considers the medical reports on the case and may make an order which will be valid for another year. After that a succession of orders may be made each covering five years. A recent decision by the Court of Appeal lays down that these periods must be construed strictly and that if an order is not renewed within a period of its operation the renewal is invalid.

A mental defective was certified on June 11, 1929. On June 23, 1930 a continuance order was made and in 1931 another continuance order was made on June 29 which purported to continue the order till June 24, 1936. A further order was made on July 6, 1936.

He applied to the Divisional Court of the King's Bench Division for a writ of *habeas corpus* alleging that he had been unlawfully restrained since June 24, 1931 because on that date the order under which he was restrained expired and the continuance order made on June 29 could not have any effect. The Divisional Court would not grant the writ but the Court of Appeal decided that it should be granted. Lord Justice Slesser, in giving the judgment of the court, said that the Act seemed unambiguous in its terms. The language was not such as to permit any consideration of the convenience or inconvenience which might be felt in operating the Act by the Board of Control. The Act gave no power to make an order for more than a year. The time for the continuance order to be made would have been June 24, 1931. For the five or six days afterward it the detained man had walked out of the institution no one could have pointed to any authority under which he could properly have been detained. It was impossible to say that he was still detained because no order had been made in 1931 within the period laid down by the Act. Another reason to allow the appeal was that the Commissioners under the Act had to satisfy himself that the appellant was mentally defective did not come to his final decision until July 7, 1931. Lord Justice Clauson and Mr Justice Goddard agreed. The Attorney General who had appeared for the Board of Control said that Mr Winterlood had been released on licence and was not therefore now being detained.

## The Services

### INDIAN MEDICAL SERVICE DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant, London, on Tuesday, June 14, at 7.15 p.m. when Major General E. W. C. B. and C.I.E. OBE, the Director General I.M.S., will preside. Tickets may be obtained from the Honorary Secretary, Major S. Thomas Care Evans, Hammerstein Hotel, Pall Mall, London W.12.

### ARMY MEDICAL SERVICES

Colonel O. W. McSteeh, D.S.O. OBE, late R.A.M.C., has been appointed Deputy Director General Army Medical Services. War Office vice Colonel F. Clement, D.S.O. late R.A.M.C. who has been promoted to Major General.

R. Board of Control, ex parte Winterlood, T. 1938, April 9, 1938.

## Universities and Colleges

### UNIVERSITY OF OXFORD

The following notice was published in the *Oxford University Gazette* of April 20

#### FIRST EXAMINATION FOR THE DEGREE OF B M

The Board of the Faculty of Medicine gives notice of the following changes in the regulations for human anatomy

(1) (*Examination Statutes* 1937, p 318) for 'Every candidate for the Examination in Human Anatomy whole body once' substitute 'Every candidate for the Examination in Human Anatomy must produce a certificate, signed by Dr Lee's Professor of Anatomy or by his deputy showing that he has dissected the whole body once and that he has attended a course of embryological histology

(2) For the present form of Certificate I (p 321) substitute

#### 1 PRACTICAL HUMAN ANATOMY

*I certify that \_\_\_\_\_ has dissected the whole body once and that he has attended a course of embryological histology at \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_*

Signature\* Name  
Qualification  
Address  
Official Position  
Date

\* This Certificate must be signed by Dr Lee's Professor of Anatomy or by his deputy

The above changes will come into operation on October 1, 1938 except that until the end of December 1939, the Board will be prepared to exempt from the requirement of having attended a course of embryological histology any candidate for whom it is satisfied that the requirement constitutes a hardship

### UNIVERSITY OF LONDON

A public lecture, on 'Some Aspects of the Heart Sounds in Normal and Pathological Conditions' will be given by Dr E Braun-Mcnenendez director of circulatory investigations, Institute of Physiology in the Faculty of Medical Sciences, Buenos Aires in the department of physiology pharmacology, and biochemistry of University College, Gower Street, W C, on Tuesday May 3, at 5 p.m. The chair will be taken by Professor C Lovatt Evans FRS. The lecture is open, without fee or ticket to students of the University and others interested in the subject

### UNIVERSITY OF DUBLIN

#### SCHOOL OF PHYSIC TRINITY COLLEGE

The eighth John Mallet Purser Lecture will be delivered by Sir Henry Dale FRS Director, National Institute for Medical Research Himpstead London on Wednesday, May 4 at 5 p.m. in the physiology theatre. The subject of the lecture will be 'Chemical Agents Transmitting Nervous Excitations'. The Provost of Trinity College will take the chair

### UNIVERSITY OF GLASGOW

A graduation ceremony was held on April 23, when the following degrees among others were conferred

M D—J C Dick \*T J Jones \*W T W Paxton †H Gillies, †Margaret B MacLean †F E Crawley †W Morton, †R H Wiseman W W Ballardie, J A Carson, Alice E Dickie, S Dunn Mary G Gorrie, J E Rankine, L G Scouler, W Thomson (*in absentia*)

M B Ch B—J F B Wyper †J Green †H Brash, J P McKenzie J Alcorn D J S Armstrong R B Bell R A Blair W K N Brown D R G Buchanan Etheldreda Cadas, Charlotte B Clark Rhoda M E Clark C Cohen W C Colville, J Conner R W Davidson S L Davidson Barbara S Dawson Muriel J W Dobbin R B Dobson J W N Duerden Constance I Dunbar A M Gardner J M W Gibson T A Goodwillie, J S Gordon Margaret T Graham A F Granger J Hammerton M B Hay A G Hegarty S B Hendry Alice M Insh W M Jamieson W Johnston Mrs Margaret Lavery I G Lennox S B Leys D C Lillie J C P Logan J M MacCormack I S McCormack D MacInnes Margaret McKay, F Y

McKendrick J M McKillop, F C McLaren M McLean J G McMenamy, Adaline N Miller, J P Monie A S Morrison C G Nairn, D Neville, J A O'Connor H Paterson J St C Polson, R S Rankin W M Robinson A Roy, R N Rutherford Agnes L Scott, T Sempie Chang Yui Shu R N Sinclair, Marion C Steven J M Sword Winifred J Symington A L Taylor A McL Thomson D A Thomson L Tobias M Urie, H G J van Bavel D L Waddell, J C Walker J Weir J White, M D Winning D W Zahn

\* With honours † With high commendation  
‡ With commendation

The following prizes among others, were awarded

UNIVERSITY PRIZES—Bellahouston Gold Medals E D Cooper D P Cuthbertson Captain H S Ranken, VC Memorial Prize W P Weir and D G Wright (equal)

SPECIAL CLASS PRIZES—Surgery—Macleod Gold Medal J W Chambers

### ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At a meeting on April 4 with Dr John Henderson president in the chair, Santosh Lal Robert, MRCS, LRCP DTM, India, was admitted a Fellow of Faculty

### CONJOINT BOARD IN SCOTLAND

The following candidates having passed the requisite examinations have been admitted LRCP Ed, LRCS Ed LRFP and S Glas

H K Abbas, L Brillon, B G Barlow, J Brimberg, G Buchanan F G Chung Ruth F Conway, J Cross Else A d'Amian D Engel Hildegarth Fischer W D Gilmour, Muriel Goldschmidt H W Gray, W Grobin Margaret Heller, R L Hill, H Jack J Johnston, R St J R Johnston R Kihane S J Koppel I Kotzin I D M B MacLurkin M MacLean S Mayer T R W Miller, P Nathan, H Nelson D Neville, Else Panth Else Perl S L Pollock, E L Rees, A S T Suid C A Smith H H Teitelbaum L Toporoff, J L Trainer, M Urie, G C Wainwright J C Young

## Medical Notes in Parliament

In the House of Commons on April 26 the Chancellor of the Exchequer, in opening the Budget, briefly referred to the medicine stamp duty. He said that a committee of the House which considered this subject made a valuable report last year, but it had not yet been possible to arrive at conclusions on all the complex issues involved. It was his intention that a decision should be reached before next year's Finance Bill.

Sir John Simon proposed that the general rate of income tax should be increased by 6d to 5s 6d in the £, the rate on the first £135 remaining at the present level of 1s 8d. He also proposed an increase to 9d a gallon in the petrol tax on light hydrocarbon oils and on power alcohol and also on heavy oils used in road transport. The tea duty was increased by 2d a pound. Resolutions giving temporary authority for these imposts were carried by the House the same night.

### London Hospitals and A R P

On April 26 Colonel NATHAN asked the Home Secretary what directions had been given or were contemplated for the information of the general and special hospitals in London as to the measures they should take for dealing with patients and the functions they were desired to fulfil in the event of air raids. Mr GEOFFREY LLOYD replied that instructions as to the methods of dealing with gas casualties were being given to the medical and nursing staffs of London hospitals as part of the Home Office scheme of medical anti gas instruction. A handbook on the structural protection that could be arranged in hospitals for the additional safety of staff and patients would shortly be issued. As regards the last part of



this question this must await the completion of the survey which is being undertaken by the Minister of Health.

Colonel NATHAN said he had a letter from the Air Raid Precautions Department of the Home Office stating that pending the completion of the survey of hospital accommodation throughout the country it was not possible definitely to allocate to individual hospitals the parts they might be called upon to take. That letter was addressed to a hospital adjacent to the House of Commons and was dated May 19.

Mr LLOYD: We must have a little further information. I do not think it will be necessary for the survey to be completed all over the country before dealing with the London hospitals.

Sir FRANCIS FREMANTLE suggested that instruction on medical work in air raids should be given at the medical schools.

## Medical News

The gold medal of the Royal Society of Medicine has been awarded to Mr Wilfred Trotter F.R.S., Director of the Surgical Unit at University College Hospital. This is the seventh award of the medal which is given triennially to a scientist man or woman who has made valuable contributions to the science and art of medicine. The previous holders of the medal have been Sir Almroth Wright, Sir F. Gowland Hopkins, Dr J. S. Haldane, Sir Henry Head, Sir Thomas Barlow, and Sir Archibald Garrod.

The Manson Medal of the Royal Society of Tropical Medicine and Hygiene has been awarded to Major General Sir Leonard Rogers K.C.S.I., C.I.E., F.R.S., I.M.S. (ret.) and will be presented at the annual general meeting of the Society on June 16. The medal is awarded triennially to the living author of such work in any branch of tropical medicine or tropical hygiene as the council may consider to be deserving of the honour.

A special lecture describing the anti-leprosy campaign in Brazil will be given in the main lecture theatre of the London School of Hygiene and Tropical Medicine (Keppel Street, Gower Street, W.C.) to-day (Friday, April 29) at 5 p.m. by Dr H. C. de Souza Araujo, secretary of the International Centre of Leprology in Rio de Janeiro. All interested are invited to attend.

A sessional meeting of the Royal Sanitary Institute will be held at Cardiff City Hall on Friday, May 6, at 5 p.m. in conjunction with the Welsh Branch of the Society of Medical Officers of Health and the South Wales and Monmouthshire Centre of the Sanitary Inspectors' Association, when discussions will take place on 'The First Municipal Asthma Clinic' to be opened by Dr D. A. Williams and on 'The Place of the Public Health Department in Relation to the Council Housing Estate' to be opened by Mr J. A. Glover.

The Oxford Ophthalmological Congress will open this year on the evening of Wednesday, July 6, at Keeble College, and the scientific sessions will be held on the three following days. On July 7, Dr Bernard Chavasse will introduce a discussion on Ocular Palsies. The Dyne memorial lecturer is Professor A. von Szily of Munster, whose subject is 'The Contribution of Pathological Examinations to the Elucidation of the Problems of Cataract'. A number of papers have been promised by other ophthalmologists from abroad, and Dr H. M. Traquair will open a discussion on Anaesthesia in Ophthalmic Surgery. Applications for membership forms and for full details of the Congress should be sent to the honorary secretary and treasurer, Dr F. A. Anderson, 12 St. John's Hill, Shrewsbury.

The ninth medical conference of Aix les Bains will be held on May 22, when a paper will be read on 'Somatic Neuralgias and their Treatment' by Dr Jacques Fournier. Further information can be obtained from Dr Lelong, Société Médicale d'Aix les Bains, Rue de Liège, Aix les Bains.

A bronze medal known as the Heberden Medal is awarded annually to a registered medical practitioner who in the opinion of the referees appointed by the Heberden Society has carried out the best work in the British Isles on the investigation of the rheumatic diseases. The recipient will be invited to deliver the Heberden Lecture, which should comprise a review of the work carried out for the award of the medal. The first award will be made in January, 1939, to the president of the society, Dr Matthew Rav, with Dr C. W. Buckler and Dr Mervin Gordon F.R.S. Published work should be submitted in the first place to the secretary, Dr Kenneth Storey, 18 Chesterfield House, Chesterfield Garden, Lorton, W.I.

We are informed that as the president of the West Kent Medico-Chirurgical Society has left London there will be no president's address this year. Mr Miles L. Fotherby will give an address on 'Some Common Otological Conditions: Aids to Their Diagnosis and Treatment' before the Society at the Miller General Hospital, Greenwich, S.E., on Friday, May 1, at 8.45 p.m.

Fifty years ago on May 5, 1888, Sir J. Spence Wells, B.F.R.C.S., published in the *British Medical Journal* 'Notes on a Visit to Pilsen and reports of his paper on the bath to visitors at that famous Czechoslovak spa. A short account of the Pilsen bathing establishment with its mud baths appeared in the *British Medical Journal* of June 19, 1927.

On Monday, April 25, Lord De By opened the new x-ray department and the extensions to the out-patient department at the Christie Hospital and Holt Radium Institute, Manchester. The new treatment equipment consists of four x-ray tubes on the continuously evacuated type, each operating at 100 kV. The control desks are situated outside the treatment room.

The Middlesex Hospital Medical School's new athletic ground at Chislehurst has been presented by Sir Edward Meyerstein and will be available for games on April 10. It consists of over eighteen acres and a large pavilion with two floors is nearing completion. This new ground will provide students with increased facilities for sport. It is situated on the Foxbury site and for those not going by road there is a frequent service of trains to Chislehurst from Charing Cross, Cannon Street, and London Bridge station, and the ground can be reached by a bus service passing Chislehurst and Bickley stations.

The Listerian Society of King's College Hospital Medical School is holding a Medico-Legal Trial on Wednesday, May 4, at 8.15 p.m., presided over by His Honour Judge Earengay.

In our advertisement columns this week the Staffordshire Mental Hospitals Board invite applications for the appointment of Medical Superintendent to the County Mental Hospital, Stafford. The salary is £1,100 per annum.

Dr W. E. Bennett, who has completed just over half a century as medical officer of health for Oxford, was presented on April 21 with a gold tourmaline pen and pencil to present and past members of the Council and officials in recognition of his long service.

Sir James Crofton B. O. F.R.S., who died on January 31, aged 97, left a will valued at £105,078, his net personal estate at £102,221.

The Grenfell Association of Great Britain and Ireland (66 Victoria Street, S.W. 1) announce that a new medical Sir Wilfred Grenfell's medical work in Labrador and Newfoundland will be held at 72 Draxton Gardens, S.W. 9, on May 25 and 26, from 10 a.m. to 10 p.m. each day.

Mr and Mrs Erich Haug, of a Secretary, have given £25,000 to the Norwegian Radium Institute for the building of a new medical building for cancer research. The block will have a first floor for men and twenty-five for women and the nurses' home will be extended.

Dr H. C. Squares has been appointed Consulting Physician to the Sudan Government.

A severe epidemic of smallpox has been reported from Havre.



## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended April 16, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for (a) The 125 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	30	6 2	10 —	2	4	24	4 3	17 5	1	1		
Diphtheria Deaths	1,056 29	133 2	192 4	54 3	30 1	1,019 26	102 3	197 2	32 2	33 —	962	165
Dysentery Deaths	76	19	33 1	—	—	18	4	6 —	—	—		
Encephalitis lethargica, acute Deaths	5	— 1	—	—	—	6	2 —	—	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	29 1	1 —	5 —	2 —	—	25 —	1 —	3 1	1 —	1 —	25	—
Erysipelas Deaths		1	44 —	10	2		1 —	74 —	9	6		
Infective enteritis or diarrhoea under 2 years Deaths	37	10	8	4	3	53	14	12	10	—		
Mersles Deaths	54	14	724 33	1	24* 4	13	—	294 1	1	—		
Ophthalmia neonatorum Deaths	80	8	21	—	—	106	8	23	—	—		
Pneumonia, influenzal § Deaths (from Influenza)	847 52	70 4	7 5	1 —	1 1	1,159 73	85 10	15 4	5 7	6 2	1,296	174
Pneumonia, primary Deaths		22	191 20	9 20	13		18	185	10 27	10	—	
Polio encephalitis, acute Deaths	—	—	—	—	—	—	—	—	—	—		
Poliomyelitis, acute Deaths	3	1 —	1 —	—	—	8	1 —	2 —	—	—		
Puerperal fever Deaths	4†	4 1†	5	—	—	33	4 2†	18	2	—		
Puerperal pyrexia Deaths	156	14	20	—	4	137	17	18	—	—		
Relapsing fever Deaths	—	—	—	—	—	—	—	—	—	—		
Scarlet fever Deaths	1,841 6	166 —	356 1	91 —	78 1	1,678 3	188 —	355 1	78 1	36 —	1,806	231
Small pox Deaths	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping cough Deaths	21	2	67 —	1	11 —	24	5	609 16	6	10 —		
Deaths (0-1 year) Infant mortality rate (per 1 000 live births)	373 62	62 51	73	32	19	407 67	75 62	76	47	16		
Deaths (excluding stillbirths) Annual death rate (per 1 000 persons living)	4 680 11 5	848 10 7	635 13 0	188 12 7	147 13 0	4,949 12 3	925 11 5	657 13 4	245 16 7	135 12 9		
Live births Annual rate per 1,000 persons living	5 919 14 6	1 030 13 0	878 17 9	305 20 6	233 20 7	6,898 17 1	1 325 16 5	977 20 0	382 26 0	270 25 8		
Stillbirths Rate per 1 000 total births (including stillborn)	258 42	51 47	—	—	—	299 42	46 34	—	—	—		

\* 24 cases in Belfast alone

† After October 1, 1937 puerperal fever was made notifiable only in the Administrative County of London

Deaths from puerperal sepsis  
§ Includes primary form in figures for England and Wales (London (administrative county) and Northern Ireland

## EPIDEMIOLOGICAL NOTES

## Enteric Fever

There has been an increase of enteric fever in England and Wales during the week under review—29 cases being notified as against 17 in the previous week and 25 in the corresponding week last year. The increase is largely due to the outbreak of paratyphoid fever in the Cardiff district where 12 cases were notified. 10 in Cardiff itself, 1 in Merthyr Tydfil and 1 in Llantrisant. Elsewhere notifications were widely scattered over England and Wales: 2 in Birmingham, 2 in Coseley (Staffs) and among the large towns 1 each in London, Birkenhead, Bristol and Leeds.

## Diphtheria and Scarlet Fever

Notifications of diphtheria dropped fairly steeply in England and Wales (London sharing in the decrease) and Eire while small increases were reported from Scotland and Northern Ireland. The numbers for England and Wales are still in excess of the median value for the last nine years while those for London are considerably less. In all four countries scarlet fever appears to be less prevalent than in the previous week but in England and Wales and in Eire it is more prevalent than in the corresponding week last year. In England and Wales the number is greater than the median value for the last nine years but in London it is less.

## Measles and Whooping-cough

In the 125 Great Towns in England and Wales there were 54 deaths from measles compared with 26 in the previous week of these 14 (15) occurred in London, 4 (4) in Manchester, 4 (1) in West Hartlepool, 2 each in Kingston upon Hull, Crosby, Bolton, Birkenhead, Reading, Portsmouth, Dagenham. The figures in parentheses refer to the numbers in the previous week. The measles epidemic in London appears to be subsiding: 996 cases were reported from the LCC elementary schools compared with 1,895 and 2,095 in the two immediately preceding weeks. The average daily admissions to the LCC fever hospitals dropped from 75 to 74 while the number of cases of measles under treatment in these hospitals on April 15 was 2,220 compared with 2,241 on April 8 and 2,339 on April 1. On the same day there were under treatment in the LCC fever hospitals 1,140 (1,160) cases of diphtheria, 802 (843) cases of scarlet fever, 264 (291) cases of whooping-cough. The figures in parentheses refer to the numbers recorded in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notified were for the week ended April 16: 734 (833) distributed as follows: Battersea 92 (128), Bermondsey 42 (88), Finsbury 39 (27), Fulham 68 (41), Greenwich 82 (99), Hampstead 24 (55), Lambeth 162 (188), St Pancras 94 (110), Shoreditch 26 (31), Southwark 60 (115), Stepney 45 (51). The figures in parentheses denote the numbers in the previous week. In Scotland 724 cases of measles were reported compared with 1,044 in the previous week, the figures for Glasgow were 285 (349), Aberdeen 204 (81), Edinburgh 65 (65), Dundee 63 (179), Paisley 25 (42). The figures in parentheses denote the numbers recorded in the previous week. During the week under review there were 33 deaths from measles in the 16 principal towns of Scotland compared with 25 in the previous week, of which 11 each occurred in Glasgow and Dundee and 2 each in Edinburgh, Clydebank, Coatbridge and Falkirk. In Northern Ireland 24 cases of measles were notified all in Belfast compared with 30 in the previous week. Four deaths from measles occurred in Belfast 1 more than in the previous week. Whooping-cough appears to be on the increase in Scotland and Northern Ireland—67 compared with 42 and 11 compared with 4 respectively—but no deaths were reported. The number of deaths in England and Wales and London was practically the same as in the previous week.

## Typhus

During the week ended April 2 there were in Algeria 82 cases of typhus (compared with 67 in the previous week) of which 65 occurred in Constantine and 16 in Algiers. During the week ended April 9 107 cases were reported in Egypt with 12 deaths occurring both in the towns and in widely scattered districts. During the same week there were in Morocco 248 cases of typhus with 25 deaths of these cases 57 were in Casablanca (6 deaths), 25 in Casablanca (7 deaths), 29 in Rabat (4 deaths), 2 in Fez (1 death). During the same week there were 61 cases of typhus in Tunisia widely scattered in the civil districts of the northern territories.

## Psittacosis

At an inquest on April 20 on William James Sprunt a relief keeper at the London Zoo the jury found that Sprunt died from psittacosis contracted during the course of his employment. It was stated that blood tests on the four keepers who tell ill about the same time were negative for psittacosis. Apparently the source of infection was a consignment of parrots brought from South America and the West Indies by Lord Moynihan. Those which did not die have since been destroyed. This is the first time that psittacosis has appeared in the Zoo for 100 years and the parrot house is to remain closed until the authorities are satisfied that the public run no risk on being readmitted. A leading article on psittacosis appeared in the *Journal* of April 2.

## Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish no notice to be taken of their communications should authenticate them with their names not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Secretary, B.M.A. House, Tavistock Square, W.C.1 on receipt of proof. Authors over seas should indicate on MSS. if reprints are required as proofs are not sent abroad.

All communications with reference to ADVERTISEMENTS should be addressed to the Advertisement Manager, Office of the *Journal* and communication with reference to subscriptions should be addressed to the Secretary, B.M.A. House, Tavistock Square, W.C.1.

THE TELEPHONE NUMBER of the *British Medical Association* and the *British Medical Journal* is EUSTON 2111.

THE TELEGRAPHIC ADDRESSES are:  
EDITOR OF THE BRITISH MEDICAL JOURNAL: 4 Wescei, London.

SECRETARY: *Medicine* Westcott, London.  
The address of the B.M.A. South of the Eire is 7, Drumahogue Garden, Edinburgh (telegrams: 4511) and of the Irish Free State is 2, 61 Edinboro, and of the Oireachtas is 1, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715, 720, 725, 730, 735, 740, 745, 750, 755, 760, 765, 770, 775, 780, 785, 790, 795, 800, 805, 810, 815, 820, 825, 830, 835, 840, 845, 850, 855, 860, 865, 870, 875, 880, 885, 890, 895, 900, 905, 910, 915, 920, 925, 930, 935, 940, 945, 950, 955, 960, 965, 970, 975, 980, 985, 990, 995, 1000.

## QUERIES AND ANSWERS

## Income Tax

*D. A. H. P. Practitioner*

H. C. M. explains that his father was the proprietor of a sole practice up to his death on August 12, 1917. At that date to November 1, 1917 the practice was carried on by the executors who employed him as a partner. H. C. M. has carried on the practice as a partner since the practice was assessed on the estate and the income tax authorities are calling for particulars of the income tax (a) between January 1 and August 12, and (b) after August 12 to the present time and a statement of the amount of the income tax still outstanding. Are these receipts liable to income tax?

In our view the position is as follows: As regards (a) the amount of the receipts is required to assess the

profits to the date of death and should be supplied. From August 12 to November 1 the executors are liable in respect of the profits of that period—if the income tax authorities are willing to accept the amount of the cash receipts as the amount of the *gross* income of that period that is obviously convenient but they can insist on the value of the gross bookings being taken if they desire and that course is the one which is legally correct. From November 1 onwards

H C M is personally liable and should base his return on bookings and on cash receipts. It will be seen from the above that the only way in which cash received after January 1 1937 can come into the calculation is for the special purpose of calculating the profits to August 12, 1937 and that cash received after that date does not affect the income tax figures. The deceased has been assessed in respect of his earnings up to April 5 1937, and the only further liability of the executors is for the period to August 12 1937. Any cash received after that date merely represents the in gathering of profits on which tax has been paid, and is capital so far as the estate is concerned.

#### Retirement from Practice

NEWCASTLE inquires what further payments of income tax, if any a practitioner will have to make if he retires at the end of 1938 after paying all tax due up to and including the July 1938 payment.

\*\* The July 1938 payment represents the final instalment of the tax assessable for the year to April 5 1938. In such circumstances the practitioner will have to account for tax in respect of his earnings for the further period of nine months to December 31 1938, and that tax will be due to be paid in January and July 1939.

#### Motor Car Depreciation

MOTORIST bought a car on March 25 1936 for £325 and his running expenses including insurance but not depreciation for the two following years were £133 and £102 respectively. For insurance purposes the car was valued at £260 in March 1937 and £160 in March, 1938. What can he claim?

\*\* It has to be borne in mind that the only depreciation allowable for income tax purposes is that arising by reason of wear and tear. In practice this is calculated in the case of motor cars at 20 per cent of the written down value as shown below.

Value at April 5, 1936	£325	
Depreciation at 20 per cent	£65	
Add statutory additional 10 per cent	£7	
Allowance for 1936/7		£72
Value as at April 5 1937 £325-£65=	£260	
Depreciation at 20 per cent	£52	
Add statutory additional 10 per cent	£5	
Allowance for 1937/8		£57
Value as at April 5, 1938, £260-£52=	£208	

The claim for travelling expenses should therefore be—

1936/7 £133+£72=£205  
1937/8 £102+£57=£159

If however the car has been used for non professional purposes some restriction of these deductions will be necessary.

## LETTERS, NOTES, ETC

### Pathology of Robert Burns

Dr WALTER R. BETT writes. The obituary of Sir James Crichton Browne in the *Journal* of February 5 referred to the fact that his mother was highly gifted and that few knew their Burns as she did. In this connexion it may be worth while noting that some ten years ago Sir James wrote a small book of 92 pages published by Hodder and Stoughton (undated) with the title *Burns from a New Point of View* in which he advanced the theory that the poet was not a confirmed drunkard but a painful example of the neglect of rheumatism in early life. His biographers particularly the arch calumniator James Currie who was an ardent prohibitionist and antipathetic to Burns the man though not to the poet insist that his death was caused by exposure through lying asleep in the snow in a drunken condition. Sir James believes that he fainted from heart failure and collapsed just outside the inn after a moderately convivial evening.

### Keesing's Medical Digest

Still another attempt has been made to meet the demand of busy readers for potted information. There are many reasons for this demand the bulk of medical literature in the world increases at an alarming pace each year, at the same time, in spite of the machine those who do work seem to become busier and busier, and this is especially the case with medical men. All this makes it difficult for those who like to be up to date to keep themselves well informed of what is happening. *Keesing's Medical Digest* is an attempt to meet the needs of what must be an increasing number of medical men each year. It consists of short abstracts from well-known medical journals in different parts of the world a diary for the current three months of the year and, what should be a particularly valuable feature, an index which will be kept up to date from month to month. The whole is fitted with loose leaves into a stout cover which will slip quite easily into the coat pocket. This would seem to be a useful venture in medical journalism, and for a subscription of one guinea a year not a very expensive one. The publishers are Keesing's Medical Diet Ltd, 1, Regent Street London, SW 1.

### A Bee-eating Sealyham

Dr J. STEWART RICHARDS (Sussex) writes. I read with interest the annotation in the *Journal* of April 16 (p. 818) on bee venom for arthritis. Many of us have heard of or know personally patients who have submitted themselves to a course of bee stings for rheumatism but the following case seems so exceptional that it is perhaps worth recording. The subject was a dog, a Sealyham aged 6. He was not markedly intelligent but of active habits his main objectives in life being the pursuit of food, tennis balls, and rabbits. At one of my visits to his home he was quite disabled for any active exercise save a painful halting walk, his back and buttock muscles were very stiff and tender and obviously painful. The veterinary surgeon's diagnosis was 'rheumatism,' and mine 'fibrous rheumatism.' The condition was attributed by his owner to a curious habit he had of sitting on a damp spot or sometimes actually in water to cool off the heat of the chase. The stiffness lasted for some months but when I next saw him he had completely recovered. I asked for further information and was told that for a short time before his recovery he had been seen going round the flower beds snapping up bees and eating them. My informant was my niece the owner of the dog, a dog lover and an acute observer. Whatever effect the bee venom by mouth may have had on the disease does not the coincidence of the bee eating and the attack of rheumatism suggest some intuitive impulse in animals, or shall I say empirical knowledge of certain internal remedies for their disorders? In the matter of bee venom have they anticipated the researches of the medical profession? Why do dogs so often resort to eating grass and that of the coarsest kind? Is it for constipation? Cows exhibit under certain conditions much appreciation of a lick of salt. A greedy dog I know after unusual gorging resorted to a sun warmed stagnant pond and drank freely. Almost immediately he vomited copiously and seemed greatly relieved the water was warm and foul enough to act as a potent emetic. I have not read any account of the spontaneous use by animals of internal remedies for their disorders but perhaps this note may elicit information on the subject from some of your readers.

### Fitness Wins

The National Fitness Council has recently issued a 64 page illustrated handbook entitled *Twenty-four Ways of Keeping Fit* (H.M. Stationery Office 2d). The illustrations are well chosen and should stir to activity even the most sluggish and for those interested there is a list of twenty-two Area Fitness Committees.

### Corrigenda

By a printer's error the first line of Dr W. J. Hohmann's letter on the control of sulphanilamide therapy in the *Journal* of April 23 (p. 923) reads 'You have twice been so good as to discuss in the paper.' It should have read 'With reference to Dr A. J. Cokkims's interesting paper.'

Dr F. H. JACOB whose paper 'Four Cases of Menstruation Treated with Prontosil' appeared in the *Journal* of April 23 (p. 887) writes to explain that the drug he used in these cases was prontosil album.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 352 Cerebellar Manifestations in Chronic Alcoholism

A. ADRIAN (*Fla. de Paris* 1937 No 733) who records six illustrative cases in patients aged from 35 to 79 three of whom were men and three women states that cerebellar lesions, with or without clinical symptoms are relatively frequent in the course of chronic alcoholism. Generally speaking alcohol is all the more likely to attack the cerebellum if it has already been affected by some other condition. In a certain number of cases also the organ possesses a constitutional weakness which is aggravated by chronic intoxication. There is a special syndrome in which chronic alcoholism is undoubtedly a factor—namely the cerebellar atrophy with cortical predominance described by Pierre Marie. In cases in which there is a previous history of alcoholism this syndrome develops before 40 years of age while in others it does not occur till much later. In all cases of chronic alcoholism with cerebellar manifestations the patients present symptoms of delirium. The cerebellar symptoms may appear either as the result of an alcoholic excess or after a reduction of the amount of drink taken.

### 353 Insulin Resistance

O. L. V. DE WESSELOW and W. J. GRIFFITHS (*Quart. J. Med.* January 1938 p 17) have studied the responses of a group of clinically dissimilar diabetic patients to the insulin glucose test of insulin sensitivity and conclude that there is no evidence of the existence of two distinct types—instances of insulin sensitivity and resistance merge into a larger group showing an approximately normal response. The type of response is not related to the initial blood sugar level nor to the sex, age, blood pressure, body weight or other clinical feature. Resistance or sensitivity to injected insulin is determined by the general state of metabolism at the time of testing and is probably largely due to the metabolic condition of the liver cell which depends to a large extent on the diet. Adequate carbohydrate in the diet results in proper functioning of the liver and thus in sensitivity to the insulin glucose test. It is possible by means of carbohydrate and insulin to convert a diabetic from the insulin resistant to the insulin-sensitive state. The more nearly the diet and hence the metabolic processes, approach with the help of insulin to the normal the less likely is there to be resistance to insulin. This accounts for the increased tolerance which is often acquired by the diabetic when the carbohydrate in his diet is increased.

### 354 Respiratory Infections and Gastric Ulcer

B. B. CROHN and G. SHWARTZMAN (*Amer. J. Digest. Dis. and Nutr.* January 1938 p 705) consider that infections of the respiratory system—for example, colds, influenza, pleurisy, pneumonia, etc.—bear a causal relationship to recurrences of gastric ulcer and especially to haemorrhage. During February and March 1937 when influenza was prevalent and severe they saw seven cases of actively bleeding ulcers within ten days. In another hospital eleven cases of haemorrhage from ulcers were admitted during the same period. They suggest that this is an example of the Schwartzman phenomenon. This phenomenon is elicited by the injection of a bacterial filtrate locally into a tissue followed by the injection into the blood stream of another filtrate from eight to 120 hours later. The two filtrates are not specifically related to one another. The first injection produces a state of reactivity in the local tissue and the second or provocative injection produces lesions characteristic of the phenomenon at the

reactive site. The lesions are predominantly haemorrhagic and apparently due to marked capillary fragility. Whatever the primary cause of gastric ulcers may be secondary bacterial invaders are commonly found in the ulcer bed. This may be responsible for a state of reactivity in the tissues of the ulcer. Then viruses and bacterial infections in distant organs may be able to produce haemorrhagic and necrotic reactions in the ulcer by way of the general circulation. This theory would account for the alleged frequency of haemorrhage and perforation in the subjects of gastric ulcer following acute respiratory infections.

## Surgery

### 355 Tuberculous Tenosynovitis

F. PERRICONA (*Chir. Organi Mov.* January 1938 p 24) has seen forty cases of tuberculous tenosynovitis treated by various methods during the last thirty-six years. Tuberculous tenosynovitis is comparatively rare though tuberculosis is the most frequent cause of chronic disease of the tendon sheaths. It used to be nearly three times as frequent in men as in women at the beginning of this century but present day figures would seem to be nearly equal for both sexes. Occupation, heredity and trauma are possible factors in aetiology. The right hand and three times more commonly affected than the left and the flexor tendons are more usually involved than the extensors. The treatment of choice is excision of the whole of the affected sheath or sheaths. This means that the tendon is very likely to become involved in adhesions unless it is moved at the earliest possible moment—in fact without waiting for the wound to heal. If this immediate mobilization is properly carried out the prognosis is good recurrence is rare.

### 356 Squamous-celled Carcinoma of the Renal Pelvis

J. LAZARUS (*J. Urol.* January 1938 p 34) recorded a case of squamous-celled carcinoma originating in the pelvis of the kidney and invading the descending portion of the duodenum. The patient a man of 57 complained of pain in the right lumbar region with increased urinary frequency, haematuria, anorexia and loss of weight. For six years he had suffered from thrombo-angitis obliterans. Following radiography, cystoscopy and urography no diagnosis seemed to be either a right calcareous pyonephrosis or a duodenal ulcer. Operation was carried out and showed the right kidney to be greatly enlarged and adherent to the diaphragm above and below to the perirenal tissues and to the second portion of the duodenum. There was a large branching calculus in the renal pelvis. The upper two thirds of the kidney were pyonephrotic while the lower third was involved in a large fungating necrotic tumour about the size of a grapefruit which was intimately adherent to the second portion of the duodenum. The kidney was removed and the patient was discharged from hospital twelve days after operation. Shortly afterwards a swelling appeared over the posterior angle of the wound. This was opened and a quantity of thin turbid fluid was drained and a drainage tube being inserted. The discharge from the wound consisted of duodenal contents. The patient died eight days after the first operation. It is pointed out that a pre-operative diagnosis of squamous-celled carcinoma of the renal pelvis has never been made. Pain is a frequent symptom but there is no marked bleeding. This is of carcinoma as opposed to renal calculus or bacterial infection. The prognosis is poor, and there is no record

of even a five-year survival. Metastases have been reported in various organs, but the case described appears to be the first in which the duodenum was involved. Whenever possible nephrectomy should be carried out, the value of irradiation in the treatment of this type of growth is extremely doubtful.

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**Carcinoma of the Penis**

G S FOULDS and B W STEVENS (*Brit J Urol* December, 1937, p 368) review a series of eleven cases of carcinoma of the penis. The relationship between phimosis with retained irritating secretions and the incidence of carcinoma is pointed out, circumcision in infancy appears to give complete protection. In only one of the cases reviewed had circumcision been carried out, and then only after the appearance of a small ulcer on the inner surface of the prepuce. Scars resulting from injury or ulceration may be the site of malignant change. Patients seek treatment because of the presence of a definite ulcer or swelling with sometimes a watery discharge from beneath the foreskin. Pain only occurs later, after extensive inflammation and ulceration have taken place. Four patients presented themselves with large fungating masses, and in one instance the corpora cavernosa were invaded. In seven cases in which the inguinal glands were removed there was no carcinomatous invasion, though all showed rather marked acute and subacute inflammatory changes. Diagnosis must rest on the microscopical examination of biopsy specimens. Venereal warts, tuberculous ulcers, chancres, and proctitis venerea must be regarded with suspicion when they are seen in men past middle life. Carcinoma of the penis is of the squamous type and usually occurs after prolonged chronic irritation. Its course is slow with late metastasis. Treatment depends on the size and type of lesion. A small ulcer of a low degree of malignancy may be destroyed by fulguration followed by treatment with radon seeds or a surface application of a radium element pack. Larger growths require amputation of the penis first followed by block dissection of the inguinal glands when necessary and after healing of the stump has taken place. Operation should be followed by deep x-ray therapy. Treatment by means of radium may be palliative in advanced cases when operation is not possible.

**Therapeutics**

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**Serum Treatment of Pneumonia**

W D SUTLIFF (*Med Clin N Amer* January, 1938, p 19) stresses the importance of early diagnosis and of specific treatment in lobar pneumonia. He reports two cases illustrating the value of early serum treatment. In the first case type I pneumococci were isolated from the blood within a few hours of the onset of symptoms, and from the sputum twenty-four hours later. Specific serum was administered intravenously in the following doses within two days: 3,000 units, 17,000 units and four doses of 20,000 units. The temperature fell to normal on the third day of the disease. In the second case, type VII pneumococci were obtained from the sputum on the fourth day of illness. Type VII serum, 100,000 units, was given in divided doses over a period of six hours. The temperature fell to normal eight hours after the last dose. Symptoms are usually of more value than physical signs in making an early diagnosis of pneumonia, x-ray examination may help. Early identification of the causal organism and the use of appropriate serum are of supreme importance. Precautions are taken to prevent reactions due to serum sensitivity. A conjunctival test is made by dropping one or two drops of a 1 in 10 dilution of horse serum into the conjunctival sac. Injection of the vessels within twenty to thirty minutes indicates sensitivity. An

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intradermal test with 0.1 c cm of 1 in 100 horse serum is also performed, a wheal and erythema in twenty to thirty minutes shows sensitivity. In these cases great caution must be observed. Doses of serum used by Sutcliffe are as follows: type I, 50,000 units in divided doses at two hour intervals; types II, V, VII, VIII, and XIV sera are given in amounts of 100,000 units in divided doses. When bacteraemia is present, when patients are over 60 years of age, in pregnancy or when more than one quarter of the total lung tissue is involved, the dosage is doubled.

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**Trichlorethylene in Angina**

F A WILLIUS and T J DRY (*Amer Heart J* December 1937, p 659) report their results in the treatment of anginal syndromes by inhalations of trichlorethylene. Glass ampoules containing 1 c cm of the drug were broken in several layers of gauze and the vapour inhaled by the patient for exactly two minutes while in the recumbent position. This was done morning and evening for the first week, then twice daily on alternate days during the second week, and from then on twice daily for two days each week. Forty cases were treated. The results were rather disappointing. In eighteen cases varying degrees of improvement occurred, only one patient obtained complete relief, but the others had fewer attacks, which were less severe. In five cases there was temporary improvement, and in thirteen cases no improvement at all was noted. Four patients died during the course of treatment, two of them had been temporarily improved. The authors consider that this method should be given a trial when other measures have failed. According to them the drug is well tolerated, and its administration appears to be perfectly safe.

**Anaesthesia****360 Toxic Jaundice following Pentothal**

J M VALZEY (*Brit J Anaesth*, January 1938, p 55) reports the case of a female patient, aged 44, who had been under treatment for anaemia for nine years and had had an operation for haemorrhoids three years previously under nitrous oxide and ether anaesthesia preceded by omnopon-scopolamine, without ill effect. As the haemorrhage and anaemia continued, she was again admitted and two haemorrhoids were ligatured, she was given omnopon, grain 1/3, scopolamine, grain 1/150, followed by 6 c cm of 10 per cent pentothal sodium solution. The operation was without incident, but next day she was nauseated and the urine contained albumin. The following day jaundice appeared, and increased for ten days. The liver was palpable and tender, and the urine was bilirubin stained. She was treated with a high carbohydrate diet, calcium lactate by the mouth, and had 10 c cm of calcium gluconate injected intramuscularly on four occasions. She made a complete recovery.

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**Epidural Anaesthesia**

P GRAFFAGNINO (*New Orleans med surg J* January, 1938, p 396) outlines the history of the method and the anatomy and physiology of the parts concerned, he has used this technique particularly in obstetrical and gynaecological cases. He makes his injection in the second lumbar space with the patient lying on her side, and uses a fine spinal needle with a glass fluid indicator attached, this shows a negative pressure when the epidural space is reached. A pause of five minutes after the first 10 c cm are injected eliminates the possibility of subdural injection. The solution commonly used is 50 c cm of 1 per cent novocain to which a small amount of pantocain is added, but without adrenaline or ephedrine. The onset of anaesthesia may be immediate or after as long as th

minutes, the duration is from half an hour to two hours. In 174 gynaecological operations of all classes the method gave 144 excellent results and thirty failures (17 per cent). On account of the difficulty and uncertainty of epidural as compared with spinal anaesthesia the author does not recommend it for routine gynaecological use. Seventy-seven obstetrical operations were also carried out including eleven Caesarean sections. In most cases the results were good but the method is not recommended for versions as the uterine contractions are unaffected. There may also be difficulty in timing the anaesthesia for delivery. Reactions requiring treatment occurred in only three cases.

### 362 Spinal Anaesthesia in China

Y. MING-TING (*Chin med J* January, 1938 p 37) tabulates and discusses the replies to a questionnaire upon the use of spinal anaesthesia in China during the years 1931 to 1935. Of the thirty-six hospitals approached only twelve replied but reports of a further 2,117 cases were obtained from the literature bringing the total up to 11,118 cases. Each year showed an increase in the number of spinal anaesthetics given the total for 1935 being more than double that for 1931. Partial or complete failure was reported in fifty-four cases or 0.5 per cent. Seven deaths occurred or 0.063 per cent of which six were from sudden collapse or heart failure on the operating table while one was from reactionary haemorrhage eleven hours later. In addition two patients died from intracranial haemorrhage after three and four weeks. The drug most often used was novocain in distilled water in strengths of 6 per cent (4,219 cases), 10 per cent (2,881 cases) and 5 per cent (1,000 cases). Stovaine has been largely given up as its administration is so often followed by post-operative retention as have spinocain on account of uncertainty of duration and percaine because of severe reactions, fever, headache and vomiting. A small series in which pantocain was used showed good results and long duration of anaesthesia. The author suggests that the maximum dose of novocain should be 0.2 gramme and that 0.15 gramme would be required for the average Chinese patient weighing about 120 lb. for a one-hour operation. He advocates injection by the usual technique in the fourth lumbar space followed by immediate Trendelenburg tilting of the table for safety. He considers that anaesthesia should not extend higher than midway between umbilicus and xiphisternum. As contraindications he suggests high or low blood pressure—that is, systolic above 170 or below 90 mm Hg—general or local sepsis, shock and mental conditions—for example epilepsy and hysteria.

### 363 Ether Convulsions

F. THIERRY (*Anesth et Analg* February 1938 p 55) induced ether anaesthesia with an Ombredanne mask in a female patient of 40 years to whom morphine and atropine had been given. To correct slow and shallow breathing carbon dioxide was being given when after five or six deep breaths a violent spasm of the upper limbs occurred. After removal of the mask this ceased and anaesthesia was continued without further carbon dioxide being administered. Much ether was used and relaxation was poor. In the discussion on this case many reports from English and American journals are quoted including that of Nosworthy's self-administration of carbon dioxide and the strange fact is brought out that in spite of the frequency of ether convulsions in other countries no case has been reported in France although the Ombredanne mask is commonly used with a high percentage of accumulated carbon dioxide. The activating cause in this case appears to have been a sudden change in acid-base equilibrium caused by the added carbon dioxide. The administration of the latter with this mask would appear undesirable. Predisposing causes are usually

present (pyrexia, sepsis etc. and possibly atropine). Treatment is by artificial respiration with perhaps intravenous barbiturates to control the convulsions. Oxygen and carbon dioxide mixtures should be used cautiously and gradually since sudden changes of carbon dioxide content in either direction may set up convulsions. Reports of animal investigations are quoted showing *inter alia* the stimulating effect of high ether concentrations on the motor centres also that a sudden return to fresh air may precipitate convulsions which are often fatal. The incidence and severity of such convulsions are increased by section of the vagus in the neck. Both atropine and ether increase the excitability of the motor cortex. Inhalation of ether has been shown to abolish the effect of hypnosis in some animals while amounts of ether otherwise ineffective were found to cause stimulation after a small dose of a hypnotic.

### 364 Obstetrical Analgesia with Rectidon

ENIMERT and GOLDSCHMIDT (*Strl med J La Grange* March 1938 p 240) have carried out 200 obstetrical analgesias with sodium amyl beta bromoethyl malonate known in America as sigmoidal and here as rectidon. The drug is supplied in 10 per cent solution ready for use and is injected direct into the rectum and as high as possible with a syringe and catheter. The rectum must be emptied by enemata and labour must be well established with dilatation of the cervix beginning. The initial dose is usually 10 ccm and gives analgesia for four to six hours after which further amounts of 5 ccm may be injected when labour is prolonged. The effect of the drug is shown in about fifteen minutes and reaches a maximum in two hours after which it decreases. The patient usually sleeps between her pains and responds to contractions with slight moaning etc. Excitement and restlessness are rare and occurred in only 4 per cent of cases. Some nervous patients were given 1.48 grain of diazepam one hour before the rectidon with good effect. Unusually deep sleep in two cases was successfully treated with coramine. Labour was not delayed and there was no increase of operative frequency. There was no maternal or foetal mortality and no increase of morbidity. Complete analgesia and amnesia was obtained in nearly 80 per cent of the cases.

## Obstetrics and Gynaecology

### 365 Intra-abdominal Radium for Cancer of the Cervix

F. DAELS (*Zbl Gynäk* February 26 1938 p 333) has previously sought to secure radium irradiation of the deeper cancerous zones in cases of carcinoma of the cervix by the following measures: complementary to radium applications to the cervix (1) radium drainage into the abdominal but extraperitoneal of the true pelvis by means of radium-containing tubes passed in various directions along the pelvic wall and (2) exteriorization of the pelvis in which the pelvis is marsupialized after transverse hypogastric incision before intrapelvic irradiation. He acknowledges the danger of phlebitis and inflammation which accompanies the first procedure and the technical difficulties and disadvantages of the second. He is now placing radium within the pelvis by using intra-abdominal incisions. The technique he says has not yet been perfected but his experience comprises thirty-six cases—two deaths within the first weeks of treatment from peritonitis and one from embolus. One intra-abdominal vesical fistula healing spontaneously. One case has been found safe to make the pelvic effusion more those to the primary growth. The intra-abdominal tubes are left in for about 10 to 15 days and the intrapelvic and intra-abdominal doses are 60 to 100 mg. A medium dose of 60 to 100 mg. is recommended.

incision 4 to 5 cm long serves for exploration of the pelvis and the introduction of two large curved silver, gold-coated, partially lead-lined tubes into the pouch of Douglas (one on each side) and two into the vesico-uterine fossa, their outer ends are brought out through and sutured near four small hypogastric stab-wounds. Small tubes containing radium are placed within the large tube at the distance which palpation of vessels and metastases shows to be desirable, each silver tube is provided externally with four narrower tubes of different lengths through which specimens of the fluid exudation can be withdrawn for bacteriological and cytological investigation.

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**Anaemias of Pregnancy**

V FODERL (*Wien klin Woch* February 11, 1938, p 168) states that a pseudo anaemia occurs in 50 per cent of all pregnant women. The blood plasma is increased, the red blood corpuscles relatively decreased to 3 million per ccm, the haemoglobin is 60 per cent, the colour index below 1, no abnormal cells are found. No symptoms occur and thus no therapy is required. The condition disappears in the puerperium. True anaemias in pregnancy are rare, and only occur in 3 to 8 per cent of all cases. With hypochromic anaemia clinical symptoms are present, and the children are often anaemic. Treatment with large doses of iron is successful and the condition clears up at the end of lactation. Pernicious anaemia may be complicated by pregnancy or may arise during pregnancy. In the latter event the prognosis is grave, the mortality is 40 to 60 per cent. Blood transfusions are sometimes required when the administration of liver and iron fails. In favourable cases the anaemia disappears during the puerperium but recurs in succeeding pregnancies. Termination of the pregnancy is rarely indicated. Normocytic aplastic anaemia is very rare in pregnancy, the author describes a case in detail. It is due to a toxic disturbance of the haemopoietic system, the red and white cells are diminished and the colour index is below 1. No regenerative forms are found and there is no evidence of haemolysis in the blood or serum. The condition is uninfluenced by the administration of liver or iron but is amenable to blood transfusions.

**Pathology**

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**First and Second Vaccinations**

O NORDLANDER (*Svenska LakSallsk Forh*, 1938, Supplement 12, 2, p 647) quotes figures from the Swedish Army Medical Service to show how much more frequent and prolonged are the serious reactions following the vaccination for the first time of young adults than are the reactions following the vaccination of young adults already vaccinated in childhood. In a three-year period beginning on October 1, 1934, there were 94,629 recruits who were either vaccinated or revaccinated. Only 996 represented first-time vaccinations, and among these men there were as many as 369 (37 per cent) whose reaction was so violent that it entailed interference with attendance to military duties, the average duration of invalidism being five days. Among the 93,633 recruits who had been vaccinated in childhood and were now vaccinated for the second time there were only 3,355 (3.6 per cent) who reacted so violently that they were reported sick, the average duration of invalidism was four days. The fact that only about 1 per cent of the recruits in the period under review had not already been vaccinated in childhood must be traced to the strictness of the vaccination legislation hitherto enforced in Sweden. With the possibility before him of this legislation being modified so as to make vaccination more or less voluntary the author calculates what will be the vaccination sickness rates some

years hence, when approximately every other recruit vaccinated represents a first-time vaccination. There will then be nearly 6,000 recruits ill for five days each every year, a sickness rate more than six times as great as that existing at the present time so far as vaccination in the army is concerned.

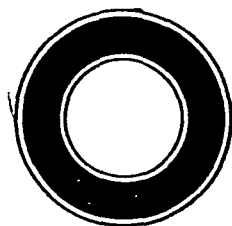
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**Alcohol Test of Hepatic Function**

E SERIANNI and G LOLLI (*Dtsch med Wschr* February 18, 1938, p 258) report from the University Institute for Human Physiology in Rome their experiences with a new test of hepatic function. It depends on the fact that, while in health the curve representing the concentration of alcohol in the blood varies greatly according to whether the alcohol is taken on a fasting or a full stomach, in certain diseases of the liver this curve is the same whether the alcohol be taken on a full or fasting stomach. The liver conditions which give rise to this abnormal reaction are Laennec's cirrhosis, new growths of the pancreas, compression of the biliary passages with jaundice, and certain forms of cholecystitis with or without gall-stones. The test consists in giving by the mouth 0.5 ccm of alcohol for every kilogramme of body weight in a 20 per cent watery solution. The blood is tested for alcohol five minutes later, the test being repeated every ten minutes during the first hour, and every fifteen minutes during the second and third hours. A day or two after these tests have been carried out in the fasting state the same procedure is followed an hour or two after an ordinary mixed meal has been taken. In health the blood-alcohol curve will be higher and longer after alcohol has been taken in the fasting state than after a full meal, whereas in the presence of the above-mentioned diseases of the liver the behaviour of both the full and the fasting curves will be identical.

**369 Bone-marrow in Pulmonary Tuberculosis**

G LANZA (*Riv Patol Clin Tuberc* January 31, 1938, p 1) has carried out investigations on the bone marrow in forty cases of tuberculosis. The samples were obtained by sternal puncture. He states that in all advanced cases the marrow shows both qualitative and quantitative changes. The qualitative changes are mainly the following: (1) anomalies of maturation both of the leucopoietic and the erythropoietic elements, particularly the frequent discrepancy between the degree of maturity of the nucleus and of the protoplasm, (2) poikilocytosis and anisocytosis, (3) degenerative changes, particularly in the granulocytes with "toxic" changes in the granules, vacuole formation, and, rarely, fatty degeneration. The quantitative changes include (1) a reduction in the number of differentiated and less mature elements in both red and white cells, (2) relative excess of the more mature elements of both series, (3) a marked reduction in the platelet-forming elements and an increase in the number of plasma cells, (4) changes in the leuco-erythrocytic ratio (more often to the advantage of the red series) and in the maturation-curves in both series. A comparative study of the above factors shows that the bone marrow is in a state of hyperactivity in 95 per cent of cases, 32.5 per cent of these 40 per cent show increased activity, 32.5 per cent show a reaction of an anaemic hyperplastic type, and 22.5 per cent an "infective" type of reaction—that is, a predominantly leucogenetic reaction, in two cases only (5 per cent) was there any deficiency in the erythropoietic function of the marrow, in contrast with the findings in the peripheral blood, this would appear to hold good even in cases of severe anaemia. The author thinks these changes may be related on the one hand with the increased requirements of red or white cells in the peripheral circulation, and on the other hand with local stimuli—for example, the "myelo-toxic factor" shown by the presence of degenerative elements, especially in the white cells.



# MENFORMON TABLETS

to reverse  
menopausal changes

' Finally there is one important observation that I would bring to your notice. Patients treated with oestrin for whatever complaint, frequently volunteer the information that they experience a sense of well-being. All of us suffer only too frequently from the voluble and discontented menopausal patient with all her aches and pains and I have been gratified by the CHANGE OF MENTAL ATTITUDE which oestrin has afforded to some of the patients converting them almost into cheerful kindly rays of sunshine.

PROC. ROY. SOC. MED., JULY 1936 p. 1094

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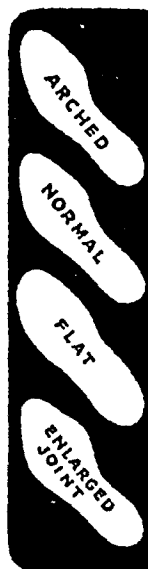
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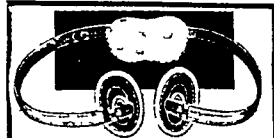
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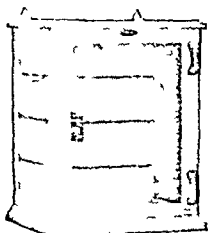
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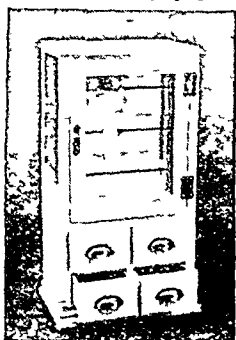
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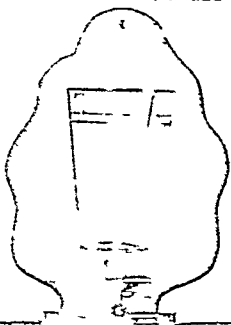
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or their dependents)

## 3,004 operations in the eight operating theatres

## OVER £5,000 SPENT ON RENOVATIONS & IMPROVEMENTS

**T**ODAY The Clinic, the wonderful Nursing Home in Devonshire Place, W 1, might have been richer by over twelve thousand pounds compared with two years ago—to such an extent have the public and the Medical Profession responded to its offer of the finest possible Nursing Home Service

Yet actually it is the Public and the Medical Profession who are the richer—for the whole of that sum (more than £12 000) has, true to the principles embodied in the Constitution of the operating Company, been put

back into The Clinic and spent on renewals and improvements of equipment and services, and thus without any increase of charges to the public

A large proportion of the money was spent in a thorough reorganisation of the nursing and catering services, previously at a remarkably high standard. As to catering at The Clinic now "It seems, nowadays, you have to be ill," wrote a patient there recently, "to learn how to live really well"

While the average charge for a room at The Clinic remains at fourteen guineas, charges actually range, as before, from 10 to 18 guineas, while there are a few suites at 25 to 42 guineas. All these rates include a free dispensary service—in "extra" which cost The Clinic nearly £2,400 last year. Enquiries and visits from the medical profession are welcomed, and the Secretary will be glad to furnish further details

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Winton (Reader in Physiology in the University of  
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These lectures are for regular students of the School but a limited number of tickets are available without fee to medical practitioners. Applications for tickets should be addressed to the Dean, British Postgraduate Medical School, Ducane Road, W.1.

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## THE HOSPITAL FOR DISEASES OF THE SKIN,

A Course of Lectures on elementary Dermatology especially designed for the needs of practitioners and medical men working in Welfare Centres &c will be held at 4.30 p.m. on Wednesdays in May June and July beginning on May 25th. No fee will be charged but those desirous of attending must send their names on a postcard to the Secretary at the above address before May 23rd. The lectures will be as follows—

**MAY** 25th Dr H. HALDIN DAVIS  
JUNE 1st Dr W. B. WINION  
8th Dr G. MITCHELL HEGGS  
15th Dr F. J. EAGAR  
22nd Dr P. M. DEVILLE  
29th Dr S. BLACKMAN  
JULY 6th Dr BEATRICE LEWIS  
13th Dr E. SKLARZ

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## GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

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(2) Obstetrical and Gynaecological Course for 4 weeks from June 6th comprising Pelvic Anatomy and Phantom Course Obstetrical and Gynaecological Pathology and Clinical Demonstrations.

Syllabuses may be obtained from The Secretary Post-Graduate Medical Association The University Glasgow

## CITY OF LONDON MATERNITY HOSPITAL

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RALPH B. CANNINGS Secretary

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### SUMMER COURSE

The following Course consisting of sixteen lectures will be given at the Hospital on Tuesdays at 4 p.m. commencing Tuesday May 10th and terminating Tuesday June 28th 1938.

4—4.45 p.m. by W. LEES TEMPLETON M.D.  
Physician for Nervous Diseases on *Practical Homoeopathic Prescribing with case records*

5.15—6 p.m. by J. D. KENYON B.Sc. M.B.  
Physician with Charge of Out Patients on *The Materia Medica of some Homoeopathic Remedies*

These lectures are intended to be complementary in that as far as possible the remedies described in the second lecture will be those illustrated in the first.

Tea will be provided during the interval between the lectures.

Registered medical practitioners and senior students of medicine are cordially invited to attend.

## MIDDLESBROUGH EDUCATION COMMITTEE

### APPOINTMENT OF ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified candidates who are not over 45 years of age for a position as ASSISTANT SCHOOL MEDICAL OFFICER to act under the School Medical Officer in connection with the medical inspection and treatment of school children and such other duties as may be required by the Education Committee.

Commencing salary £500 per annum (provided the successful candidate has had not less than three years postgraduate experience) rising by annual increments of £25 to £700 per annum. The Committee may at their discretion take into account previous experience as an Assistant School Medical Officer in determining the amount of the commencing salary. The successful candidate will be required to devote his (her) whole time to the duties of the office. The appointment will be subject to the provisions of the Local Government and Officers Superannuation Act 1922 and the salary of the candidate will be required to pass a written examination. The appointment will be for a term of two calendar months.

Applications may be obtained on application to the Director of Education, Education Committee, Middlesbrough, to whom they should be sent not later than May 15th 1938. Candidates should send their names on a postcard to the Secretary, Middlesbrough Education Committee, 10, Victoria Road, Middlesbrough, to whom they should be sent not later than May 15th 1938.

PRESTON KITCHEN

10, Victoria Road

## CHARLES MURCHISON SCHOLARSHIP IN CLINICAL MEDICINE

The next EXAMINATION for this SCHOLARSHIP will be held at the ROYAL COLLEGE OF PHYSICIANS OF LONDON ON TUESDAY JUNE 14th 1938 and following days.

The Examination is open to any Student of Medicine whether holding a Medical qualification or not who subsequently to the date of passing his professional Examination in Anatomy and Physiology for a Medical qualification commenced clinical studies not less than two and a half and not more than five years previously at a Medical School in London recognized by the Royal College of Physicians or at the University of Edinburgh in eluding Medical Classes recognized by the Medical Faculty of the University.

The Scholarship is of the value of Twenty Guineas and is tenable for one year.

Intending Candidates are required to send in their names to the Registrar of the Royal College of Physicians Pall Mall East London SW 1 not later than May 31st with evidence of the duration of their Medical Studies from the Deans of their respective Schools and evidence of the date at which they passed their examination in Anatomy and Physiology.

(The Examination for 1939 will be held in the University of Edinburgh.)

CHARLES NEWMAN M.D.

Assistant Registrar

Pall Mall East SW 1

## CHILD GUIDANCE COUNCIL

### FELLOWSHIPS IN PSYCHIATRY

The Child Guidance Council offers THREE FELLOWSHIPS each of £300 tenable for a year for half time work at the London Child Guidance Clinic 1 Canonbury Place Islington N.1.

Candidates should hold the Diploma in Psychological Medicine or show evidence of psychiatric knowledge up to a similar standard. Experience in Pediatrics or School Medical service will be regarded as an asset.

The Fellows will be expected to commence work in October this year.

Further particulars and forms of application may be obtained from the Secretary Child Guidance Council 1 Woburn House Upper Woburn Place London W.C.1.

Applications should reach the Secretary not later than May 10th 1938 and should be accompanied by copies of three recent testimonials.

**EXPERIENCE COACHING IN PHYSIOLOGY Pathology and Medicine by M.D. and (Hons.) MRCP Lond B.Sc. Physiology Lond. All exams. Classes held—Address No. 70, B.M.A. House Tavistock Square W.C.1**

## BRITISH ASSOCIATION OF RADIOLOGISTS (FELLOWSHIP BOARD)

### FELLOWSHIP EXAMINATION

The second Examination for the Fellowship of the Association will be held in London during the period November 28th to December 2nd 1938.

The Examination is limited to Medical Practitioners who are duly registered in the country in which they practise and who have held a recognized Diploma in Radiology for not less than two years. The Diplomas so far recognized are those granted by the following bodies: the Universities of Cambridge, Edinburgh, Liverpool, and London; the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England; and the American Board of Radiology.

The principal subjects of the Examination are

### I. RADIO DIAGNOSIS II. RADIOTHERAPEUTICS

Every candidate must pass on an honourable standard the examination in either Radiodiagnosis or Radiotherapeutics. A candidate may if he chooses elect to take honours in both subjects. All candidates will also be examined in General Medicine, General Surgery and General Pathology but those who have passed examinations for higher medical or surgical qualifications may be exempted partly or wholly from this part of the Fellowship Examination. A thesis (or published work in lieu of a thesis) concerned with some aspect of the honours subject is also required from candidates. This thesis may be lodged with the Warden at any time after the expiration of two years from the taking of a radiological diploma.

In addition to passing the Examination candidates must comply with the conditions for ordinary membership of the Association before they can be elected Fellows.

Practitioners intending to specialise in Radio are invited to register their names with the Board in order that they may receive information.

Entrance forms which must be sent in before the end of August 1938 and further particulars may be obtained from

F. HERNAMAN JOHNSON M.D. D.M.R.E.  
Warden Fellowship Board  
British Association of Radiologists  
32 Welbeck Street London W.1  
Telephone WELbeck 6867

## ADVICE ON THE CHOICE OF SUITABLE SCHOOLS AND TUTORS

for BOYS and GIRLS with prospective recommended establishments will be given free of charge to parents stating age of pupil and strict preferred range of fees and type of school required.

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## SEAMENS HOSPITAL SOCIETY

The Committee of Management invite applications for the appointment of PHYSICIAN in charge of out patients at the Dreadnought Hospital Greenwich. The elected candidate will have charge of the out patients and will be appointed for 12 months but will be eligible for re-election.

Candidates must be Doctors of the Royal College of Medicine of a University in the United Kingdom and Fellows or Members of the Royal College of Physicians of London.

Applications to be sent in on or before Friday May 27th to the undersigned from whom further particulars can be obtained. The successful Physician is a candidate for the Fellowship of the Society.  
Greenwich April 25th 1938 F. A. HODGKINSON Secretary

# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances

Opportunities are available for officers on the permanent list for post graduate study, to specialise, to take higher examinations and to obtain further qualifications

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers

Copies of the regulations for entry and conditions of Service, including rates of pay, allowances and retired pay may be obtained from the Medical Director General of the Navy, Admiralty, S.W. 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than 31st May, 1938

## CITY OF PORTSMOUTH

### ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER (Male)

Applications are invited from medical men not over 40 years of age for the above appointment. The maximum salary will be £60 per annum. The commencing salary will not be less than £40 per annum and will be fixed according to the qualifications and experience of the successful applicant, and will rise by increments of £5 to £60 per annum.

The duties are concerned chiefly with the medical inspection and treatment of school children and preference will therefore be given to candidates with experience of School Medical work and of diseases of children.

The appointment will also include duties in the Health Department and it is accordingly desirable but not essential that applicants should hold the D.P.H. or a similar Public Health qualification.

Forms of application may be obtained from the Chief Clerk Education Offices Guildhall Portsmouth, and should be returned accompanied by three testimonials of recent date not later than May 16th 1938 to the undersigned.

The Guildhall F. J. SPARKS  
Portsmouth Town Clerk.  
-April and 1938

## COUNTY BOROUGH OF HUDDERSFIELD

### APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from registered Medical Practitioners (Males) who have had recent experience in ante-natal work and in the care of Infants. Salary £40-£55 £100 initial salary according to experience.

The post will be designated under the Local Government and Other Officers Superannuation Act, 1932 and the successful candidate will be required to pass a medical examination before being appointed to the position.

Applications should be full particulars regarding training qualifications, and appointments held. The Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials, so as to reach him not later than Thursday May 19th 1938.

Town Hall SAMUEL PROCTER  
Huddersfield Town Clerk.  
April 1938

## LANCASHIRE COUNTY COUNCIL

### PUBLIC ASSISTANCE COMMITTEE

LAKE HOSPITAL AND DARTON HOUSE INSTITUTION  
Ashton-under-Lyne near Man heater

APPOINTMENT OF SENIOR RESIDENT MEDICAL OFFICER. Salary £20 per annum to enter with the usual residential emoluments. The person appointed will be required to take up duty on June 1st 1938.

Applications are invited from registered Medical Practitioners for the above appointment at the Lake Hospital and Darton House Institution, Ashton-under-Lyne comprising 100 and 45 beds respectively.

The Hospital is recognised as a complete Training School for Nurses.

Candidates must be unmarried. Preference will be given to candidates having previous hospital experience especially in mental and in the administration of anaesthetics.

The appointment will be the first instance be for a period of six months the successful candidate being eligible for reappointment for a further period of six months at the end of that period.

Forms of application may be obtained from the County Medical Officer of Health Public Assistance (Hospital and Medical) Department County Offices Preston to whom all applications accompanied by copies of not more than two recent testimonials must be forwarded not later than Tuesday May 10th 1938.

County Offices GEORGE ETHERTON  
Preston Clerk of the County Council  
April 25th 1938

## NEW ZEALAND

Appointments are invited for the position of RESIDENT SURGEON, New Plymouth Hospital (C.O.D.). Salary £400 per annum and 200 house. A special allowance for the services of a RADIOLOGIST (C.O.D.) is also available. Applications should be full particulars regarding training qualifications, and appointments held. The Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials, so as to reach him not later than Thursday May 19th 1938.

## ESSEX COUNTY COUNCIL

### JUNIOR ASSISTANT MEDICAL OFFICER

The County Council of the County of Essex in the Municipal District of the Municipal Ward of Black Notley St. Paul's near Chelmsford.

The Sanatorium has 100 beds for the treatment of pulmonary tuberculosis. It is situated in a beautiful country and is well equipped with modern appliances.

The appointment is for a period of three years, which may be extended to five years at the discretion of the County Council. The successful candidate will receive a salary of £400 per annum and 200 house.

Applications should be full particulars regarding training qualifications, and appointments held. The Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials, so as to reach him not later than Thursday May 19th 1938.

The appointment will be the first instance be for a period of six months the successful candidate being eligible for reappointment for a further period of six months at the end of that period.

Forms of application may be obtained from the County Medical Officer of Health Public Assistance (Hospital and Medical) Department County Offices Preston to whom all applications accompanied by copies of not more than two recent testimonials must be forwarded not later than Tuesday May 10th 1938.

County Offices GEORGE ETHERTON  
Preston Clerk of the County Council  
April 25th 1938

## CITY OF PLYMOUTH

### CITY GENERAL HOSPITAL (C.O.D.)

Applications are invited from registered Medical Practitioners (Males) who have had recent experience in ante-natal work and in the care of Infants. Salary £40-£55 £100 initial salary according to experience.

The post will be designated under the Local Government and Other Officers Superannuation Act, 1932 and the successful candidate will be required to pass a medical examination before being appointed to the position.

Applications should be full particulars regarding training qualifications, and appointments held. The Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials, so as to reach him not later than Thursday May 19th 1938.

Town Hall SAMUEL PROCTER  
Huddersfield Town Clerk.  
April 1938

# COUNTY COUNCIL OF MIDDLESEX DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR EDMONTON SOUTH

Applications are invited from duly qualified medical practitioners for the undermentioned appointments—

District Medical Officer for the Edmonton South Medical Relief District Salary £200 per annum plus the cost of expensive drugs and fees in respect of attendance at confinements and for the services of another medical practitioner to administer short anaesthetics for minor operations (e.g. septic fingers abscesses)

The officer appointed will be required to carry out his duties in accordance with the Public Assistance Order 1930 of the Minister of Health and to name to the Council some duly qualified medical practitioner who will in the case of his absence or other hindrance to his personal attendance act in his place.

Public Vaccinator for the Edmonton South Vaccination District. The person appointed will be required to produce to the Council a certificate of proficiency in vaccination except in a case in which such certificate was required as a condition of obtaining any diploma licence or degree which he possesses. He will be required also to enter into a contract with the Council in accordance with the Vaccination Order 1930 of the Minister of Health. The contract will provide for the payment of the scale of fees laid down by the County Council.

The person or persons engaged will not at present have any superannuation rights under the Council's superannuation scheme and will be required to commence duty on June 8th.

Applications stating date of birth qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 14th. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed "District Medical Officer and/or Public Vaccinator as the case may be". Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 21st 1938

# COUNTY COUNCIL OF MIDDLESEX VISITING DERMATOLOGIST

Applications are invited for the appointment of a Visiting Dermatologist at REDHILL COUNTY HOSPITAL EDGWARE Middlesex. Applicants must be medical practitioners devoting their time wholly or mainly to the treatment of diseases of the skin.

The physician appointed will be required to attend one session per week at a fee of £3 3s per session. The appointment which does not at present carry any superannuation rights will be held during the pleasure of the Council and is terminable by three months notice on either side.

Applications stating age qualifications and three recent testimonials must be received by the undersigned not later than May 7th 1938. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed "Visiting Dermatologist". Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
April 14th 1938

# CITY OF SHEFFIELD NETHER EDGE HOSPITAL

Applications are invited from duly qualified medical women for the appointment of ASSISTANT MEDICAL OFFICER at the above hospital. The Medical Officer appointed will be required to reside in the hospital and assist in the medical and nursing duties. She will also take part in the Maternity and Child Welfare work of the hospital. Candidates must have had previous hospital experience and a minimum of three years' experience in Maternity and Child Welfare work. Salary £250 per annum with board and lodging. The successful applicant will be required to carry out the duties of first aid and also any other duties allocated to him by the Medical Officer of Health.

# COUNTY BOROUGH OF SOUTHAMPTON TEMPORARY ASSISTANT MEDICAL OFFICER OF HEALTH FOR AIR RAID PRECAUTIONS

Applications are invited from registered medical practitioners for the post of Temporary Assistant Medical Officer of Health for Air Raid Precautions for a period not exceeding twelve months at a salary of £600 per annum.

Candidates should have had experience in Air Raid Precautions work and training in first aid. The successful applicant will be required to carry out the duties of first aid and also any other duties allocated to him by the Medical Officer of Health.

Further particulars may be obtained from the Medical Officer of Health, Civic Centre, South Street, Southampton. Applications should be forwarded to the undersigned not later than May 10th 1938.

R. RONALD H. MEGGESON  
Town Clerk

# COUNTY BOROUGH OF STOCKPORT PUBLIC HEALTH AND ASSISTANCE COMMITTEE LADY ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified Medical Women for the position of Assistant Medical Officer for Maternity and Child Welfare.

The Officer appointed will be required to assist the Medical Officer of Health in carrying out the Council's Maternity and Child Welfare Scheme and such other duties from time to time as directed by the Council. She will be required to devote her whole time to the service of the Council.

Applicants must be registered Medical Practitioners and possess the Diploma of Public Health or similar qualification. Preference will be given to candidates who have had experience in Diseases of Women and Children and in Maternity and Child Welfare work.

The salary will be at the rate of £600 per annum inclusive rising by annual increments of £25 to a maximum of £700 per annum inclusive.

The candidate appointed will be required to pass a medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Forms of application and particulars as to the terms and conditions of the appointment may be obtained from the Medical Officer of Health, Town Hall, Stockport.

Canvassing directly or indirectly will be a disqualification.

Applications accompanied by copies of three recent testimonials and endorsed "Assistant Medical Officer" should reach the undersigned not later than the first post on Monday May 16th 1938.

Town Hall Stockport F. KNOWLES  
April 1938 Town Clerk

# CITY OF STOKE ON TRENT MEDICAL OFFICER OF VENEREAL DISEASES CENTRE

The City Council invite applications for the appointment of a Medical Officer of the Venereal Diseases Centre at a salary of £750 rising to £937 10s per annum inclusive in accordance with the B.M.A. Scale.

The person appointed will be required to devote the whole of his time to the service of the Corporation which will not necessarily be confined to work in connexion with venereal disease.

Applicants must be fully qualified medical men and have had special experience in modern methods of the diagnosis and treatment of Venereal Diseases. The possession of the Diploma in Public Health will be considered an advantage.

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials and endorsed "Medical Officer V.D." to be delivered to the undersigned on or before Monday May 9th 1938.

Town Hall Stoke on Trent E. B. SHARPLEY  
April 22nd 1938 Town Clerk

# CITY OF STOKE-ON TRENT STANFIELD SANATORIUM RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer (male) at Stanfield Sanatorium. Candidates must be single. Previous institutional experience in Tuberculosis will be an advantage. The appointment will be for a period of twelve months only.

Salary at the rate of £250 per annum together with board and lodgings. The selected candidate will act under the immediate direction of the Tuberculosis Officer.

Applications endorsed "Resident Medical Officer" together with copies of three recent testimonials to be sent to the undersigned not later than Monday May 9th 1938.

Town Hall Stoke on Trent E. B. SHARPLEY  
April 22nd 1938 Town Clerk

# COUNTY BOROUGH OF SOUTHAMPTON TEMPORARY ASSISTANT MEDICAL OFFICER OF HEALTH FOR AIR RAID PRECAUTIONS

Applications are invited from registered medical practitioners for the post of Temporary Assistant Medical Officer of Health for Air Raid Precautions for a period not exceeding twelve months at a salary of £600 per annum.

Candidates should have had experience in Air Raid Precautions work and training in first aid. The successful applicant will be required to carry out the duties of first aid and also any other duties allocated to him by the Medical Officer of Health.

Further particulars may be obtained from the Medical Officer of Health, Civic Centre, South Street, Southampton. Applications should be forwarded to the undersigned not later than May 10th 1938.

R. RONALD H. MEGGESON  
Town Clerk

# CITY OF BIRMINGHAM MENTAL HOSPITAL DEPARTMENT RUBERY HILL AND HOLLYMOOR DIVISION

The Committee of Visitors invite applications from duly qualified medical men for the post of Junior Male Assistant Medical Officer. The successful candidate will be required to reside in the Hospital.

The commencing salary will be £350 per annum plus the usual residential emoluments of board, lodging laundry and attendance. An increase of £50 will be granted on completion of twelve months satisfactory service and thereafter increases of £25 per annum up to a maximum salary of £450 per annum. An additional £50 per annum will be paid to a holder of the D.P.M. qualification or to a person obtaining the D.P.M. qualification. All fees received in connexion with paid work will be required to be paid into the Borough Funds but for making insurance reports reports on compensation cases and Coroner's inquests the fees can be retained.

A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification. Previous mental hospital experience is not essential but experience in the administration of anaesthetics is desired.

The candidate appointed will be required to pass a medical examination and will be placed on the permanent staff after one year's satisfactory service when he will be required to contribute under the Asylums Officers Superannuation Act, 1909. He will be required to serve in such institution belonging to the Mental Hospitals Committee as they may from time to time direct. The appointment is subject to one month's notice on either side.

Applications stating full particulars of qualifications experience and appointments should be accompanied by copies of three recent testimonials must be addressed to the undersigned so as to be received not later than May 15th 1938.

F. H. C. WILTSHIRE  
Clerk to the Committee of Visitors.  
Town Clerk's Office  
Council House Birmingham 1

# CITY OF MANCHESTER WITHINGTON HOSPITAL (1184 Beds) Recognized under the Regulations for the F.R.C.S.

The Public Health Committee invites applications from registered medical practitioners for the undermentioned posts.

1. RESIDENT OBSTETRICAL OFFICER. Salary £350 per annum rising by annual increments of £25 to a maximum of £450. Candidates must have had previous experience in obstetrics and gynaecology and preference will be given to candidates holding a higher qualification. Board residence and laundry is provided in addition to the salary stated. To commence mid June.

2. ASSISTANT TO THE RESIDENT SURGICAL OFFICER (Grade 2). Salary £250 per annum with board residence and laundry. To commence mid June.

3. ASSISTANT TO THE RESIDENT OBSTETRICAL OFFICER (Grade 2). Salary £250 per annum with board residence and laundry. To commence mid June.

Appointments numbered (2) and (3) will be renewable for a further six months but not renewable thereafter.

Full information and forms of application may be obtained from the Medical Officer of Health, Town Hall, Manchester 2 and applications for these posts must be received by him not later than May 16th 1938.

Town Hall F. E. WARBRECK HOWELL  
Manchester 2 Town Clerk  
April 26th 1938

# CITY OF NOTTINGHAM—CITY HOSPITAL RESIDENT ASSISTANT SURGICAL OFFICERS

Applications are invited from fully qualified medical practitioners for posts as Resident Assistant Surgical Officers at the City Hospital.

This hospital is a general hospital of over a thousand beds with a considerable amount of acute work.

The salary is £250 per annum with board and residence.

The appointments will be for six months with a prospect of renewal for a further six months.

The duties will be chiefly surgical and will be directed by a staff of visiting surgeons and subject to the control of the Medical Superintendent. Applicants must have had previous hospital experience.

The appointments will not be subject to the Corporation's Superannuation Scheme.

Application forms may be obtained from the undersigned to whom they should be sent forthwith.

Canvassing directly or indirectly is forbidden.  
J. E. RICHARDS  
Town Clerk

Guildhall Nottingham  
April 22nd 1938

## UNIVERSITY OF ABERDEEN

The Senate will award A. W. GARDEN FELLOWSHIPS in June 1939 for the period commencing October 1st 1939. The FELLOWSHIPS are of the annual value of not less than £200 and are normally tenable for from 3 to 5 years in any of the Departments of the Faculty of Medicine in the University of Aberdeen. Graduates of Medicine of any British University are eligible, but preference will be given to Medical Graduates of the University of Aberdeen with suitable qualification.

Applications must be received before May 1st 1939 with the Secretary of the University of Aberdeen, Marischal College, Aberdeen from whom particulars may be obtained.

## CAERNARVONSHIRE COUNTY COUNCIL

## ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited for the above post from Registered Medical Practitioners of not more than 40 years of age at a salary of £60 per annum rising by annual increments of £5 to £70 per annum plus a travelling allowance in accordance with the scale adopted by the Council.

Candidates must, subsequent to qualification, have had at least three years' experience in the practice of the profession and also have had special experience in Maternity and Child Welfare Work and the School Medical Services. Practical experience in Immunization Method is also desirable. The possession of a Diploma in Public Health or an equivalent qualification is essential.

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act 1928, and the successful applicant will be required to pass a medical examination.

Canvassing either directly or indirectly will be a disqualification.

A knowledge of Welsh is essential. Further particulars about the post may be obtained from the County Medical Officer of Health, County Offices, Caernarvon.

Forms of application may be obtained from the undersigned to whom they should be returned completed together with copies of three recent testimonials, and endorsed "Medical Officer" by not later than Monday, May 16th 1938.

Dated this 5th day of April 1938  
DAVID G. JONES  
of the County Offices, Caernarvon  
Clerk of the County Council

## BOROUGH OF HENDON

## ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER (MALE)

The Hendon Borough Council invite applications for the above post.

Applicants must be fully qualified Medical Practitioners and hold a Diploma in Public Health or an equivalent qualification.

The duties will be mainly in connexion with the Council's Maternity and Child Welfare and School Medical Services, but in addition other duties under the direction of the Medical Officer of Health.

The salary is £600 per annum, rising by annual increments of £5 to a maximum of £700 with a car allowance of £20 per annum if the successful candidate provides his own car for use in connexion with his duties.

The appointment is subject to the provisions of the Local Government and Other Officers' Superannuation Act 1928 and the successful candidate will be required to pass a medical examination.

Applications on forms to be obtained from the undersigned together with copies of not more than three recent testimonials to be sent to the undersigned not later than the first post on Thursday, May 5th 1938.

Canvassing directly or indirectly will be deemed a disqualification.

Dated this 1st day of April 1938  
TOWN HALL, HENDON N.W.4 LEONARD WORDEN  
Town Clerk

## DEVON COUNTY COUNCIL

(Medical Department)

HAWKMOOR SANATORIUM  
Near Bovey Tracey

## RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered medical practitioners (male) for the above appointment. Candidates must be unmarried and have held resident hospital appointments. Salary will be at the rate of £20 per annum with board, residence, and laundry.

The appointment will be made for a period of six months.

Forms of application may be obtained from the undersigned and must be returned accompanied by copies of not more than three recent testimonials, not later than the first post on Monday, May 16th 1938.

L. MEREDITH DAVIES  
County Medical Officer  
4 Barnfield Crescent, Exeter

## BOROUGH OF TOTTENHAM

## APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited from Registered Medical Practitioners for the appointment of Deputy Medical Officer of Health for the Borough at a salary of £200 per annum with annual increments of £10 per annum.

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act 1928, and the successful candidate will be required to pass a medical examination.

Applications on forms to be obtained from the undersigned together with copies of not more than three recent testimonials, and endorsed "Deputy Medical Officer of Health" by not later than Monday, May 16th 1938.

The appointment will be made for a period of six months.

Forms of application may be obtained from the undersigned and must be returned accompanied by copies of not more than three recent testimonials, not later than the first post on Monday, May 16th 1938.

Canvassing directly or indirectly will be deemed a disqualification.

Dated this 1st day of April 1938  
TOWN HALL, TOTTENHAM E. TOWNSEN  
Town Clerk

Appointment of Deputy Medical Officer of Health

Canvassing in any form will be a disqualification.

Forms of application may be obtained from the undersigned and must be returned accompanied by copies of not more than three recent testimonials, not later than the first post on Monday, May 16th 1938.

Canvassing directly or indirectly will be deemed a disqualification.

Dated this 1st day of April 1938  
TOWN HALL, TOTTENHAM E. TOWNSEN  
Town Clerk

## SURREY COUNTY COUNCIL

## ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an Assistant Medical Officer (Male) for the County of Surrey. The duties will be in connexion with the School Medical and Maternity and Child Welfare Services, but the officer appointed will be required to undertake such other Public Health duties as may be allocated to him. He will be on the staff of the County Medical Officer of Health, and must reside in the County of Surrey and devote his whole time to the work.

Salary £600 per annum rising by annual increments of £5 to £700 per annum. Travelling expenses in accordance with the Council's scale will be allowed.

The appointment will be subject to the approval of the Ministry of Health and the Board of Education to the successful candidate passing a medical examination to the provisions of the Local Government and Other Officers' Superannuation Act 1928, and to the Statutory Regulations of the Council, which provide inter alia that the appointment may be determined at any time by three months' notice.

Applications stating age, qualifications, and experience, together with copies of three recent testimonials, should be made on the prescribed form and sent to the County Medical Officer of Health, County Hall, Kingston upon Thames, from whom copies of the application form may be obtained, and to whom any enquiries relating to the appointment should be addressed.

Last day for receipt of applications Friday, May 13th 1938.

Canvassing directly or indirectly will be deemed a disqualification.

Dated this 1st day of April 1938  
COUNTY HALL, KINGSTON UPON THAMES  
Clerk of the County Council

Canvassing directly or indirectly will be deemed a disqualification.

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Dated this 1st day of April 1938  
COUNTY HALL, KINGSTON UPON THAMES  
Clerk of the County Council

## STAFFORDSHIRE COUNTY COUNCIL

## BACTERIOLOGICAL AND PATHOLOGICAL LABORATORY

## SECOND ASSISTANT BACTERIOLOGIST AND PATHOLOGIST

Applications are invited from Registered Medical Practitioners for the appointment of Second Assistant Bacteriologist and Pathologist for the County of Staffordshire. The duties will be in connexion with the Bacteriological and Pathological Laboratory, County Hall, Stafford.

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act 1928, and the successful candidate will be required to pass a medical examination.

Applications on forms to be obtained from the undersigned together with copies of not more than three recent testimonials, and endorsed "Second Assistant Bacteriologist and Pathologist" by not later than Monday, May 16th 1938.

The appointment will be made for a period of six months.

Forms of application may be obtained from the undersigned and must be returned accompanied by copies of not more than three recent testimonials, not later than the first post on Monday, May 16th 1938.

Canvassing directly or indirectly will be deemed a disqualification.

Dated this 1st day of April 1938  
COUNTY HALL, STAFFORD  
Clerk of the County Council

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Dated this 1st day of April 1938  
COUNTY HALL, STAFFORD  
Clerk of the County Council

# THE HOSPITAL FOR SICK CHILDREN

Great Ormond Street London WC1

## APPOINTMENTS TO BE MADE PRELIMINARY TO THE OCCUPATION OF THE NEW HOSPITAL

A RESIDENT ASSISTANT PHYSICIAN who is to be the Senior Resident Officer is required. Duties to commence as soon as possible after May 4th. Salary £200 per annum.

This appointment is tenable in the first instance for one year but may be held for a period of two years subject to re-election.

The duties will include those of the former Medical Registrar.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital. Special experience in infectious diseases is desirable.

TWO RESIDENT MEDICAL ASSISTANTS AND CLINICAL PATHOLOGISTS are required on June 1st 1938. Salary £125 per annum.

These appointments are tenable in the first instance for one year but may be held for a period of two years subject to re-election.

The morning duties will include those of an Out-patient Medical Registrar. The afternoons will be devoted to work in a section of the Pathological Department.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

AN OUT-PATIENT MEDICAL OFFICER (part time and non resident) is required on June 1st 1938. Salary £150 per annum.

This appointment is tenable in the first instance for one year but may be held for a period of two years subject to re-election.

The duties will include those of the former Out-patient Medical Registrar.

Candidates must possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

AN ASSISTANT RESIDENT SURGICAL OFFICER is required duties to commence as soon as possible after May 4th.

The appointment is tenable for one year. Salary £100 per annum.

Duties will include attendance upon members of the Surgical Staff in the Out-patient Department, the performance of Out-patient Operations and deputing for the Resident Surgical Officer.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

A HOUSE SURGEON is required. Duties to commence as soon as possible after May 4th.

This appointment is tenable for six months. Salary at the rate of £50 per annum.

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital.

Candidates for the above appointments must attend at the Hospital to appear before the Joint Committee at 4.45 p.m. on Wednesday May 4th 1938.

Further particulars and forms of application which must be completed and returned by noon on Monday May 2nd 1938 are obtainable from the undersigned.

HERBERT F. RUTHERFORD  
April 1938 Secretary

## BOLINGBROKE HOSPITAL

Wandsworth Common S.W.11  
(135 Beds)

Applications are invited from duly registered Medical Practitioners for the posts of —  
1. HOUSE SURGEON (male)  
2. CASUALTY OFFICER (male)

Candidates must be unmarried.

The appointments are for six months commencing on June 1st next.

Salary will be at the rate of £120 a year with board residence and laundry.

Application stating age, qualifications and experience, with copies of not more than three testimonials should be sent to the undersigned on or before May 11th.

W. S. RANDOLPH BISS  
Secretary Superintendent

## S. BARTHOLOMEW'S HOSPITAL

PART-TIME CHIEF ASSISTANT IN THE X-RAY DIAGNOSTIC DEPARTMENT

Applications are invited for the post of part-time Chief Assistant in the X-ray Diagnostic Department. Candidates must be registered Medical Practitioners and possess a Diploma in Medical Radiology.

The appointment will be required to attend in the Department a few half-days a week.

Applications should be made for a period of six months, with the understanding that re-election will be held at the end of the period.

Applications with copies of three testimonials should be sent to the undersigned on or before May 11th.

C. C. CARLWILSON  
Secretary

## LONDON JEWISH HOSPITAL

Stepney Green E1  
General Hospital (109 Beds)

Candidates (male) for the following Resident appointments which are for a period of six months commencing June 1st next may obtain forms of application from the Secretary to whom applications with copies of three recent testimonials must be sent on or before May 20th 1938.

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum.

HOUSE SURGEON Salary at the rate of £100 per annum.

CASUALTY OFFICER Salary at the rate of £100 per annum.

## ROYAL FREE HOSPITAL

Gryps Inn Road W.C.1

Applications are invited from duly qualified medical men for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st 1938 and tenable for one year. Candidates must have held at least one year's Resident Hospital experience.

Salary £180 per annum with board and residence.

Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 7th 1938.

RICHARD T. BARTLEY

Secretary

## SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN PLAISTOW E.13

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (vacant May 1st) male or female. The appointment is for six months and will expire on October 30th. Board and residence are provided. Salary at the rate of £150 per annum including £5 allowance for laundry. Personal canvassing not desired.

Applications with copies of three recent testimonials to be sent to the undersigned as soon as possible.

A. ERNEST WILKES

Secretary

## ROYAL NORTHERN HOSPITAL

Holloway N.7

Applications are invited for the post of OBSTETRIC REGISTRAR. The appointment is for one year with eligibility for reappointment. Duties will include Clinical Lectures to pupil midwives. Honorarium £200 p.a. with luncheon and tea provided.

Applications with copies of testimonials should be sent by May 11th to the undersigned from whom the necessary forms of application and rules may be obtained.

GILBERT G. PANTER

Secretary

## KING EDWARD MEMORIAL HOSPITAL

Ealing W.13 (145 Beds)

Applications which should be submitted as soon as possible are invited for the following appointments —

OPHTHALMIC SURGEON  
HONORARY ANAESTHETIST  
(Two vacancies)

Particulars may be obtained from the undersigned.

R. A. MICKLEWRIGHT

House Governor

## NATIONAL HOSPITAL QUEEN SQUARE W.C.1

ASSISTANT REGISTRAR

Applications are invited for the post of Assistant Registrar which will become vacant in May. The salary is £200 a year. Applications with copies of recent testimonials should reach the undersigned from whom any further particulars may be obtained on or before May 31st 1938.

GODFREY H. HAMILTON

Secretary

## NATIONAL HOSPITAL QUEEN SQUARE W.C.1

REGISTRAR

Applications are invited for the post of Registrar which will become vacant in October. The salary is £200 a year. Applications with copies of recent testimonials should reach the undersigned from whom any further particulars may be obtained on or before May 31st 1938.

GODFREY H. HAMILTON

Secretary

## HOUNSLOW HOSPITAL

ANAESTHETIST

Applications are invited for the post of ANAESTHETIST one session per session the appointment to commence at once.

Applications with copies of three recent testimonials should be sent to the Secretary Hounslow Hospital, Staines Road, Middlesex from whom further particulars may be obtained.

## WEST LONDON HOSPITAL

Hammersmith Road W.6 (739 Beds)

Applications are invited for the post of CHIEF ASSISTANT TO THE DEPARTMENT FOR CHRONIC RHEUMATIC DISEASES for a period of one year eligible for re-election. An honorarium of £100 a year is attached to the post. The duties will include attendance in the Out-patient Department on two half-days a week.

Candidates must be registered under the Medical Act and preference will be given to those possessing an M.R.C.P. or F.R.C.S. qualification. Previous experience in the treatment of rheumatism is an advantage.

Applications with copies only of testimonials should reach me not later than first post on Thursday May 12th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a meeting of the Medical Council at 4.30 p.m. on Friday May 20th and the House Committee Meeting at 7 p.m. the same day when the appointment will be made.

H. A. MADGE

Secretary

## WEST LONDON HOSPITAL HAMMER SMITH W.6 (239 Beds)

An additional HONORARY REGISTRAR is required for the Throat, Nose and Ear Department. The appointment is for one year and subject to annual re-election may be extended for a period of not longer than 3 years.

Applicants must be duly qualified registered Medical Practitioners with previous experience in otolaryngology.

Applications accompanied by copies of testimonials must reach me not later than Thursday May 19th. Candidates must attend a Meeting of the Medical Council at 4.30 p.m. on Friday May 20th and prior to that date call upon and send copies of their applications and testimonials to each member thereof. They must not canvass members of the Board but nevertheless must send copies of their application and testimonials to each member thereof and if so notified be in attendance at a Meeting of the Board at 5 p.m. on Tuesday May 24th when the appointment will be made.

H. A. MADGE

Secretary

## WEST LONDON HOSPITAL HAMMER SMITH W.6 (239 Beds)

Applications are invited from duly qualified registered Medical Practitioners for the post of HONORARY CLINICAL ASSISTANT in the X-ray (Diagnostic) Department. The successful candidate will be required to attend for two sessions each week.

Application with copy of a recent testimonial should reach me not later than Wednesday May 18th.

H. A. MADGE

Secretary

## THE LONDON CHEST HOSPITAL

Victoria Park E.7  
(Bus Tram and Rly. Cambridge Heath L. & N.E. Railway)

MEDICAL REGISTRAR (MALE)  
(PART TIME)

Applications are invited for the above post. The appointment will be for a period of one year with eligibility for re-election for a maximum period of three years.

Honorarium £175 per annum. Applications with copies of three testimonials should be sent to the undersigned from whom further particulars may be obtained on or before Tuesday May 3rd 1938.

THOMAS BROWN

Secretary

## THE LONDON CHEST HOSPITAL

Victoria Park E.7  
(Bus Tram and Rly. Cambridge Heath L. & N.E. Rly.)

SURGICAL REGISTRAR (MALE)  
(PART TIME)

Applications are invited for the above post. Four sessions a week, Tuesday and Friday (essential). Appointment is for one year at £175 per annum. Application is attached to the post.

Applications with copies of three testimonials should be sent to the undersigned on or before Tuesday May 3rd 1938.

THOMAS BROWN

Secretary

## THE LONDON CHEST HOSPITAL

Victoria Park E.7  
(Bus Tram and Rly. Cambridge Heath L. & N.E. Rly.)

A HOUSE SURGEON is required to commence as soon as possible after May 1st. Six months appointment. Salary £100 per annum.

Board residence and laundry provided. Applications with copies of testimonials should be sent to the undersigned on or before Tuesday May 10th 1938.

THOMAS BROWN

Secretary

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association B.M.A. House, Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Secretary 7 Drumshugh Gardens, Edinburgh)

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(c)</b>	<b>CONTRACT PRACTICE—(c)</b>
ABERTYSSWIG MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	OAKDALE MON (Medical Officer)
BLAENAVON MEDICAL SOCIETY (Chief Medical Officer)	NORTH AND DISTRICT (Medical Aid Association)	<b>PUBLIC HEALTH</b>
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Brynam Colliery Medical Association) (Workmen's Medical Scheme)	MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE (Assistant Medical Officer) (Health Association) (School Medical Officer)
LLWYNPHIA CLYDACH VALE PENYGRIG GLAMORGAN (Health and Medical Scheme)		SALOPMENTAL HOSPITAL SHREWSBURY (Assistant Medical Officer)

Medical practitioners are requested **not to apply** for any appointment referred to in this list unless they have been previously notified in writing by the Honorary Secretary of the Division or Franchise Committee, or by the Secretary to the British Medical Association, 11, Tavistock Square, W.C.1.

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
<b>NEW SOUTH WALES</b> (All Friendly Societies' Appointments)	The Medical Secretary New South Wales Branch 15 Macquarie Street Sydney N.S.W.	<b>VICTORIA</b> (All Institutes of Mutual Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Halls Albert St East Melbourne Victoria	<b>WESTERN AUSTRALIA</b> (Correspondence of Local Societies)	The Honorary Secretary Western Branch British Medical Association 121 St Sh Halls St C Perth Western Australia
<b>QUEENSLAND</b> (Brisbane Associate Friendly Societies Institute)	The Hon Sec. Queen Land Branch British Medical Association B.M.A. House Wickham Terrace Brisbane B 17				

G C ANDERSON *Secretary*

Applicants are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (male) to the General Hospital. Salary £10 per an with board and laundry subject to deduction for the Asylum Officers Superannuation Act. Hospital is the centre for St Andrew's and prior to it and for research in study in Psychiatry. Applicant should send curriculum vitae and three recent testimonials to be forwarded to the Medical Superintendent.

A vacancy will occur at the end of the 1951-52  
JUNIOR RESIDENT MEDICAL OFFICER  
Salary 103 per annum. A 12 month and majority  
tenure for 5 years with the right to extend  
for 5 years. The salary of \$103 per annum  
is based on the 1951-52 schedule.  
Applicants should send their resumes to the  
Secretary.

[illegible]



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**WANTED IMMEDIATELY INDOOR ASSISTANT** near Cardiff £350 all found. Apply with references age and experience (if any)—Address No 5227 B.M.A. House Tavistock Square W.C.1

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**WANTED IMMEDIATELY SINGLE (MALE) INDOOR ASSISTANT** for panel and private practice Yorkshire city. Salary £300 all found. Dispenser and chauffeur kept. Prospects to suitable man—Address No 5319 B.M.A. House Tavistock Square W.C.1

**WANTED IMMEDIATELY INDOOR AND OUTDOOR ASSISTANTS** for Town and Country Practices with and without view to Partnership. Good salaries offered. State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester 2

**WANTED AT AN EARLY DATE ASSISTANT** for large mixed general practice. Salary approximately £400 indoor £500 outdoor inclusive of commissions car allowance etc. House free and possible bonus—Address No 5203 B.M.A. House Tavistock Square W.C.1

**WANTED NOW ASSISTANT WITH F.R.C.S.** Protestant. Salary £420 allowance own car. State age experience nationality—Address No 5304 B.M.A. House Tavistock Square W.C.1

**WANTED ENGLISH OR SCOTTISH MALE ASSISTANT** in country town in Midlands. Salary £400 to £450 outdoor according to experience. Car provided. Work light and ample time for reading—Address No 5101 B.M.A. House Tavistock Square W.C.1

**WANTED ASSISTANT WITH VIEW FOR WOMAN'S PRACTICE** Suburb of large Lancashire town. Salary £300 plus £50 car allowance. Furnished house all found—Address No 5327 B.M.A. House Tavistock Square W.C.1

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**WEST INDIAN DOCTOR M.B. Ch.B. N.S.** located in London. Excellent references. LOCUMS or ASSISTANT. For details and Will consider any reasonable proposal—Address No 5341 B.M.A. House Tavistock Square W.C.1

1. The first part of the document is a list of names and dates, which appears to be a roster or a list of participants. The names are written in a cursive script, and the dates are written in a more formal, printed script. The list is organized into columns, with names in the first column and dates in the second column.

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**THE ROYAL CANCER HOSPITAL (FREE)**  
(Incorporated under Royal Charter)  
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Applications are invited for the post of HOUSE  
SURGEON (Resident) to be attached to the  
RADIUM DEPARTMENT Candidates must be  
Registered Medical Practitioners

Facilities afforded for Post Graduate study The  
appointment is for six months commencing July  
1st 1938 Salary £100 per annum

Applications to be made on a form which will  
be supplied by the Secretary with copies only of  
not more than three recent testimonials to be  
sent to the Secretary not later than the first post  
on Friday May 13th 1938

CLEMENT COBBOLD

Secretary

**THE WELFARE HOSPITAL**  
Grove Road Bilmham SW12  
(30 Beds)

**JUNIOR RESIDENT MEDICAL OFFICER**  
required May 18th (male unmarried) Candidates  
must be fully qualified and duly registered Salary  
£150 per annum with board residence and  
laundry

Applications with copies of testimonials to be  
sent to the Secretary from whom further informa  
tion may be obtained

**THE NATIONAL TEMPERANCE HOSPITAL**  
Hampstead Road NW1

Applications are invited for the following post —  
HOUSE PHYSICIAN (male) Salary £100 per  
annum board residence and laundry allowance  
being provided The appointment is for a period  
of six months as from June 1st Preference will  
be given to those who have held resident posts  
Candidates must submit applications stating quali  
fications etc with copies of not more than three  
testimonial by Monday May 9th addressed to the  
Secretary

**THE QUEEN'S HOSPITAL FOR CHILDREN**  
Hackney Road London E2

**CASUALTY OFFICER** required immediately  
The post is for six months appointment by arrangement  
Salary at the rate of £100 per annum with board  
residence and laundry

Application must be made on form to be  
obtained from the Secretary and should be  
accompanied by not more than three testimonials  
CHARLES H BESSELL Secretary

**CITY AND COUNTY OF BRISTOL  
ASSISTANT MEDICAL OFFICER OF HEALTH**

The Council invite applications for two whole  
time Assistant Medical Officers of Health (one male  
and one female) Age not exceeding 40 years  
Salary £500 per annum rising by annual increments  
of £50 to £700 The appointments will be subject  
to the provisions of the Local Government Act  
Other Officers Superannuation Act 1972. The  
Diploma of Public Health is essential

Particulars of the duties of the Assistant Medical  
Officers may be obtained from the undersigned

Applications which must be on the form pro  
vided for this purpose should be accompanied by  
not more than three recent testimonials and must  
be received by the undersigned not later than  
Saturday May 7th 1938 Envelopes should be  
endorsed Assistant Medical Officer of Health  
Canvassing will disqualify

Council House JOSIAH GREEN  
Bristol 1 Town Clerk  
April 12th 1938

**QUEEN CHARLOTTE'S MATERNITY  
HOSPITAL**

Marylebone Road NW1

Applications are invited from registered Med  
Practitioners for the following appointments

**ASSISTANT RESIDENT MEDICAL OFFICER**

(male) Salary £80 per annum

**RESIDENT ANAESTHETIST** and District

Resident Medical Officer six months Salary £40

per annum

**RESIDENT ANAESTHETIST** three months

Salary £100 per annum

With board residence and laundry allowance

(4s weekly) Appointments to commence 1st

July 1st 1938

The Assistant Resident Medical Officer is  
appointed for three months and on completion  
will be expected to proceed to the post of Senior  
Resident Medical Staff (salary £100 per annum)

Obstetric experience desirable

Applications stating age and with copies of  
three testimonials should be sent to the Secretary  
by May 20th 1938

H B STOKES

Secretary Superintendent

**SOUTH MIDDLESEX AND RICHMOND  
JOINT HOSPITAL BOARD****SOUTH MIDDLESEX FEVER HOSPITAL****ASSISTANT RESIDENT MEDICAL OFFICER**

Applications are invited from fully qualified  
Medical Practitioners for the above appointment  
Duties to commence as soon as possible

The appointment is for a period of one year  
at a salary of £250 per annum with board re  
sidence and laundry Preference will be given to  
candidates who have held a resident appointment  
in a General Hospital Experience in anaesthetics  
desirable

Forms of application with full particulars of  
duties may be obtained from the Medical Super  
intendent South Middlesex Fever Hospital Mary  
Line Isleworth Middlesex Applications on the  
prescribed forms should be returned to him on  
or before Monday May 16th 1938

S C I LITTLEWOOD

Clerk to the Board

14 Church Street

Kingston on Thames

April 26th 1938

**METROPOLITAN BOROUGH OF  
PADDDINGTON****ANTE NATAL CLINIC**

The Council invite applications for the appoin  
tment of SENIOR VISITING MEDICAL  
OFFICER for ante natal and post natal ex  
aminations to be held on Wednesdays at 2.30 p.m.  
at the new Welfare Centre at 283A Harrow Road  
W9 For two guineas for a session of about 10  
hours Applicants must have had practical ex  
perience of practical midwifery and ante natal ex  
aminations Form of application and further particulars may  
be obtained from the Medical Officer of Health  
Town Hall Paddington W2 Applications sh  
be received here not later than May 15th 1938

W F ABBISS

Town Hall Paddington W2

April 27th 1938

**THE ROYAL CANCER HOSPITAL (FREE)**

(Incorporated under Royal Charter)

Fulham Road London SW3

Applications are invited for the following post —  
HOUSE SURGEON to commence duties as soon as possible

Salary at the rate of £100 per annum with board  
residence and laundry allowance being provided

The appointment is for a period of six months  
as from June 1st Preference will be given to those  
who have held resident posts

Candidates must submit applications stating quali  
fications etc with copies of not more than three  
testimonial by Monday May 9th addressed to the  
Secretary

Application must be made on form to be  
obtained from the Secretary and should be  
accompanied by not more than three testimonials

CHARLES H BESSELL Secretary

# KENT COUNTY COUNCIL

## PUBLIC HEALTH DEPARTMENT

### CONSULTANT OBSTETRICIANS

The County Council invites applications from registered medical practitioners adequately qualified and experienced in obstetrical work for four part-time appointments as Consultants in Maternity and Gynaecology. The private practitioners require the assistance of a Consultant in Maternity and Gynaecology. One consultant will be appointed for each of the County Maternity and Child Welfare Areas: (a) Chatham, Gillingham, and Rochester; (b) Tunbridge Wells; (c) Ashford; and (d) Canterbury. Each of the consultants appointed will be required to reside in or near the town to which his or her area is added and to appoint a deputy who must be approved by the County Council to act in his or her absence. Consultants will be arranged by medical practitioners but the consultants will be required to submit reports of cases to the County Medical Officer and comply with such other requirements as may be specified from time to time by him.

The remuneration of the consultants will be as follows:—Consultants at or within one mile of the town £1,500; up to 5 miles £1,000; from 5 to 10 miles £750; over 10 miles £500. The appointments will be at the pleasure of the County Council. The arrangements will be reviewed at the end of the first year.

Forms of application and if required further detail of the appointments can be obtained from the County Medical Officer, Sessions House, Maidstone, to whom completed application forms should be returned not later than May 15, 1938.

W. L. PLATT

Clerk of the County Council

Sessions House, Maidstone

April 14th 1938

# STAFFORDSHIRE MENTAL HOSPITALS

## BOARD

### COUNTY MENTAL HOSPITAL STAFFORD

#### APPOINTMENT OF MEDICAL SUPERINTENDENT

The Visiting Committee invite applications for the post of Medical Superintendent from duly registered Medical Men, preferably having the degree of Doctor of Medicine of a University in Great Britain or Ireland, especially one requiring residence. Experience in the treatment of mental disorders and the administration of a mental hospital is essential. Salary £1,600 per annum together with emoluments valued at £200 per annum. Incentives will be at the discretion of the Committee of Management. The salary and emoluments will be subject to deductions and the Asylum Officers Superannuation Act, 1909. Applications endorsed Medical Superintendent giving particulars of any qualifications, experience, etc., together with not more than three testimonials should be received by the undersigned not later than 10 a.m. on May 15th 1938.

Canvassing directly or indirectly will disqualify the applicant. County Buildings, H. L. UNDERWOOD, Stafford. Clerk to the Visiting Committee. April 15th 1938.

# JOINT COUNTIES MENTAL HOSPITAL CARMARTHEN

### SENIOR ASSISTANT MEDICAL OFFICER AND DEPUTY MEDICAL SUPERINTENDENT

The Committee of Visitors of the above Institution (78 patients) invite applications for the post of Senior Assistant Medical and Deputy Medical Superintendent from duly qualified and registered Medical Practitioner possessed of the DPM Diploma (or equivalent) and with previous Mental Hospital experience at a commencing cash salary of £500 per annum with annual increments of £50 up to a maximum of £600, together with emoluments (board, residence, attendance, and laundry) valued at £146 1s per annum for the purposes of the Asylum Officers Superannuation Act, 1909, subject to which and to the Rules in force from time to time the appointment will be made. Applications by three months notice of suitable persons to the undersigned not later than 10 a.m. on May 15th 1938.

Applications (containing full particulars as to age, qualifications, present appointment, and previous experience and accompanied by copies of recent testimonials) must be delivered to the undersigned not later than Saturday, May 15th 1938. 34 Quay Street, W. J. WALLIS-JONES, Carmarthen. Clerk to the Visitors. April 2nd 1938.

# WEYMOUTH AND DISTRICT HOSPITAL WEYMOUTH

## (9. Beds and Co.)

Wanted May 15th HOUSE SURGEON (male European). Salary £150 per annum with house, fuel, and laundry. The successful candidate will be required to hold a qualification in surgery and to be registered with the General Medical Council not later than May 9th 1938.

MORRIS LODGE, Honorary Secretary

# STAFFORDSHIRE WOLVERHAMPTON DUDLEY JOINT BOARD FOR TUBERCULOSIS

## PRESTWOOD SANATORIUM (Beds 10)

Applications are invited for the post of Assistant Medical Officer (male) to be in charge of the sanatorium with 10 beds. The successful candidate must have a minimum of 5 years' experience in the treatment of tuberculosis. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, Stafford, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Stafford

Stafford April 19th 1938

# ROYAL BUCKINGHAMSHIRE HOSPITAL Aylesbury (110 Beds)

Applications are invited for the post of (1) SENIOR RESIDENT MEDICAL OFFICER (2) JUNIOR RESIDENT MEDICAL OFFICER

The successful candidate for the post of Senior Resident Medical Officer must have a minimum of 5 years' experience in the treatment of internal medicine. The successful candidate for the post of Junior Resident Medical Officer must have a minimum of 3 years' experience in the treatment of internal medicine. The appointments will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointments can be obtained from the County Medical Officer, Sessions House, Aylesbury, to whom completed application forms should be returned not later than May 15th 1938.

W. L. PLATT

Clerk of the County Council

Sessions House, Aylesbury

April 14th 1938

# THE RADCLIFFE INFIRMARY OXFORD

Applications are invited for the post of SURGICAL REGISTRAR who will be in charge of the surgical notes of the infirmary. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, Oxford, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Oxford

April 14th 1938

# THE PRINCE OF WALES'S HOSPITAL Greenbank Road Plymouth

(Formerly South Devon and East Cornwall Hospital) (Beds 100)

Applications are invited for the post of SENIOR SURGICAL OFFICER (Male) and SENIOR MEDICAL OFFICER (Male). The successful candidate for the post of Senior Surgical Officer must have a minimum of 5 years' experience in the treatment of internal medicine. The successful candidate for the post of Senior Medical Officer must have a minimum of 5 years' experience in the treatment of internal medicine. The appointments will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointments can be obtained from the County Medical Officer, Sessions House, Plymouth, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Plymouth

April 14th 1938

# THE CORBETT HOSPITAL STOURBRIDGE

## (Beds 20) Special Department

Applications are invited for the post of HOUSE PHYSICIAN at a salary of £100 per annum with house, fuel, and laundry. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, Stourbridge, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Stourbridge

April 14th 1938

# LIVERPOOL HEART HOSPITAL

## (Beds 10) Special Department

Applications are invited for the post of HOUSE PHYSICIAN at a salary of £100 per annum with house, fuel, and laundry. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

# ROYAL LONDON OPHTHALMIC HOSPITAL (DOORFIELDS) E.C. 4

Applications are invited for the post of ASSISTANT SURGEON. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, London, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, London

April 14th 1938

# THE HOSPITAL FOR SICK CHILDREN Great Ormond Street London W.C.1

Applications are invited for the post of TWO RESIDENT HOUSE PHYSICIANS ONE RESIDENT HOUSE SURGEON. The successful candidate for the post of Resident House Physician must have a minimum of 5 years' experience in the treatment of internal medicine. The successful candidate for the post of Resident House Surgeon must have a minimum of 5 years' experience in the treatment of internal medicine. The appointments will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointments can be obtained from the County Medical Officer, Sessions House, London, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, London

April 14th 1938

# WAPPINGTON NEW

## PART TIME RADIOLOGIST

Applications are invited for the post of PART TIME RADIOLOGIST. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, Wappington, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Wappington

April 14th 1938

# WEST SUFFOLK GENERAL HOSPITAL Bury St. Edmunds

Applications are invited for the post of SENIOR SURGEON. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, Bury St. Edmunds, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Bury St. Edmunds

April 14th 1938

# THE ROYAL INFIRMARY

Applications are invited for the post of SENIOR SURGEON. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, The Royal Infirmary, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, The Royal Infirmary

April 14th 1938

# VICTORIA HOSPITAL ACCRINGTON

Applications are invited for the post of SENIOR SURGEON. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

Forms of application and if required further detail of the appointment can be obtained from the County Medical Officer, Sessions House, Accrington, to whom completed application forms should be returned not later than May 15th 1938.

H. L. UNDERWOOD

County Medical Officer, Accrington

April 14th 1938

# THE HOSPITAL FOR SICK CHILDREN

Applications are invited for the post of SENIOR SURGEON. The successful candidate must have a minimum of 5 years' experience in the treatment of internal medicine. The appointment will be for a period of 3 years, renewable for a further 3 years. Salary at the rate of £100 per annum with house, fuel, and laundry.

**HULL ROYAL INFIRMARY**

Applications are invited for the post of **SECOND CASUALTY OFFICER (male)** vacant now. Salary £150 per annum plus board residence and laundry.

In addition to carrying out duties in the Casualty Department the officer appointed will act as House Surgeon to one of the Honorary Assistant Surgeons and will thus obtain Ward and Theatre experience. He will be eligible for promotion to a more senior post when a vacancy occurs.

The appointment will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications giving particulars of age, experience and nationality together with copies of testimonials should be addressed to the undersigned.

April 25th 1938 R. J. CARLESS  
House Governor

**DORSET COUNTY HOSPITAL**  
Dorchester**APPOINTMENT OF HOUSE SURGEON**

The Committee of Management are open to receive applications for the position of House Surgeon (male only) to take up his duties on May 14th 1938.

Every candidate must be unmarried and possess a registered qualification to practise medicine and surgery from some recognized body in Great Britain or Ireland. Salary £150 per annum with board and lodging. The appointment is for a period of six months.

All applications accompanied by copies of three recent testimonials should be sent to the Secretary Dorset County Hospital as early as possible. Candidates must be of British birth and nationality.

**EAR AND THROAT HOSPITAL**  
Birmingham 3

**THIRD HOUSE SURGEON** wanted (non resident). Must be qualified and with clinical experience. Salary at the rate of £150 per annum with lunch on six week days and an allowance of £50 per annum in lieu of board and lodging.

Appointment for six months to commence as soon as possible.

Candidates are eligible for election to senior posts. Facilities for training for D.L.O.

Applications and testimonials to be forwarded to the undersigned immediately.

W. H. LOMAS  
Secretary

**LEIGH INFIRMARY LANCASHIRE**

Wanted **SENIOR RESIDENT SURGICAL OFFICER MALE** single for Hospital of 85 Beds. Should have good Surgical Experience. Salary £250 p.a. with rooms fire attendance and board. Good quarters. The position is vacant on May 16th 1938.

The appointment is for six months with eligibility for re-election. Must be good Anaesthetist. The appointment offers exceptional opportunities for Surgery.

Applications to be addressed to Mr J. A. Smith Secretary 5 Silk Street Leigh Lancashire.

**BECKETT HOSPITAL AND DISPENSARY**  
Barnsley (153 Beds)

**CASUALTY OFFICER (male)** required May 16th to deal with the injuries and fractures. Capability to perform emergency operations a recommendation.

Salary £250 per annum together with board residence and laundry.

Applications stating age, qualifications and experience (Ophthalmology desirable) accompanied by testimonials should be sent to the undersigned immediately.

April 27th 1938 ARTHUR L. BOURNE  
Secretary Superintendent

**CITY OF DUBLIN SKIN AND CANCER HOSPITAL**  
Hume Street Dublin**DEEP X RAY AND RADIUM THERAPIST**

Applications are invited from Medical Practitioners practising as above who possess the qualification of D.M.R.E. or D.M.R. for a whole time appointment. Salary up to £700 per annum with allowances according to qualifications and experience. Copies of testimonials are required. Full particulars may be obtained on application to the Secretary.

**BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN**  
(Usually known as the Children's Hospital)  
St. Michael's Hill

Applications are invited for the position of **HOUSE PHYSICIAN**. Salary £125 per annum with board, rooms, attendance and laundry.

Applicants should state age, qualifications, experience and send testimonials to the undersigned on or before May 9th.

REGINALD C. THOMAS F.C.S.  
Secretary

**BARROWMORE TUBERCULOSIS SANATORIUM AND SETTLEMENT**  
Gt Barrow near Chester

**Male JUNIOR ASSISTANT MEDICAL OFFICER** required. Salary £200 per annum with board residence and laundry. The appointment will be made in the first instance for a period of six months renewable for a further six months not renewable afterwards.

The Institution deals with all stages of Pulmonary Tuberculosis and comprises Hospital accommodation, extensive workshops for graduated work and a Settlement.

Special treatment Sanocrysin and Artificial Pneumothorax given.

Applications marked Junior Assistant Medical Officer with copies of three testimonials should be sent to the Medical Director at the above address.

**NORTH STAFFORDSHIRE ROYAL INFIRMARY**  
Stoke on Trent (390 Beds)**RESIDENT ANAESTHETIST**

The Committee invite applications for the above post. Salary at the rate of £150 per annum with board residence and laundry.

This appointment which is recognized by the Royal College of Surgeons for the Diploma in Anaesthetics will be made for six months renewable.

Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately.

By Order  
W. STEVENSON  
Secretary and House Governor  
April 25th 1938

**ANCOSIS HOSPITAL MANCHESTER 4**  
ORTHOPAEDIC REGISTRAR

Applications are invited from duly qualified Medical Practitioners. Duties to assist the Hon. Orthopaedic Surgeon in the Out Patient Clinics on Tuesday afternoons at 2 and on Thursday mornings at 9. Honorarium £50 per annum. Appointment for 12 months renewable on January 1st of each year.

Applications stating age, qualifications, experience and full particulars to be forwarded on or before May 11th together with copies of three recent testimonials.

By Order of the Board  
HERBERT J. DAITORNE  
Gen. Supt. and Secretary

**NUTFIELD DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY**  
THE RADCLIFFE INFIRMARY  
Oxford

Applications are invited for the post of **HOUSE SURGEON** for Gynaecological Ward. The appointment will start as soon as possible after receipt of applications and will terminate on September 30th 1938. The salary will be at the rate of £120 per annum if the candidate has held a previous House appointment, £100 per annum if he has not done so. Candidates must be male and qualified.

Applications with copies of testimonials must be sent to the undersigned on or before May 4th 1938.

A. G. E. SANCTUARY  
Administrator

**ROYAL BERKSHIRE HOSPITAL READING**  
(338 Beds)

Applications are invited immediately for the post of **HOUSE SURGEON TO THE SPECIAL DEPARTMENT (Eye, Ear, Nose and Throat)** (male).

Appointments are for six months and candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum with board residence and laundry.

Applications stating age and experience with copies of testimonials to be sent to the undersigned immediately.

H. E. RYAN  
Secretary and House Governor

**ROYAL ALEXANDER HOSPITAL FOR SICK CHILDREN**  
Dyke Road Brighton (100 Beds)

**HOUSE SURGEON (male)** required. Salary at the rate of £120 per annum with board, lodging and laundry. Good experience. No canvassing. To take up duties at the end of May.

Applications in writing accompanied by testimonials should be sent to Percy F. Spooner the Secretary.  
April 11th 1938

**THE HARTLEPOOLS HOSPITAL**  
(95 Beds)

Applications are invited for the position of **HOUSE SURGEON**. Salary £150 p.a. together with board residence and laundry. Appointment for six months subject to renewal.

Duties to commence April 30th  
NORMAN O. DEANS Secretary

**THE HOSPITAL OF ST. CROSS RUGBY**  
(170 Beds)

Applications are invited for the post of **ONE MALE RESIDENT MEDICAL OFFICER (R.M.O.)**

Salary to commence at the rate of £100 per annum for the first three months, £125 per annum for the second three months and at the rate of £150 per annum for subsequent months. Board washing etc. provided.

Six months' appointment and on the completion of service for further extension of six months.

Candidates must be prepared to commence immediately.

The practice of the Hospital offers extensive opportunities for wide experience.

Certificates and other fees shared by R.M.O.s.

Applications stating age, nationality and details with copies of three recent testimonials to be sent to the undersigned.

(Signed) J. W. COCKBURN  
Superintendent and Secretary

**THE GENERAL INFIRMARY AT LEEDS**

Applications are invited for the following posts:  
1. **SENIOR RESIDENT ANAESTHETIC OFFICER** to take up duties on May 1st. Salary £149 per annum.

2. **JUNIOR RESIDENT ANAESTHETIC OFFICER** required immediately. Salary £120 per annum with the usual residential allowance for each case.

The appointments are for twelve months and six months respectively and subject to re-election.

Candidates must be fully qualified and registered.

Applications with copies of testimonials to be sent in at once to the undersigned.

S. CLAYTON FRIERS  
House Governor and Secretary

**THE STAFFORDSHIRE GENERAL INFIRMARY**  
Stafford

**HOUSE PHYSICIAN** required immediately. Salary £150 per annum. The appointment is held for at least six months. The Hospital has 145 beds including fourteen private wards. There are three Residents.

Applications stating age, accompanied by copies of three recent testimonials as to qualifications and experience must be sent to me forthwith.

Stafford  
April 25th 1938  
E. COLLINS  
Secretary

THE DOCTOR IN PRACTICE OR  
ABOUT TO ENTER THEREIN SHOULD  
BE ADEQUATELY PROTECTED BY  
INSURANCE IN RESPECT OF

HIS LIFE  
HIS HEALTH  
HIS HOME  
HIS PRACTICE  
AND  
HIS CAR

FOR ALL THESE  
CONSULT

The  
**Medical Insurance Agency**  
(Limited by Guarantee)  
BRITISH MEDICAL ASSOCIATION HOUSE  
TAVISTOCK SQUARE W.C.1

WE CAN ALSO ARRANGE  
ADDITIONAL CAPITAL FOR THE  
PURCHASE OF A PRACTICE OR  
PARTNERSHIP

State age next birthday  
when writing

Exhibit 1 dated 12/2/54 A RESUME

# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1880)

Tele Address  
Triform, Westcent—London

TAVISTOCK HOUSE SOUTH  
TAVISTOCK SQUARE, W C 1

Telephone Euston 1644  
1645

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical, Scholastic, and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent. Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

## REDUCTION IN FEES

In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill, book debts, furniture, drugs, fittings and other effects (excluding sales of any freehold or leasehold property, or of practices, effects etc. outside Great Britain) is limited to a maximum fee of Fifty Pounds.

## FULL TERMS ON APPLICATION

### Practices and Partnerships for Disposal

### Full Particulars sent free

- 1 DEATH VACANCY—LONDON, N 16—Receipts last year £1,730, including appointment worth over £400 and panel £375. Semi-detached non-basement house to rent.
- 2 ESSEX—Good middle-class non-panel PRACTICE about £2,000 p.a. in outlying suburban district. Detached corner house (6 bedrooms, etc.), garden and garage. Price £1,000. Excellent scope for panel. Premium—best offer.
- 3 S COAST—PARTNERSHIP in Practice, £4,770 p.a. in residential town and health resort. Panel 6,000. Semi-detached house (5 bedrooms) garage and garden to rent. Premium one fourth share £2,800.
- 4 W OF ENGLAND—PARTNERSHIP in Practice about £2,800 in first rate residential town. Panel about 3,000. House obtainable. Good scope. One third share. It first at two years' purchase.
- 5 LONDON—RESIDENTIAL SUBURB S of the THAMES—Well established middle class PRACTICE, averaging £1,595 p.a. with small select panel. Minimum visiting fee 5/- Modern detached non-basement residence (6 bedrooms and 3 professional rooms with separate entrance), large garage and garden, for sale. Scope. Premium one and three quarter years' purchase.
- 6 MIDLANDS—PARTNERSHIP in old established Practice, £3,270 p.a. in manufacturing town. Panel 3,820. Modernized house (4 bedrooms and professional accommodation) good garage and garden, for sale or rent. Premium one half share £3,270.
- 7 PRIVATE MENTAL HOME (both Sexes)—Profits average over £800 p.a. Georgian residence rented on lease. Premium, licence, goodwill etc., £2,600 offer considered.
- 8 LONDON, S W—Good class PRACTICE, about £1,000, in residential part near West End. Fees £1 1s, upwards. Rent of consulting rooms £200 p.a. on lease. Premium two years' purchase.
- 9 NE SEAPORT—Old-established PRACTICE, £1,677 p.a. Panel 1,275. Price of house, £1,500 freehold. Premium two years' purchase.
- 10 LONDON, EC—Old-established City PRACTICE, averaging about £1,700 p.a. Panel 316. Premises rented on lease. Good scope. Premium one and a half years' purchase.
- 11 HOME COUNTIES—PARTNERSHIP in increasing middle class Practice about £1,600. Panel about 500. Modernized house for sale or rent. Scope. Cottage hospital. Premium one half share £1,600.
- 12 S OF ENGLAND—PARTNERSHIP in Practice over £3,600 p.a. in growing seaport town. Panel 3,525. One fifth share at two years' purchase. Prelim Assistantship.
- 13 MIDDLE EAST—Well-established PRACTICE in large town averaging £2,000 p.a. Chiefly Gynaecology, Obstetrics and Anaesthetics. Premium for quick sale, £1,500.
- 14 SUSSEX—Country PRACTICE near coast. Receipts last year £270. Panel about 200. Attractive modern house, garage and garden. Price £1,500. Premium £450.
- 15 FRENCH RIVIERA—Old-established PRACTICE. M.D. or M.R.C.P. necessary.
- 16 BRISTOL—Good middle-class PRACTICE. Receipts 1937 £342. Panel 200. House (6 bedrooms, garage and garden) in best residential district. Decided scope for increase. Premium—reasonable offer.
- 17 S MIDLANDS—PARTNERSHIP in good class Practice nearly £5,000 p.a. in first rate town. Panel over

- 1,500. Applicant should be about 25/30 years of age and well qualified. One fourth share at two years' purchase after Assistantship. Favourably known and strongly recommended by the Bureau.
- 18 LONDON, SE—PARTNERSHIP in Practice, nearly £4,300 p.a. in rapidly growing district. Panel about 3,000. Modern labour saving house (4 bedrooms) with professional accommodation, garage and good garden to rent. Hospital. Premium one fourth share £2,250.
- 19 MIDLANDS—PARTNERSHIP in Practice, averaging £2,580 p.a. in manufacturing town. Good appointments and panel 2,150. Suitable house obtainable. Premium two fifths or one half share two years' purchase with succession to whole practice in about two years.
- 20 INLAND HEALTH RESORT—Old established SPA PRACTICE about £1,450 p.a. Fees £2 2s and £1 1s. Good house in excellent position for sale. All kinds of sport. Premium one and a half years' purchase.
- 21 ESSEX—THIRD PARTNER required in good middle class Practice in outlying district. Panel 700. House (6 bedrooms), garage and garden. Price £1,000. Excellent opportunity for one desiring surgery. Share worth £1,500 p.a. (guaranteed for two years) at two years' purchase.
- 22 SURREY—PRACTICE, about £600 p.a. in growing country district on outskirts of market town. Panel 776. House (7 bedrooms), large garage and garden. Price £2,000. Good educational facilities. Scope. Premium two years' purchase.
- 23 EASTERN COUNTIES—PARTNERSHIP in lucrative Practice, £5,200 p.a. in market town. Panel over 4,000. Suitable house obtainable. Premium one fifth share two and a quarter years' purchase.
- 24 S COAST—PRACTICE in health resort. Receipts, 1937, about £1,600. Panel 900. House (5 bed and dressing rooms), large garage and garden. Price £2,250. Good scope. Premium £3,750.
- 25 DEATH VACANCY—ANGLESEY COAST—PRACTICE about £900 p.a. (appointments and panel £435). House (6 bedrooms), with nice garden. Rent £60 p.a.
- 26 W OF ENGLAND—PRACTICE, nearly £1,200 p.a. in small favourable watering place. Panel 715. Detached house (5/6 bedrooms) garage and good garden. Rent £85 p.a. Scope. Premium two years' purchase or nearest offer.
- 27 LONDON, E 5—Middle-class PRACTICE about £2,700 p.a. Panel 1,200. Price of surgery premises, £1,200. Private residence available if needed. Good scope for panel. Premium two years' purchase.
- 28 UNIVERSITY TOWN—PRACTICE about £1,800. Panel over 2,500. House (about 7 bedrooms) for sale. Also surgery premises for sale. Scope. Premium one and three quarter years' purchase.
- 29 COUNTY TOWN, about 50 miles from London—PARTNER required (under 30 years of age, with F.R.C.S. Eng. or Edin.) to do Ear, Nose and Throat work in addition to general practice and some general surgery. Share worth £1,000 p.a. at two years' purchase. Possibility of hospital appointment later.
- 30 KENT—SEASIDE TOWN—PARTNERSHIP in mixed Practice, £3,610 p.a. Panel over 2,000. Excellent modern house for sale or rent. One third or one half share at two years' purchase. Must be young experienced and well qualified.



## (FOLDED 15 0)

Telephone Extension 1644  
1645

For further details apply The Manager 21 Al-a Street, Ex-100-7.



# BRITISH MEDICAL BUREAU

(The Scholastic, Clerical and Medical Association Ltd.)

(FOUNDED 1880)

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**YORKSHIRE**—Old established PRACTICE in pleasant country town Cash receipts last year £1 080 Panel 500 (producing £330 p.a.) Scope Excellent house 3 reception 6 bedrooms 3 Professional rooms garage and large garden Good sport and educational facilities Premium—Practice—£1 700—No 1102

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**YORKSHIRE (W R)**—Very old established Mixed Panel and Private PRACTICE Cash receipts £1 200 p.a. Panel 900 Scope Good detached house 2 reception 4 bedrooms Professional rooms garage and garden Premium—1½ years purchase or near offer—No 1060

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**NORTH EAST**—PRACTICE Cash receipts £1 100 Panel 1 100

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# BRITISH MEDICAL JOURNAL

JOURNAL OF THE



SATURDAY MAY 7 1938

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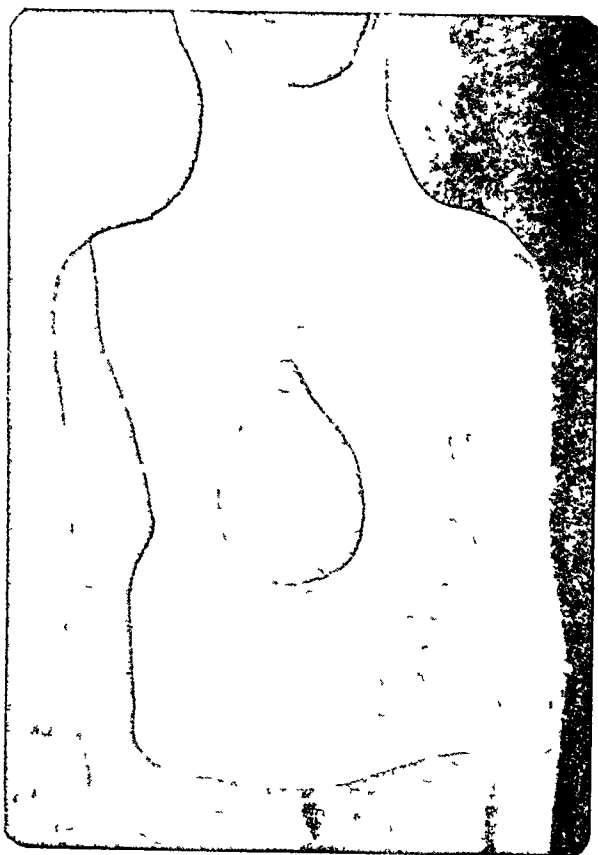
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*Front view of completed fillet*



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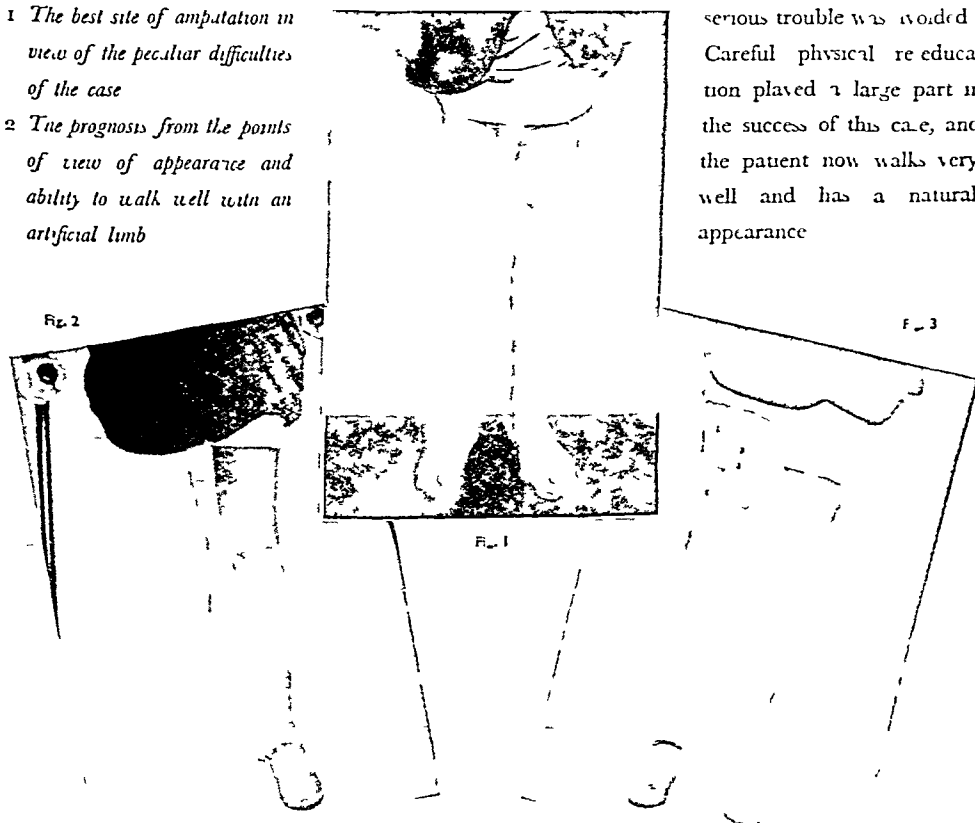
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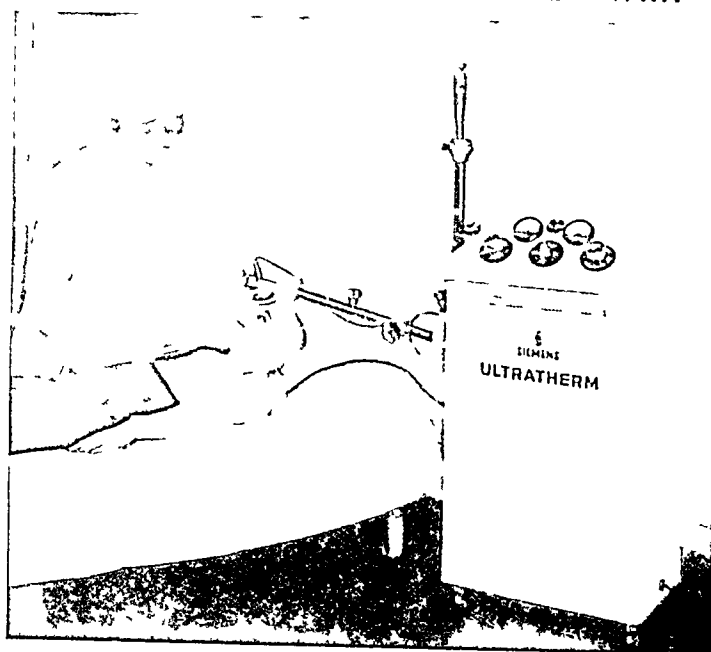
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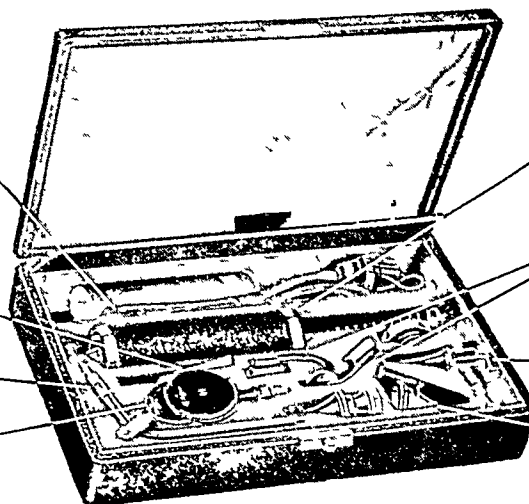
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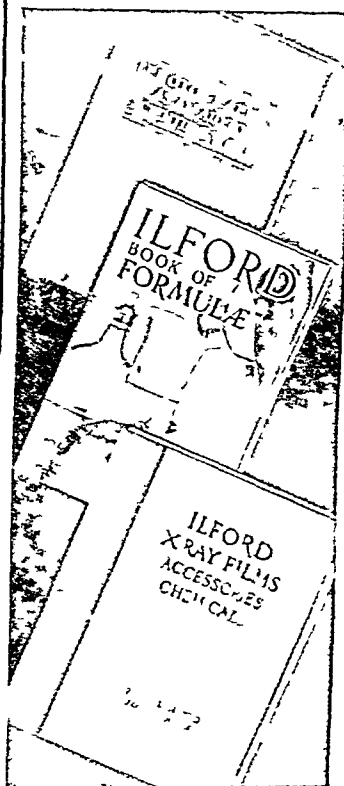
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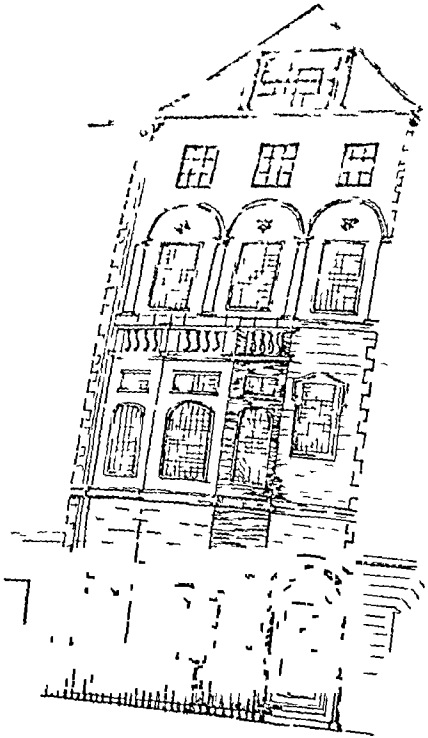


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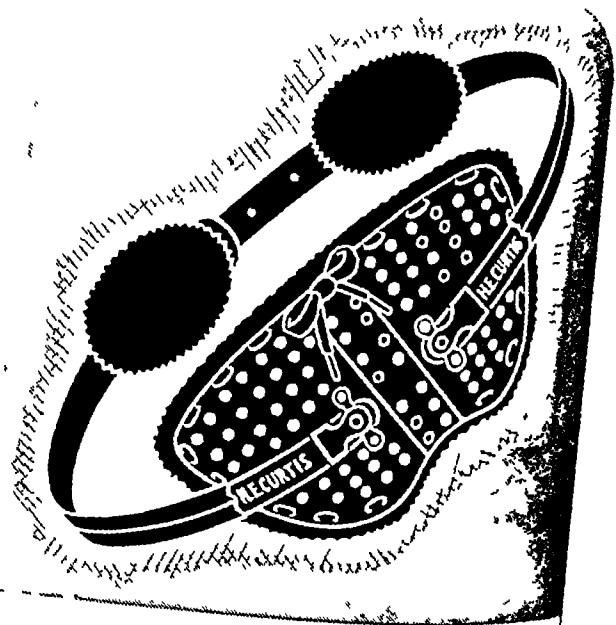
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## Efficient and Effective Support

### SCIENTIFICALLY Applied

The secret of the success of the Curtis Abdominal Support No 1 lies in its scientific application of power. At all times it gives even anterior-posterior pressure without undue constriction of the lower abdomen. The resulting support obtained allows for greater freedom and comfort than ever before. Medical men prescribe the Curtis Model No 1 for all forms of abdominal ptosis—viscerop-tosis, enteroptosis and gastrop-tosis, and it is also recommended for support of ventral hernia and scar tissue in the lower abdomen.



# CURTIS

ABDOMINAL SUPPORT NO 1

H E CURTIS & SON, LTD  
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Specialists in Abdominal Appliances  
Sole Makers of CURTIS APPLIANCES ABDOMINAL BELTS  
and CORSETS ELASTIC HOSE TRUSSES COLOSTOMY  
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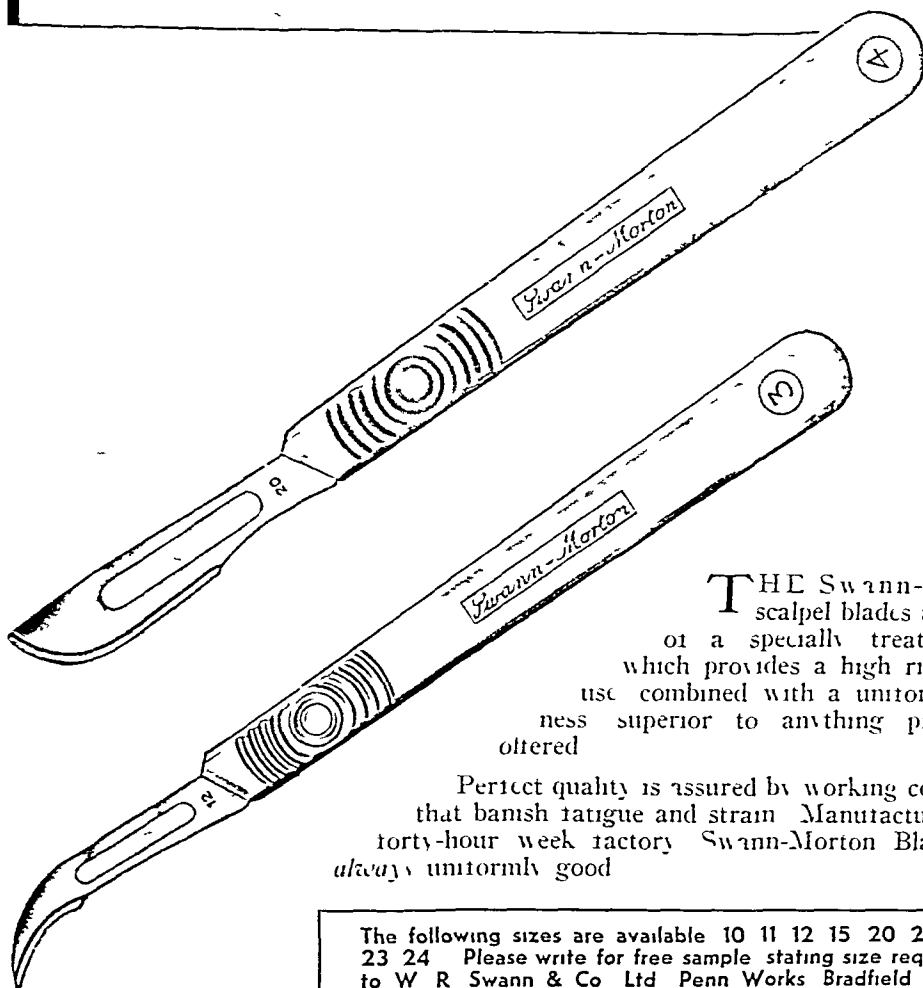
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THE Swann-Morton  
scalpel blades are made  
of a specially treated steel  
which provides a high rigidity in  
use combined with a uniform keen-  
ness superior to anything previously  
offered

Perfect quality is assured by working conditions  
that banish fatigue and strain. Manufactured in a  
forty-hour week factory Swann-Morton Blades are  
*always* uniformly good

The following sizes are available 10 11 12 15 20 21 22  
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BLADES

**6/6**

P R DOZ

HANDLES

**5/-** each

OBTAINABLE FROM ALL THE LEADING SURGICAL INSTRUMENT HOUSES

**SWANN-MORTON**

# COLLIRON

(COLLOIDAL IRON HYDROXIDE 10%)

For the effective treatment of

## Secondary Anaemia, Debility and Fatigue

Colliron replaces with advantage, all the older forms of pharmaceutical iron as it is readily assimilated non constipating, and does not aggravate the digestive troubles which frequently accompany the anæmias

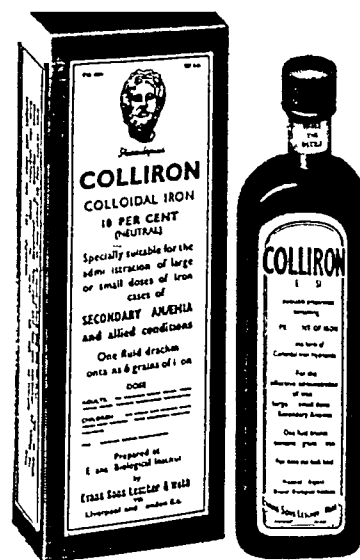
### The dosage of Colliron

Adults—20 minims three times daily after meals

Children—5 to 10 minims three times daily after meals

*Colliron is issued in bottles*

4-flid oz	- 3/-	16-flid oz	- 9/8
8-flid oz	- 5/4	80-flid oz	- 40/-



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## MANDECAL

(Compound Calcium Mandelate B D H)

Clinical trials with Mandecal (*Lancet*, February 26th, 1938, p 494) on a series of 33 hospital patients have established the value of this product as a bacteriostatic and bactericidal agent in the treatment of urinary infections. Mandecal is also shown to be markedly less irritating and nauseating than the salts of mandelic acid hitherto used.

Further, in Mandecal the immiscibility of calcium mandelate has been entirely overcome, and it approximates to the ideal urinary antiseptic, it is particularly indicated for hypersensitive patients who may be unduly nauseated by other mandelic acid preparations.

*Sample and literature on request*

THE BRITISH DRUG HOUSES LTD LONDON N 1

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# Prescribing with Confidence

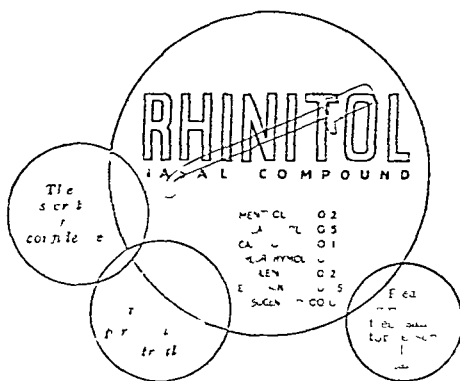
The advantages of Rhinitol in the treatment of

## COLDS

### NASAL CONGESTION and CATARRH

and all other affections of the upper respiratory tract are —

- 1 Its very low ephedrine content.
- 2 Its property of emulsifying with body fluids owing to the vasogen vehicle.
- 3 Its complete freedom from irritant or toxic effects
- 4 Its rapid yet prolonged action.



T PEARSON & CO LTD MITCHAM SURREY

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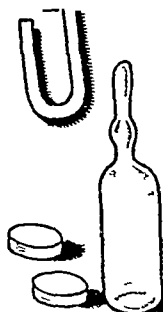
The full development of Antisepsis demands an agent which while efficient, does not damage human tissues nor inhibit the normal function of the natural defences against infection. That Verpine is efficient has been proved during years of clinical trial. When used at fully antiseptic strengths Verpine has negligible effect on human tissues while one of its active principles encourages natural resistance to infection by promoting leucocytosis and is a protoplasmic stimulant. Verpine moreover, is agreeable to use and possesses a pleasant, refreshing odour.

# VERPINE ANTISEPTIC AND GERMICIDE

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Trade Mark Dehydrocholic acid Brand

Because of its dependably effective pharmacodynamic action DECHOLIN is of accepted value as a powerful choleric and cholagogue

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(Standardised Vitamins A and D)

## *In General Practice*

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The daily ingestion of Radiostoleum acts as an effective safeguard against attacks of invading organisms in epidemics of acute infections

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If infection has supervened, the administration of Radiostoleum in massive doses aids in reducing the

virulence by building up the patient's resistance

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The administration of Radiostoleum makes good depleted reserves, stimulates the jaded appetite, restores vitality, reinstates normal metabolic processes and hastens the return to normal health

*Samples of liquid and capsules on request*

THE BRITISH DRUG HOUSES LTD LONDON N 1

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INDICATED IN

**ECZEMAS, PRURITUS,  
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Issued in 2, 4 and 8-oz pots

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# 'PANOPEPTON'

## WHAT IT CONTAINS

Contains in solution in an agreeable form the entire nutritive constituents of beef and wheat

Contains all that is digestible in beef—in its juice and in its muscle tissues

Contains all that is digestible in wheat—its gluten its carbohydrates

Contains all the savoury and stimulating elements the extractives the mineral constituents of beef and wheat

Contains these constituents in the soluble perfectly diffusible form into which they are converted in the process of normal digestion

## USES OF 'PANOPEPTON'

Can be relied upon in cases where the nutrition of the patient is of prime importance

Has saved the patient in desperate straits due to intolerance of food

Has nourished and recovered in cases of intolerance of other foods

Possesses remarkably restorative and stimulating properties

Is most nutritious most agreeable as a food at night against insomnia—exhaustion due to acute need of nourishment

SUPPLIED IN 12 oz BOTTLES

*A sample will be sent to Members of the Medical Profession on request*

Originated and Manufactured by

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Agents

**Burroughs Wellcome & Co,**  
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# MILTON

Detergent, Penetrative, Germicidal, OSMOTIC, NON-TOXIC,  
Liquefactive, Regenerative

## OSMOTIC & NON-TOXIC

Like all hypertonic salines, Milton acts osmotically, promoting leucocytosis and reducing œdema

It is bland to living tissue and contains no caustic element 50% Milton applied to delicate cutaneous tissues for one hour was shown to have no irritant effect

Tests show that, compared with the standard preparation of its class (Dakin's Solution), Milton is decidedly non-irritating, also that its toxic effect upon growing tissue is unusually low, which may be taken as a very favourable indication

as regards the effect of Milton upon the repair of injured tissues

Laboratory researches have clearly demonstrated the qualities of this carefully designed preparation and its superiority over other "hypochlorite" antiseptics

Reports of these researches and a sample of Milton will be forwarded to any medical practitioner on request.

Milton is supplied at a standard strength ready for immediate use, and is stable. It is safe for either external or internal application

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## FOR THE EXTERNAL APPLICATION OF SULPHANILAMIDE

# Streptocide Ointment

is of proved efficacy in infective  
skin diseases.

## Impetigo and Chronic Ulcers

Streptocide Ointment is a powerful bactericide  
Its application soothes inflamed areas and  
promotes healing

**CONTAINS 5% STREPTOCIDE IN  
A NON-IRRITATING SOLVENT**

Made at  
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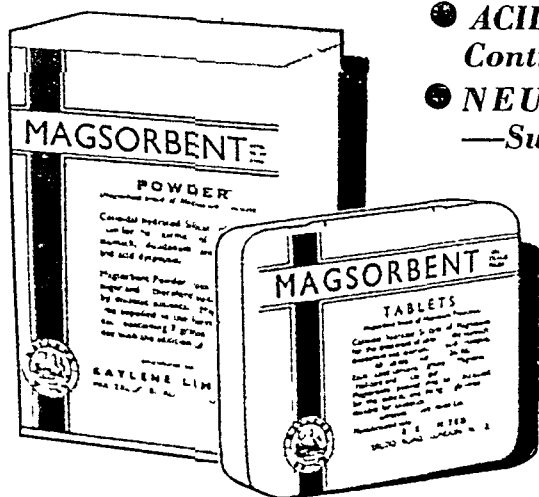


In tubes of 2 oz 2/3 each  
In tins of 1 lb 13/ each

*The Original and Standard Brand of Synthetic  
Hydrated Magnesium Trisilicate:—*

# MAGSORBENT

The safe and effective **ANTACID** for the treatment of **CHRONIC  
PEPTIC ULCER, HYPERCHLORHYDRIC DYSPEPSIA and ACID FER-  
MENTATION**



- **ACIDITY—Complete Control**
- **NEUTRALISATION—Sustained**
- **No Toxic Alkalosis**
- **Correct Physico-chemical Constitution**

**REDUCED PRICES — Magsorbent Powder**  
2 oz 1/6, 5 oz 3/-, 16 oz 8/9, 3 lbs 23/-  
**Tablets—65 for 2/4, 250 for 7/9, 600 for 15/-**

**SAMPLES ON REQUEST**

Manufactured only by  
**KAYLENE, LTD, WATERLOO RD, NW2**  
Sole Distributors **ADSORBENTS LTD**



### The Ideal Spring Tonic

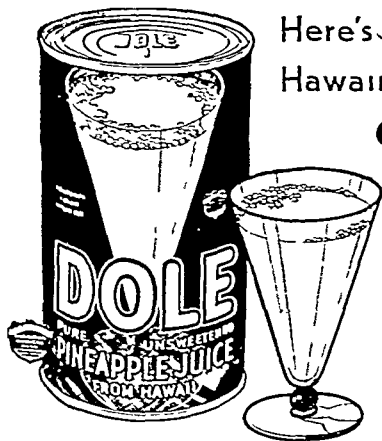
Livogen provides the ideal spring tonic for use in those varying conditions of lowered vitality which are so widespread at the end of the winter and in the early days of spring. These conditions, manifested in asthenia, lassitude, lethargy and debility, are often extremely difficult of exact diagnosis, but physicians everywhere report that the administration of Livogen is followed by a restoration of energy, increased appetite and a general return to normal conditions.

## LIVOGEN

Sample on request

THE BRITISH DRUG HOUSES LTD  
LONDON N 1

Lgn S 36



### Here's a Delicious Field-Fresh Fruit Juice from Hawaii—**YOU CAN RECOMMEND WITH CONFIDENCE TO YOUR PATIENTS**

**P**ATIENTS are usually finicky about their diet. They like variety. And Dole Hawaiian Pineapple Juice is a delicious pure un-sweetened fruit juice which makes a bright and cheerful change in your patients' menu.

Dole Pineapple Juice has been submitted to and has received the Seal of Acceptance of the American Medical Association's Committee on Foods.

The exclusive Dole Fat Seal Vacuum Packing Process retains the important fresh fruit constituents which are so valuable to convalescents. Dole Pineapple Juice is a refreshing natural juice. A natural source of vitamins A, B and C. And it has such a refreshing delicious taste and such field-fresh fragrance that everyone wants more from adult to children.

J. K. Hubbard & Co. Ltd. 10 Eatechep London E.C.3

#### AN ANALYSIS OF DOLE PINEAPPLE JUICE

Moi ture	85.50%
Ash	0.1
Fat (ether extract)	0.3
Protein (N x 6.25)	0.3
Crude fibre	0.0
Titratable acidity (citric acid)	0.9
Reducing sugars (invert sugar)	1.4
Carbohydrates other than sugar (by difference)	0.33

#### MAT WEAVERS—In the early

little villages of Hawaii and in the pools on the Island of Hawaii, one can see the native men at work mat weaving. These are called under a kahala, a traditional Hawaiian name for the mats are woven. Today there is a revival of the old art and many beautiful modern articles are being made.



**P.S.** If you will write us on your letterhead we shall be glad to send you a free sample tin of Dole Hawaiian Pineapple Juice.



# FEROSAN

BRAND

*Ferrous Chloride Capsules*

**IN THE TREATMENT OF  
HYPOCHROMIC ANÆMIA**

PER BOX OF 50 CAPSULES - - 2/-  
Each capsule contains 3 grains of stabilized  
Ferrous Chloride equivalent to 1½ grains  
of metallic iron in the ferrous state  
(Discount to the Medical Profession)

*Sample and Literature sent on request*

OBTAINABLE THROUGH ANY BRANCH OF



or from the  
WHOLESALE AND  
EXPORT DEPARTMENT

★ *Extract from the British  
Medical Journal, 1936, 1, 954*  
**Idiopathic and Secondary  
Hypochromic Anæmia**  
"Ferrous chloride is the most  
efficient, probably because it is  
the form into which most of the  
available iron is converted in the  
stomach before absorption. A  
total daily dose of 9 to 18 grains  
of stabilized ferrous chloride  
(Boots), made up into capsules  
of 3 grains each (that is, one to  
two capsules thrice daily after  
meals), is sufficient for the most  
severe degrees of hypochromic  
anæmia. In this form it maintains  
its ferrous condition very well."

**BOOTS PURE DRUG CO. LTD. NOTTINGHAM, ENGLAND.**

## WHOOPIING COUGH

Detoxicated Whooping Cough Vaccine (Genatosan) has proved remarkably successful. Reports received from medical practitioners state that it usually reduces the frequency of the paroxysms after the first injection, and subsequent injections almost invariably clear up the condition. Owing to the elimination of the toxic elements of the germ during the process of manufacture, this vaccine may be given to infants and young children, in doses sufficiently large to produce the desired therapeutic effect, with an absence of harmful reaction.

The following is typical of many reports received from physicians —

*"I have been making a somewhat extensive use of your Detoxicated Vaccine for Whooping Cough, and am pleased to say that the results have been almost invariably gratifying. In nearly all my cases the very distressing symptoms have disappeared after the third injection."* M D

Additional information regarding this Vaccine will gladly be supplied on request

### GENATOSAN LIMITED

VACCINE DEPARTMENT,  
LOUGHBOROUGH, LEICESTERSHIRE.

# HAY FEVER

## ASTHMA

## BRONCHITIS

## EMPHYSEMA

'One drachm doses (0.5 gm Caffeine Iodide) are worthy of a trial. There appears to be far less liability to iodism with this preparation than with potassium iodide.'

*J. di al. Press and Circular Med. 20th 1936 p. 4-4*

# "EUPNINE VERNADE"

(ANTI DYSPOEIC)

*The original stable solution of Caffeine Iodide*

**RELIEVES lung congestion**

**PROMOTES diuresis**

**STRENGTHENS the heart**

*Reduced Prices 100 cc 4/- 50 cc 2/4*

**WILCOX, JOZEAU & CO., LTD.,**

North Circular Road LONDON, NW 2 and 19 Temple Bar DUBLIN

# OVALTINE

**FOR THE OLD AND FEEBLE**

**D**URING old age when the digestive powers and vitality are on the wane the problem of satisfactory feeding often becomes acute. A solution to this difficulty is found in Ovaltine. Its delightful flavour appeals to the jaded palate its digestive action aids the enfeebled assimilation while its high nutritive value stimulates the flagging metabolism. It is a boon to the aged.

In Ovaltine the nutritive constituents of fresh milk, eggs and malt are transformed into crisp granules which dissolve readily in milk to form a delicious beverage. A cup of Ovaltine in the morning ensures energy for the day and a cup on retiring generally relieves the sleeplessness so common a symptom of old age and gives digestive rest.

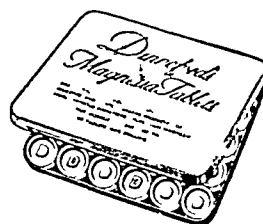
Ovaltine enriches the diet in certain important factors notably calcium and vitamins A and B, which recent investigations have shown to promote longevity.

*A liberal supply for clinical trial sent free on request*

**A WANDER, Ltd, 184, Queen's Gate, SW 7**  
Laboratories and Works **KINGSLANGLEY HERTS**



A rare distinction is that enjoyed by DINNEFORD'S MAGNESIA which—after more than 100 years—we still believe, retains the respect and goodwill of the Medical Profession.



# DINNEFORD'S

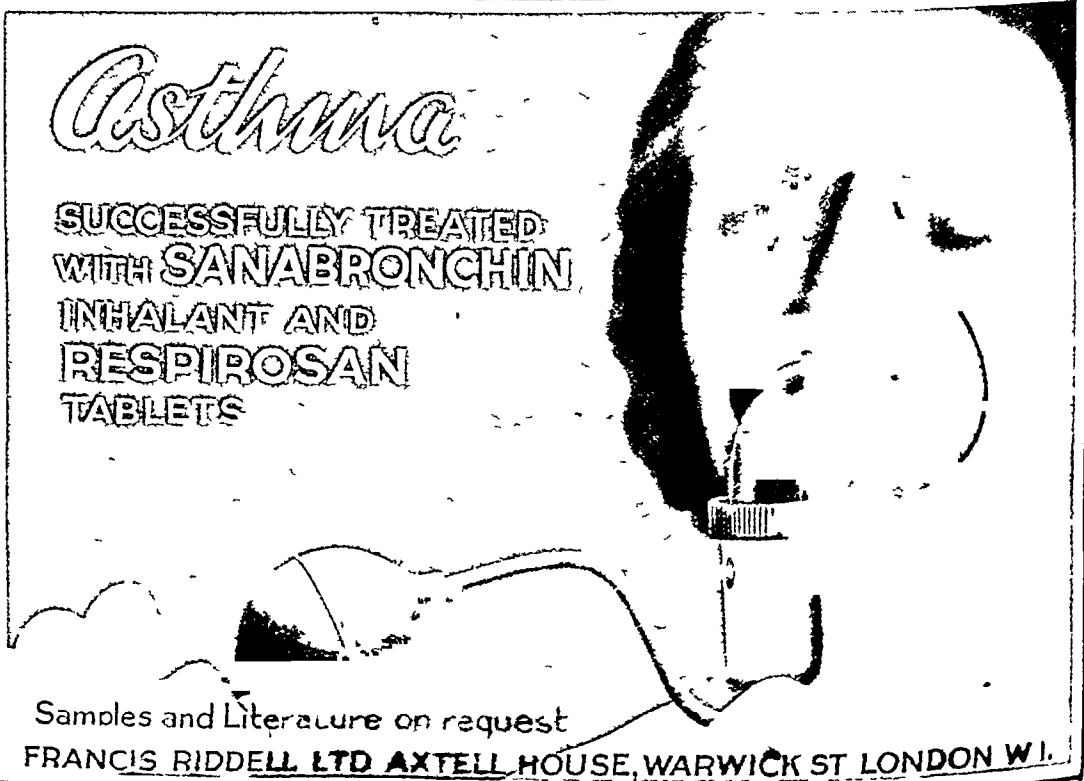
## *Pure Fluid* MAGNESIA

Now also supplied in tablet form for use away from home  
Made only by DINNEFORD & CO., LTD., CLIPSTONE STREET, LONDON W1

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### *Asthma*

SUCCESSFULLY TREATED  
WITH SANABRONCHIN  
INHALANT AND  
RESPIROSAN  
TABLETS



Samples and Literature on request

FRANCIS RIDDELL LTD AXTELL HOUSE, WARWICK ST LONDON W1.



### Formula

Intestinal gland	0.05 grms
Biliary extract	0.10
Lactic ferments	0.05 "
Agar-agar	0.05 ,
Fiat tablet	0.35

Initial Daily Dose  
Two Tablets

*Laxatives*, it is well known nowadays, must have two essential characteristics:

- 1 They must be biological i.e. they must accord with and imitate in their action the natural physiological processes of the intestine.
- 2 They must be capable of educating the intestine so that the habit of a laxative is not formed and the intestine can function unaided when bowel adjustment is attained.

*Taxol* has both these advantages.

*Taxol* has not the violent irritant action of many laxatives and purgatives but stimulates the intestine by processes which resemble those of nature. The intestinal gland which is an important part of its composition acts on the intestine by reinforcing the deficient function which has culminated in constipation. This stimulating action is gentle and does not force the weakened intestine to efforts beyond its power which would culminate in aggravation of the constipation.

*Taxol* is not habit forming. It re-educates the intestine to resumption of normal function unaided thanks to the biological nature of its action. It contains no irritant drug of violent and artificial action to which the intestine can become accustomed. On the contrary, many stubborn cases of constipation after a course of TAXOL revert to normal and regular peristalsis.

CONTINENTAL LABORATORIES LTD.



117, 119, 121, STREET, LONDON, S.W.1

## Vitamin Concentrate or Natural Food?

The normal daily dosage of Bemax, i.e.,  $\frac{1}{2}$ -ounce, provides 200 International units of Vitamin B<sub>1</sub>, which is from four to ten times as much as the recommended daily dosage of certain Vitamin B<sub>1</sub> "concentrates" advertised to the medical profession. If a higher intake is required, it is possible to supply as much as 600 to 800 units of Vitamin B<sub>1</sub> daily by the administration of three to four tablespoonfuls of Bemax, and this in an entirely natural form at only a fraction of the cost of concentrates.

The Vitamin B<sub>1</sub> potency of Bemax is assured by biological assay of every day's output, and is from 12-15 International Units per gramme, about 400 units per ounce.

# BEMAX

A unique natural source of accessory nutritional factors

Vitamin B <sub>1</sub> —400 International Units per ounce	Vitamin E—the richest natural source 1.30 mg. per ounce
Vitamin B <sub>2</sub> —11.5 in present B <sub>1</sub> -rich supply	Phosphorus—90 mg. per ounce
Vitamin A—50 International Units (as Carotene).	Magnesium—30 mg. per ounce
	Iron—3 mg. per ounce
	Copper—0.45 mg. per ounce.

Complimentary carton sent on request

The Bemax Laboratories  
(Dept B 59), Upper Mall, London, W 6

## Sterility and Habitual Abortion

The increasing use of Vitamin E for habitual abortion and sterility of dietary origin demands a wheat germ oil of proven high activity and of stable Vitamin value. Such an oil is available for the medical profession in Fertitol.

# FERTIOL

Wheat Germ Oil Capsules

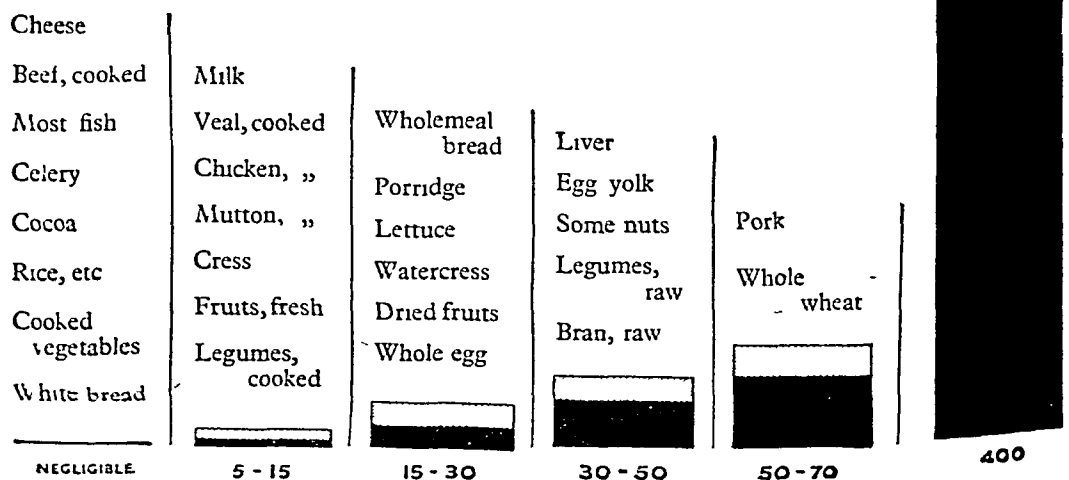
*A highly active source of Vitamin E*

*A complimentary box of Fertitol Capsules and brochure sent on request*

Vitamins Ltd  
(Dept B 59), Upper Mall, London, W 6

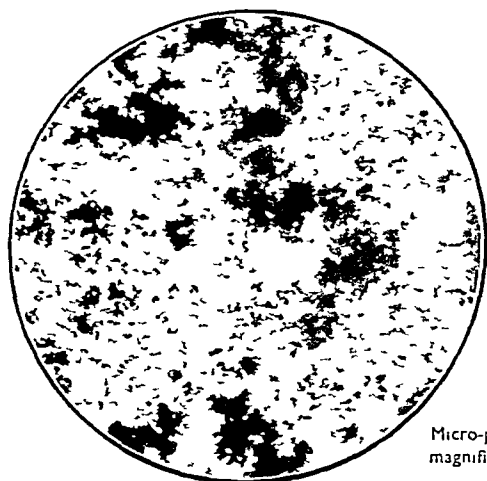
## VITAMIN B<sub>1</sub> IN FOODS

*Biochemical J, 1935, and other sources*

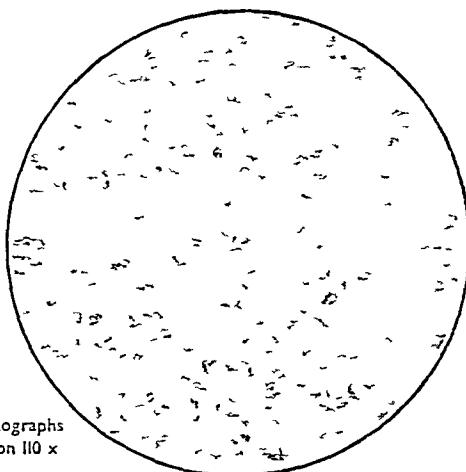


*The figures represent International Units per ounce*

# Visual evidence of the minute sub-division of 'BiSoDoL'



An antacid powder compounded by ordinary methods



Micro-photographs  
magnification 110 x

BiSoDoL reduced to fine  
sub-division by special  
processes in compounding

Comparison shows a remarkable distinction in the state of sub-division between an ordinary antacid powder and BiSoDoL.

BiSoDoL is composed of Bismuth Subnitrate Magnesium Carbonate Sodium Bicarbonate Papain Diastase and Peppermint Oil compounded by a special process. It conforms to the most recent demands of modern gastro-intestinal therapy.

'BiSoDoL' can be recommended with confidence in all conditions involving hyperacidity.

Samples for clinical trial will gladly be sent on request.

## BiSoDoL

*A major operation in progress  
in the operating theatre of a  
London Hospital*

## THE LESSON OF ANTISEPTICS

LISTER'S discovery that suppuration of wounds was caused by bacterial infection and could be prevented by the use of antiseptics opened the way to the marvels of modern surgery. To-day, it is taken for granted that every operation will be carried out without the introduction of micro-organisms into the blood.

Recognition of the importance of germ-free cleanliness, however, is no longer confined to the operating theatre and surgery, it receives ever-increasing attention from the lay public. Health standards to-day

are higher than they have ever been, as a result. Naturally, elaborate precautions against infection are impracticable in everyday life, but fortunately adequate protection is provided by the liberal use of soap and water—provided that the soap is pure and has antiseptic qualities.

Wright's Coal Tar Soap has enjoyed the confidence of the medical profession for over 70 years. Leading bacteriologists advocate its use for everyday protection against infection, and it has been found that more doctors use Wright's than any other brand of toilet soap. Wright's has substantial antiseptic and antipruritic qualities, and is the only soap to contain



'liquor carbonis detergens' (Wright's), the valuable skin therapeutic used and recommended by the foremost dermatologists. You can use and recommend Wright's Coal Tar Soap with every confidence.

**WRIGHT'S**  
**COAL TAR SOAP**  
*The Safe Soap*

*Wright, Layman & Umney Ltd., 44, 50 Southwark Street, S.E.1*

# CRUNCHY FOODS AND THE TEETH

---

Crisp, fibrous foods are generally considered to perform a useful function in scouring the teeth, thus keeping them free from sticky food particles, which are apt to ferment and cause decay. The plentiful saliva, which hard, dry foods produce, is also of value in cleaning the mouth.

Furthermore the vigorous mastication that hard foods demand is generally held to assist the growth and correct development of the jaws.

For these reasons many practitioners recommend that the normal diet should include a proportion of hard, dry foods. They find that Ryvita eaten daily has a beneficial effect upon the teeth, especially those of children. Free samples of Ryvita for distribution to patients will gladly be supplied on request.

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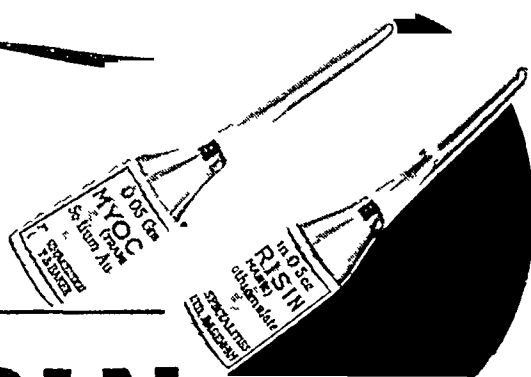
THE RYVITA COMPANY LIMITED  
96-98 SOUTHARK ST LONDON SE1

*Bakeries in Birmingham*

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# TREATMENT OF ARTHRITIS BY INTRAMUSCULAR INJECTION



# MYOCRISIN

TRADE SODIUM AUROTHIOMALATE MARK

Given within two years of the onset of rheumatoid arthritis, considerable improvement is seen in practically every case.

Relatively non-toxic and well tolerated

#### AQUEOUS SOLUTION

Single ampoules of 0.1, 0.5, 1 and 2 grm at 1/9, 2/6, 3/3 and 4/6 respectively

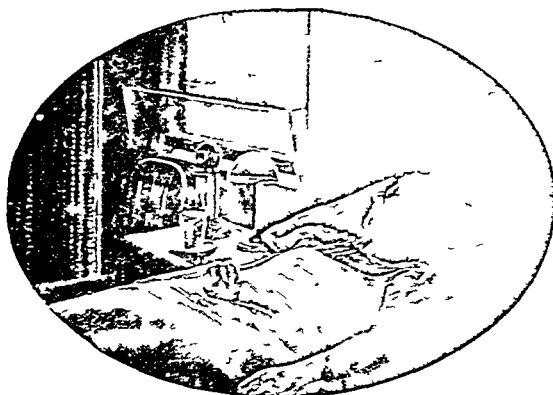
*Detailed information on request*



**PHARMACEUTICAL SPECIALITIES  
(MAY & BAKER) LTD. DAGENHAM**

# ELI LILLY AND COMPANY LIMITED

*Pharmaceutical and Biological Products*



*Trade Mark* 'AMYTAL' *Registered*

*Iso amyl Ethyl Barbituric Acid*

SUPPLIES the relaxation and sleep which are essential to rapid convalescence of medical and surgical patients. Upon awakening the head is usually clear, there is little after-depression, energy and self-confidence are restored.

'Amytal' brand iso-amyl ethyl barbituric acid is supplied in 1/4-grain, 3/4-grain, and 1 1/2-grain tablets in bottles of 40 and 500.

*Prompt Attention Given to Professional Inquiries*

23 AND 4, DEAN STREET, LONDON, W 1

*Distributing Agent in Britain for*

ELI LILLY AND COMPANY, INDIANAPOLIS, U S A

# Gastritis

Sanatogen is a *chemical combination* of ninety-five per cent. concentrated milk casein and five per cent. sodium glycerophosphate, which can be easily digested and absorbed even in cases of enteritis. Moreover, it stimulates a better utilisation of whatever ordinary food can be taken.

*"I had a female patient age 43 who was always rather below weight and nervy. She suffered severely from acute Gastritis following mild food poisoning and progressed slowly. She was put on carefully chosen soft foods, rest in bed, sedatives and Sanatogen, commencing with one teaspoonful three times daily. The last dose was taken half an hour before settling down for the night. She certainly improved. The stomach could receive and retain, with comfort, more food, and the nervous symptoms showed marked improvement, especially regarding sleep and general interest in life."—L R C P & S*

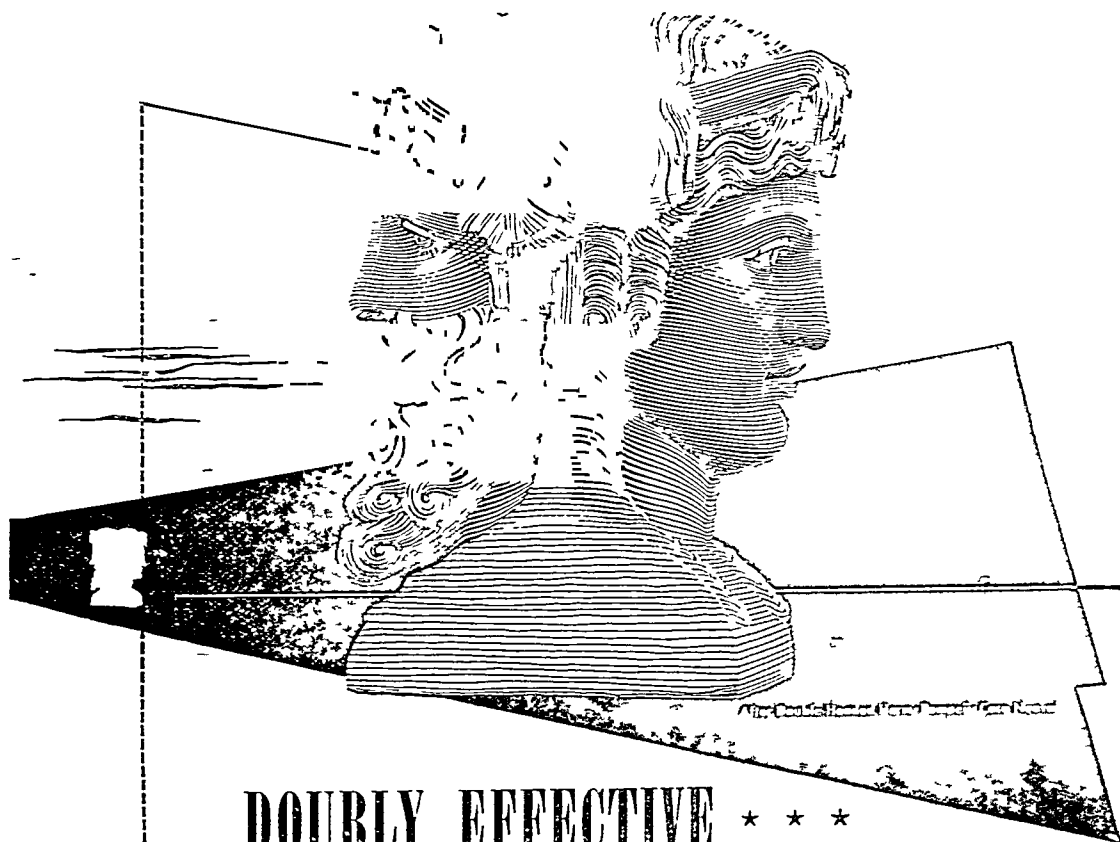
## SANATOGEN

**A Genatosan Product  
for effective action**



*Samples and literature available on request to*

**GENATOSAN LIMITED**  
**LOUGHBOROUGH LEICESTERSHIRE**



## DOUBLY EFFECTIVE \* \* \*

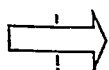
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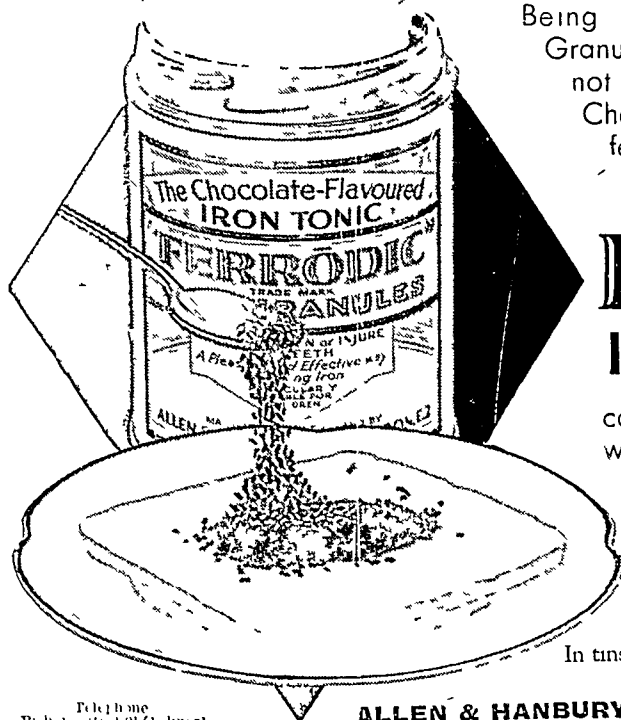
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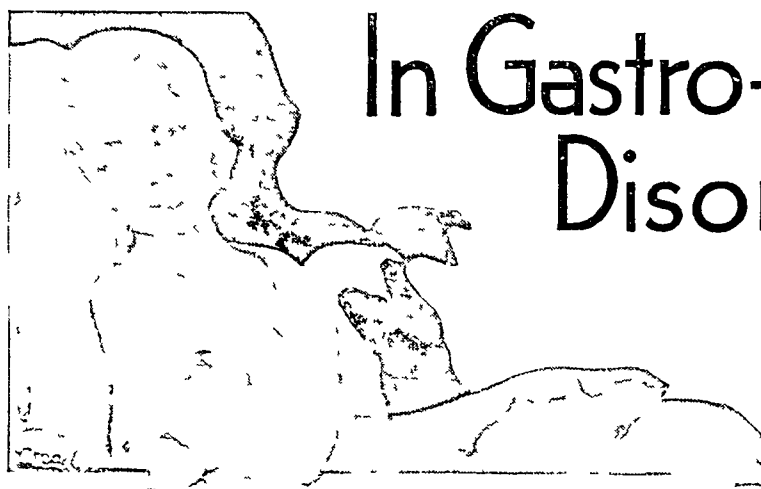
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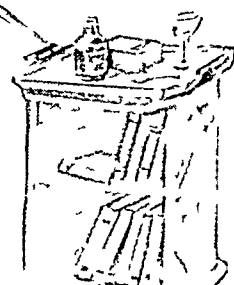
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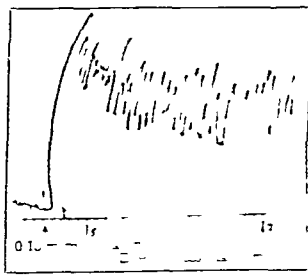
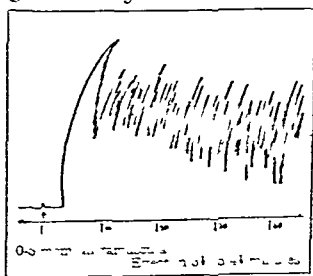
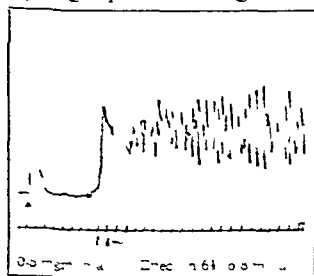
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# BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 7 1938

## THE CLINICAL BEARINGS OF THE PARATHYROIDS

By

W J E JESSOP, M D, M Sc, D P H

*Professor of Physiology, Royal College of Surgeons in Ireland*

In this paper I propose to deal with the general principles underlying the action of the parathyroid glands illustrating their clinical importance by such items as have fallen within my experience. Those who desire more detailed information are referred to one of the many reviews published on this subject of which the most recent by Hunter (1937) might be specially mentioned.

The parathyroids are small glands usually four in number, situated at the postero lateral margins of the thyroid. Occasionally one or more additional glands may be found either similarly situated or placed above or below the thyroid—even in a few instances within the superior mediastinum. The maximum total weight is less than 0.5 gramme. Histologically they consist of closely packed cells of two main types—principal cells with a faintly basophil protoplasm and eosinophil cells. We have no evidence to indicate definitely the relative importance of these types.

### The Parathyroid Hormone

The glands produce a hormone which has been extracted by Collip in a form suitable for intravenous injection but which has not yet been prepared pure enough for its chemical constitution to be determined and hence no synthetic preparation of it has been possible. For clinical purposes several commercial extracts of recognized activity are available though doubts are sometimes expressed regarding the uniformity of their potency. At present a unit is defined as one hundredth part of the amount necessary to raise the blood calcium of a dog weighing 20 kg by 1 mg per 100 ccm. The hormone is useless when taken by mouth.

Although it is generally agreed that the parathyroids are primarily concerned with regulation of calcium and phosphorus metabolism and that the various other manifestations of increased or decreased activity are only secondary to this function the precise mechanism by which the hormone acts has not yet been fully worked out. Several theories have been put forward suggesting that the primary influence is exerted on one or other of the calcium fractions and even on phosphorus metabolism.

From the point of view of the clinician it will suffice to state clearly what appears to be the most likely sequence of events. The activity of the parathyroid is normally governed by the level of serum calcium probably the ionized fraction. A fall in value of ionized calcium acts as a stimulus to secretion which may operate either directly or indirectly, if indirectly then either through a nervous mechanism or by stimulating the pro-

duction of a parathypotropic hormone by the pituitary. The primary object of this increased secretion is to raise the level of serum calcium to its normal level. Calcium is essential for proper functioning of the greater part of the neuromuscular system. The object is attained by the stimulation of osteoclastic activity in bone so that the balance normally maintained between deposition and absorption of calcium is upset and calcium salts are released to the blood in increased quantities.

It is not necessary to ascribe any further direct action to the parathyroid hormone for the results of interference with the supply of hormone available either in clinical or in experimental conditions will follow from this primary effect. Suppose the supply of hormone is deficient. Osteoclastic activity is retarded and since osteoblastic activity proceeds unchanged there is a lowering of serum calcium resulting in clinical tetany and reduced calcium excretion. It is generally found that the concentration of inorganic phosphorus in plasma varies inversely as that of calcium possibly as an expression of the law of mass action. Hence a further feature will be a high plasma inorganic phosphate content. The only other result which might logically be expected would be an increase in calcium content of bone. Tetany is an acute condition which must be treated at once so that it would be impossible to demonstrate such increase of calcium content. It would be very interesting to know if any patient with chronic parathyroid deficiency who had lived for a considerable time while receiving calcium injections showed any observable increase in density of x-ray shadows.

Events parallel to those in the above sequence follow a prolonged increase in available parathyroid hormone. There is a stimulation of osteoclastic activity so that absorption of calcium from bones outruns deposition resulting in an increase in serum calcium. This in turn causes a reduction in muscle tone and increased calcium excretion and lowered plasma inorganic phosphate. The condition can continue either experimentally or clinically long enough to produce a definite reduction in bone calcium as shown by x-ray shadows by loss of strength and by appearance on direct examination.

### Hypoparathyroidism

In man clinical hypoparathyroidism and hyperparathyroidism present further features which call for special consideration. Hypoparathyroidism may result either from removal of parathyroid tissue during an operation on the thyroid or from a spontaneous loss of function of



and in both cases the primary fall of serum calcium gives rise to those secondary changes referred to above. Outstanding among these is the increased neuro-muscular excitability or tetany. In the post-operative type symptoms begin twenty-four to seventy-two hours after operation, and generally vary in severity with the reduction of serum calcium. The severity seems to be more closely related to the difference between pre-operative and post-operative values of serum calcium and the rate at which serum calcium falls than to the absolute value at the time tetany sets in. Thus in a person whose blood calcium was constantly in the neighbourhood of 14 mg per 100 ccm before operation, removal of a nodule of hypertrophied parathyroid tissue caused an immediate fall of serum calcium to 8.5 mg, which resulted in tetany, although people whose serum calcium had been normal do not develop tetany until a value of about 7 mg per 100 ccm has been reached. The condition may at first be latent—that is, neuro-muscular excitability is demonstrated only by the application of specific stimuli, as in Trousseau's and Chvostek's signs. Later the skeletal muscles develop spasms, apparently spontaneously. The characteristic attitudes produced in the forearms and hands, and often in the legs and feet, have given rise to the term carpo-pedal spasm. Disorders of sensory nerves producing tingling sensations in upper and lower limbs are present early in a number of cases. Patients who have suffered from hypoparathyroidism for some time are said to develop subjective manifestations: they tend to become hysterical and to be unduly depressed even between acute attacks. In rare cases cataracts may appear.

#### POST OPERATIVE TETANY

Post operative tetany is often due to temporary interference with the blood supply of the glands, and will rectify itself when an adequate supply is re-established. Only in those instances where a considerable amount, say 50 per cent, of the total parathyroid tissue is removed will tetany persist. In both cases the logical treatment is injection of parathyroid extract to make good the deficiency in the natural supply and the administration of calcium to correct as quickly as possible the lowering of serum calcium.

The essential factor in the production of tetany is a low serum calcium, and any condition which produces this will lead to increased neuro-muscular excitability like that found in parathyroid deficiency. Thus any interference with calcium absorption, such as is produced by an excess of fatty acid in the intestine or by a deficiency of vitamin D, will operate in this way. An interesting point which has been made in connection with the tetany associated with vitamin D deficiency is the lack of parallelism between the severity of the rickets and that of the tetany. In a series of cases of tetany published by Guild (1933) 58 per cent had very mild rickets, while only 6 per cent showed really severe bony changes radiologically. No attempt was made in the original paper to account for this peculiarity, but in view of what has been said above a rational explanation could be given as follows. In one type of case suffering from lowered calcium absorption the tendency to the lowering of blood calcium stimulates the parathyroids and calcium is mobilized from bones. Tetany is thus prevented but the bones suffer correspondingly. In another type with less active parathyroids calcium is not mobilized from bones, and the blood calcium falls. Tetany develops but the bones will not be so severely damaged. Since the principal function of the parathyroids is probably to maintain the level of blood

calcium, tetany produced by a low calcium absorption is to be regarded as a sign of relative failure of parathyroid activity under strain. Tetany due to lowered calcium absorption should be treated by improving the factors promoting absorption. Injections of calcium salts and parathyroid extract may be employed, but the latter should be regarded as only an emergency measure.

One other condition may be touched upon before leaving the subject of hypoparathyroidism. A number of authors, of whom Mirvish (1930) may be specially mentioned, claim to have shown that the local pathological condition in otosclerosis is a manifestation of parathyroid deficiency and that the disease may be successfully treated by injection of extract. But the figures given for serum calcium by this author are normal, and other workers have failed to produce permanent benefit consistently by this treatment.

#### Hyperparathyroidism

Hyperparathyroidism may be brought about by injection of the extract of the parathyroids or by the local manufacture of an excess of the hormone by parathyroid tissue. In animals the prolonged injection of the extract produces the effects summarized above. In man it is not possible or desirable to continue the experiment long enough to produce obvious bony changes, but a good deal of information has been obtained from cases of lead poisoning treated by parathyroid extract. Here lead is deposited in the skeleton, and this acts as a reservoir long after the supply from outside has been cut off. Injection of parathyroid extract causes a rise in serum calcium, with increased calcium excretion. At the same time evidence of its action on the bones is produced by the increase in excretion of lead and its disappearance from these reservoirs.

Clinical hyperparathyroidism due to an increased local production of the hormone by a tumour has recently assumed special interest in view of the discovery that it is responsible for generalized osteitis fibrosa cystica. Although this was described in 1891 by von Recklinghausen, and post-mortem examination during the early part of this century had repeatedly shown cases to be associated with a parathyroid tumour, it was not until 1926 that Mandl attempted to cure the disease by removal of such a tumour. The case showed the typical features to be described presently, and the operation effected a complete cure. This discovery, taken in conjunction with the observed effects of the injection of Collip's extract, finally established the role of the parathyroids in calcium metabolism, which, in spite of significant observations by MacCallum and others, had not previously been definitely recognized.

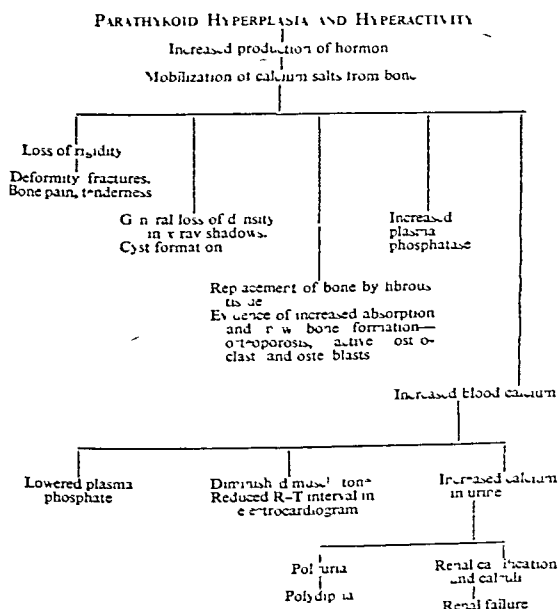
#### The Development of Clinical Hyperparathyroidism

We may trace the development of the clinical condition as follows. The primary effect is stimulation of osteoclastic activity with removal of calcium salts from bones. Secondary effects are produced in the bones and elsewhere. In the bones we find loss of rigidity, leading to deformity, spontaneous fractures, pain, and tenderness. Radiologically and histologically there are lack of density of x-ray shadows, cyst formation, giant cell tumours, replacement of bone by fibrous tissue, and increased osteoblastic and osteoclastic activity with osteoporosis. The general alteration may be quite easily seen with the naked eye, and the bone may be so soft as to be easily cut with a knife.

The more general effects may be largely attributed to the increase in blood calcium which automatically follows removal of this element from the skeleton. Thus plasma inorganic phosphate is lowered, muscle tone is diminished and calcium excretion is increased. The last leads to polyuria which in turn produces polydipsia. The continual passage of urine rich in calcium salts often together with the bedridden condition of the patient leads to deposition of calcium salts in the kidney either diffusely in the cortex or as one or more renal calculi. Deposits of calcium phosphate may also be found in the lungs.

A further interesting feature of this condition is the great increase of plasma phosphatase. This enzyme is concerned in the hydrolysis of esters of phosphoric acid with the liberation of inorganic phosphate. It normally occurs in greatest quantity in osteogenic tissues and is found in blood only in very small concentrations. In hyperparathyroidism it is present in plasma in five to ten times the normal values and we assume that this is due to a marked compensatory activity of osteoblastic tissue. Certain American workers—for example Ballin (1932)—have described a reduction of the R-T interval in the electrocardiogram. This they suppose to be a direct effect of the raised blood calcium on the relaxation of the heart.

The sequence of events may be represented diagrammatically as follows:



The victim of the fully developed condition is thus not infrequently a confirmed invalid who has been much restricted in activity or completely bedridden perhaps for years. In the absence of treatment death often from renal complications was the rule. The dramatic improvement after removal of the tumour is therefore all the more striking. The blood calcium falls often so rapidly that symptoms of tetany supervene and require treatment by injections of calcium salts or parathyroid extract. Blood phosphate and calcium excretion return to normal while bone pain and tenderness and muscular atony disappear and the patient regains strength and weight rapidly. The bones return to normal more slowly but

definite increase in density is generally apparent in six to twelve months. The cysts may decrease in size and there are no more spontaneous fractures. In short the patient has always been improved and has in many cases been enabled to lead an active useful life.

When the condition was first recognized it was thought that hyperparathyroidism might prove to be a no longer common complaint as many clinicians realized almost immediately that they had cases already under their care but general experience indicates that it is quite rare. In Dublin only six cases proved by operation or necropsy and full investigation have been seen during the last 25 years. Three of these have already been described in detail by me (1936).

It has also been stated that a parathyroid tumour is a frequent cause of renal calculi. Colby (1934) has recorded three cases in two of which no bone change was detected radiologically but which showed a raised serum calcium. A parathyroid tumour was found in each case and was removed and in one the calculus disappeared after operation. But in the urological department of the Meath Hospital Dublin during the last five years every patient with urinary calculi has been investigated from this point of view and not one case has been found.

Several attempts have been made to include other bone diseases such as osteitis deformans, osteogenesis imperfecta and polyarthritides as manifestations of hyperparathyroidism but the evidence adduced is in no case conclusive. Certainly in several cases of osteitis deformans and in one case of osteogenesis imperfecta we found no biochemical evidence of increased parathyroid activity and in the last mentioned a post mortem examination failed to reveal a parathyroid tumour.

#### REFERENCES

- Ballin M (1932) *Ann Surg*, 96 649  
 Colby F H (1934) *Surg Gynec Obstet* 59 210  
 Guild Harriet G (1933) *Parsons and Barling Diseases of Infancy and Childhood* p 500 London  
 Hunter Donald (1937) *British Medical Journal* 1 929 930  
 Jessop W J E (1936) *Irish J med Sci* 6th ser 39  
 Mirvish L (1930) *J Laryng Otol* 48 49

The Proceedings of the Second International Scientific Congress on Nutrition have been published under the title *La Science de l'Alimentation en 1937* (Alimentation Imprimerie Alenconnaise). Among the numerous resolutions adopted by the congress were the following: (a) tables of analysis of foods in terms of minerals, vitamins and indispensable organic compounds should be drawn up and periodically reviewed in every country; that it was desirable to popularize the rules of a rational diet based on modern scientific knowledge and to establish closer relations between (a) physiologists and doctors, (b) public authorities and (c) families and educational establishments; that children should not have more than 1 litre of milk a day; that in homes for infants in schools etc bread pastries dried vegetables pork and recocked meats should to a large extent be replaced by fresh vegetables and fruits; that from the age of 5 years it was necessary to give an abundant ration of animal protein; that a child of 12 needed a diet as nutritive and as varied as that of an adult; and that a boy or girl of 16 required a greater amount of food than the average adult of either sex. Various resolutions were also passed which emphasized the importance of continuing investigations in different countries into the diet of people of different professions and occupations, the importance of education in dietetics, the need for legislation for preventing the misuse of food, the importance of refrigeration and the control of adulterants which exaggerated the good effects of vitamins.

# LABORATORY AND CLINICAL INVESTIGATIONS ON TUBERCULIN PURIFIED PROTEIN DERIVATIVE (P.P.D.) AND OLD TUBERCULIN (O.T.)

BY

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The value of the Mantoux test as a clinical aid seems to be doubted in some quarters, apparently on the assumption that there is almost complete tuberculinization of the population. This may still be true of crowded urban districts but recent epidemiological surveys have shown that in many communities a large percentage of people reach adolescence without having been infected, and, moreover that this percentage is becoming greater as the incidence of tuberculous disease is decreasing. There can be little doubt therefore that with time the Mantoux test will be found more and more useful in clinical work.

Since the Mantoux test is a quantitative one, the material used in its performance should be stable, and constant in composition and potency, further the exact amount of the active principle injected should be known. Only if these conditions are fulfilled will it be possible to compare repeated tests at intervals on the same patient, and to correlate or pool the observations of different workers investigating large groups. Until a few years ago Koch's old tuberculin was always used, but it was increasingly realized that this crude material did not fulfil the conditions laid down above.

Old tuberculin is usually prepared by the growth of the tubercle bacillus on a veal-infusion-peptone medium containing a comparatively large amount of glycerol. The mature culture is steamed and the filtrate evaporated to one-tenth of its original volume. Thus it is a complex mixture, containing besides the active principle, much non-specific material such as peptones salts glycerol, and bacillary metabolic products. Long (1934) has stated that its potency is due to about 1 per cent of its total substance. It has been found that batches of old tuberculin prepared not only from different strains, but even from the same strain and in the same type of culture medium may vary in potency. Moreover no accurate method of standardization has been developed. The shock method, which was found to carry a large error was replaced by intracutaneous testing in guinea pigs but even this may allow a 40 per cent error unless a large number of comparisons are made (Oxell and Parish 1927). Finally, the use of old tuber-

culin has the disadvantage that dilutions deteriorate comparatively rapidly.

These considerations have stimulated much research work, particularly in America, to eliminate non specific factors and thus prepare a purer product. The first important step was made when Long and Seibert (1926) showed that the tubercle bacillus would grow and produce a potent tuberculin on a synthetic medium with asparagine and ammonium salts as the sole sources of nitrogen. It was found that protein-like substances were formed during growth on this medium and this led to the view that the active principle was of a protein nature, as suggested much earlier by Koch. Definite confirmation was obtained by Seibert (1928), who prepared unheated culture filtrates of the organism grown on Long's medium, and was able to isolate a crystalline protein which is water-soluble and a very active tuberculin. Repeated recrystallization of this product increased rather than decreased its potency, demonstrating conclusively the protein nature of the active principle. This method is impracticable for the routine production of a pure tuberculin for the following reasons: (1) the amount of tuberculo-protein which will crystallize is very small, (2) the protein which will not crystallize is also physiologically active, (3) when the product is injected there is some risk of producing sensitization which might lead to errors in reading. In this connexion Seibert (1933) has shown that it is possible to isolate the active principle in different states of molecular aggregation according to the method of preparation. Potent tuberculin preparations, all of a protein nature, have been made with different molecular weights—namely (a) ammonium sulphate fraction from unheated culture filtrates (Seibert's TPA)—molecular weight = 25,000, (b) trichloroacetic acid precipitate from unheated culture filtrates (Seibert's TPT)—molecular weight = 3,000 to 8,000, and (c) trichloroacetic acid precipitate from steamed and evaporated culture filtrates (Seibert's SOTT—"synthetic medium old tuberculin trichloroacetic-acid-precipitated")—molecular weight = 2,000. The sensitizing power of these preparations has been investigated, with the exception of SOTT which possesses the lowest molecular weight, they are capable of eliciting reactions of the Arthus type when injected repeatedly into the skin of guinea-pigs and of producing precipitins in rabbits. Obviously it is undesirable to use preparations with which there is the slightest risk of sensitization, for they may lead to erroneous results (Aronson and Nicholas, 1933), the best diagnostic agent so far produced is therefore the non sensitizing SOTT, which Seibert (1934) has more recently named "purified protein derivative". This is simply the substance of the lowest molecular weight which will cause the tuberculin reaction in sensitive subjects. It is isolated as a dry powder, any desired doses of which can be issued to doctors in sterile form in bottles or in the shape of tablets. Solutions are made up very conveniently as required. It is claimed that PPD is always of the same composition and potency. Variation in strain of bacillus or luxuriance of growth merely causes variation in yield of PPD. Thus an exact known quantity by weight of the effective substance is always injected. The other advantages claimed are absence of non-specific substances, increased stability, and the convenient preparation of dilutions.

## I LABORATORY INVESTIGATIONS

By F. V. LINGGOOD and H. J. PARISH

In this section we propose to deal with the preparation, potency, and stability of purified protein derivative (P.P.D.) and of "dried dilutions" of P.P.D.

### Preparation of Purified Protein Derivative

We have adhered closely to Seibert's method (1934). The bacillus is grown on a synthetic protein free medium from which an old tuberculin is prepared by steaming and evaporation. The bulk of the impurities is removed by ultrafiltration and the active principle precipitated with trichloroacetic acid. The precipitate is thoroughly washed with this reagent and the acid is then removed with ether which at the same time dehydrates the protein derivative.

For those who are specially interested in the method of preparation technical details are as follows:

A suitable strain of tubercle bacillus is grown as a film in large 20 litre (rose water) bottles on the synthetic medium of Long and Seibert (1926) which in our hands has given a better product than certain other synthetic media. After two to three months the mature cultures are killed by steaming for two hours and the organisms are then removed by filtration through paper pulp. Glycerol is added in the proportion of 122 ccm to each litre of original culture fluid and the mixture is evaporated on a steam bath to one fifth to one tenth of its original volume. This concentrate is diluted with an equal volume of 1 per cent phenol in distilled water left in the cold room for some days for any precipitate to collect and then filtered warm through a Berketeld candle. By this means a synthetic medium old tuberculin is produced which has now to be freed from all extraneous matter.

A preliminary purification is made by ultrafiltration using the technique described by Quigley (1934) except that a special collodion is used (ICI H445 as a 13 per cent solution in glacial acetic acid).

The synthetic medium old tuberculin prepared as above is diluted with an equal volume of 0.5 per cent phenol water and drawn through the ultrafilters. The active principle remains outside the filters while salts, glycerol, amino acids and other non colloidal constituents of the crude tuberculin pass through the membranes. Washing with 0.5 per cent phenol water is continued until the ultrafiltrate is practically chloride free.

The solution outside the membrane concentrated to a small volume consists mainly of the active principle bound to polysaccharide. The latter is removed by the addition of one quarter volume of freshly prepared 50 per cent trichloroacetic acid. The resulting precipitate which consists almost entirely of the pure protein derivative (Seibert 1932) is collected by centrifugalization and washed six to eight times with fresh 10 per cent trichloroacetic acid to remove the contaminating polysaccharide.

After the final washing the precipitate is smeared rather thickly inside the centrifuge tube and the excess of water is removed by drying *in vacuo* for half an hour but complete drying must be avoided. (From this stage onwards great care must be taken to prevent any of the powder being inhaled by the manipulator. All operations are conducted inside a box with a closely fitting glass lid and sleeves to protect the arms of the manipulator. Suction from a water pump is gently applied to one side of the box to prevent any of the powder diffusing around the lid into the air of the room. As a further precaution rubber gloves and a respirator should be worn.) Large volumes of dry ether are used to extract the water and trichloroacetic acid from the precipitate by alternate trituration and decantation through a Soxhlet thimble. The process is repeated until the precipitate is in the form of a very fine powder. By this time it will be found that the ether coming through the Soxhlet thimble gives no acid reaction. The fine powder is transferred to the thimble and is thoroughly washed again with dry ether. The thimble is then placed over paraffin wax in a desiccator and the last traces of ether removed *in vacuo*. As tuberculin adheres tenaciously to filter-candles and glassware (Parish and O'Brien 1935) the apparatus in the tuberculin laboratory must on no account be employed for other biological work.

### Potency and Stability of Purified Protein Derivative

The dry purified protein derivative is a tan-coloured powder. Although minor variations have been noticed occasionally the potency of different preparations has been remarkably constant. When redissolved at a concentration of 5 mg per ccm successive batches almost invariably have been equal in potency to the international standard old tuberculin on guinea pig intracutaneous test. The solutions for these tests are prepared by the addition of a small amount of N/10 alkali to the powder in order to dissolve it. Borate buffer solution is added subsequently and the pH adjusted to 7.4; the final concentration being 5 mg per ccm. The dry purified protein derivative is a very stable preparation.

### 'Dried Dilutions' of Purified Protein Derivative: Preparation, Potency, and Stability

In America the active principle is incorporated in tablets with a dry diluent, beta lactose (Reichel and Clark 1934) and issued in two strengths. We have adopted a somewhat different procedure. The dry powder is weighed and dissolved as described above to give a final strength of 5 mg per ccm. The potency of the material after filtration through a Berketeld candle is checked on tuberculous guinea pigs on a number of occasions to ensure that it is equivalent to international standard old tuberculin. The standardized solution of P.P.D. is then diluted under sterile conditions in a special boric acid buffer solution of pH 7 the final dilutions being distributed in bottles which contain 1 ccm (ten doses of 0.1 ccm) of strengths equivalent to 1 in 10,000, 1 in 1,000 and 1 in 100 of international standard old tuberculin. These dilutions are evaporated to dryness *in vacuo* under sterile conditions. Immediately before use 1 ccm of a special borate diluent is added to the required bottle which is left stoppered for two minutes for the dried dilution to dissolve and is then well shaken. The strength of the boric acid borate and salt in the final diluent is adjusted so that the final mixture is isotonic and of pH 7.4. The dose of the reconstructed dried dilution is 0.1 ccm. The actual weights of P.P.D. prepared for injection are 0.00005 mg (that is 0.1 ccm of dilution 1 in 10,000), 0.0005 mg and 0.005 mg.

Before issue from the laboratories the potency of each batch of dried dilutions is tested on tuberculous guinea pigs against freshly prepared dilutions of international standard old tuberculin. For these tests the dried dilutions are redissolved in the special diluent and may then be diluted further in physiological saline to provide a suitable range of dilutions for the injections. Thus a dilution of 1 in 500 is generally prepared from the 1 in 100 dried dilution and dilutions of 1 in 2,000 and 1 in 4,000 from the 1 in 1,000 dried dilution. Checking the potency of the 1 in 10,000 dried dilution is only practicable on very sensitive guinea pigs. So far we have been unable to detect any loss in potency during preparation or after storage for three years at room temperature. A more serious solution however of error is more rapid than that of corresponding dilutions of old tuberculin.

With reference to the particular dried dilutions of P.P.D. which were used in the following clinical study our aim was to make them as nearly equal to the corresponding dilutions of old tuberculin as possible. Actually they proved to be very slightly stronger although this difference was apparent only after repeated tests on the

skin of very sensitive guinea-pigs. Altogether forty-six guinea-pigs have now been used, with the following results

PPD = O.T. on 12 guinea pigs  
 " > " ; 22 "  
 " < " ; 12 "

We would emphasize that the difference between the dilutions of the two preparations was not detectable on all the guinea pigs and that only our most sensitive animals indicated that the dilutions of PPD were a trifle stronger. Twofold differences were clearly distinguishable on the whole of the guinea-pigs, and it was agreed by all who observed the reactions that the difference in potency indicated in the above table was very much less than twofold.

## II CLINICAL INVESTIGATIONS

### (a) Mantoux Tests. A Comparison of Purified Protein Derivative with Old Tuberculin

The present investigations were undertaken to compare PPD with old tuberculin in clinical work. At first sight this is absurd since we are apparently comparing two substances made comparable by standardization. But since the standardization is carried out in guinea-pigs, such an investigation is still indicated in man, and might serve to emphasize any deficiencies of the guinea-pig standardization. Preliminary tests on human subjects made previously by Davis and Guzzard (1935) and Westwater (unpublished) have shown that 'wet' dilutions of PPD deteriorated more rapidly than corresponding dilutions of old tuberculin and were thus unsuitable for use. Therefore, as mentioned earlier in this paper, 'dried dilutions' of PPD and also a suitable borate buffer diluent were supplied to us from the Wellcome Laboratories. Corresponding dilutions of old tuberculin in 0.5 per cent phenol saline were also provided, and, on account of the possibility of deterioration, were used within a fortnight (very occasionally three weeks) of receipt.

Particular care was taken in performing the tests and in recording the results. The usual technique was followed—that of injecting 0.1 c.c.m. intradermally, choosing comparable sites on each forearm, and, in view of the extreme 'tenacity' of tuberculin to glass (Parish and O'Brien, 1935) separate syringes were reserved, and employed for each type of tuberculin and for each individual dilution. Some of us found that for accurate work it was helpful to have only one dose in the syringe at a time—that is the tuberculin drawn up to the 0.1 c.c.m. mark—so that attention could be concentrated on raising a proper intradermal wheal.

The reaction to the intradermal injection of 0.1 c.c.m. of tuberculin in a sensitized person is an erythema, an erythematous infiltration or an actual oedema of the skin, usually at a maximum after forty-eight hours and varying in size. Mild reactions may present difficulty in interpretation and there is no universal agreement on what constitutes the minimum reaction to be accepted as positive. Different authorities have taken as suitable criteria areas of erythema varying in diameter from 2 mm to 10 mm, with or without associated infiltration. In addition there is considerable difference of opinion concerning the best time to read results, but most workers agree that a twenty-four hour reading is not reliable. Hart (1932) accepts as a positive reaction an erythema or erythematous infiltration whose greatest diameter is 5 mm or more taking the forty-eight hour reading, and Aronson (1934) has a similar standard. Holm (quoted by Kayne, 1936) requires

at least an infiltration of 7 mm diameter at forty-eight hours, or 5 mm at seventy-two hours, for a positive reaction. Kayne (1936) adopts the following criteria in considering a reaction positive:

At 48 hours area of erythema, with or without swelling, 10 mm in diameter (mean)  
 At 72 hours area of erythema and swelling, 7 mm in diameter (mean)

#### TESTS BY G. GREGORY KAYNE

The erythema and swelling cannot always be measured with accuracy, and the "experimental error" of the size of the reaction has not been determined. It appeared, therefore, that as the object of the present investigation was to assist in clinical work, the comparisons should be based on the relative number of positive and negative reactions. The criteria adopted in considering a reaction positive with either substance are given above.

A total number of 119 persons were tested with old tuberculin and PPD at comparable sites on each forearm. 114 were adult patients at the Clare Hall Sanatorium, Middlesex, all of whom except three suffered, or had recently suffered, from active pulmonary tuberculosis, the remaining five belonged to the domestic staff, and were healthy (three of them proved negative to all dilutions of both substances). All the results were read after twenty-four, forty-eight, and seventy-two hours, and the reactions were carefully measured. The subjects were injected first with the highest dilutions—namely, 1 in 10,000 of each preparation. If the tests were negative or doubtful they were repeated with the next stronger dilution. The results are as follows:

TABLE I—Summary of Tests with Purified Protein Derivative and Old Tuberculin

	Dilutions		
	1 in 10 000	1 in 1 000	1 in 100
PPD - O.T. -	26 patients	7 patients	4 patients†
PPD - O.T. -	63	24	2
PPD - O.T. -	29	1	0
PPD - O.T. +	1	0	0

\* Some of the tests with 1 in 10 000 that were only just positive were repeated with 1 in 1 000.

† Three of these persons belonged to the domestic staff, the fourth was a tuberculous patient who died two days later.

TABLE II—Variation of Readings (48 and 72 Hours)

Negative at 48 hours positive at 72 hours	{ PPD 3 patients O.T. 7
Positive at 48 hours negative at 72 hours	{ PPD 3 O.T. 4

Note.—In each of these four groups were tests with both the 1 in 10 000 and the 1 in 1 000 dilutions.

An appreciably greater percentage of positive reactions is obtained with PPD than with old tuberculin (Table I). A few reactions did not appear till seventy-two hours after the injections (Table II), and, with both old tuberculin and PPD, reactions occasionally occurred at twenty-four and forty-eight hours, which disappeared twenty-four hours later.

#### TESTS BY A. T. DOIG, G. GEMMILL AND J. S. WESTWATER

In the present investigation we adopted the following minimum standard to be accepted as a positive reaction: an erythema of at least 10 mm or an infiltration of at least 5 mm, in either case persisting for forty-eight hours. Reactions less than that were considered negative. We consider it would not be safe to accept a simple erythema under 10 mm as a positive reaction without confirming the result by using a stronger dilution. It

should be noted that it is rare to have a 5 mm infiltration without some surrounding erythema

By taking the forty eight hour reading any transient erythema arising from needle trauma is excluded as this does not last longer than twenty four hours. In this section of the work the forty eight-hour reading being usually the maximum was taken as the standard for comparison of the two tuberculins and the mean diameter was recorded in millimetres. In order to allow for errors of technique it was decided to regard as equal those reactions in which the mean diameter of the larger did not exceed that of the smaller by more than 25 per cent.\*

A total of 302 subjects have been tested the majority in the course of routine diagnostic work on children and adults. Of these 241 can be considered adequately tested—that is negative reactions were checked up to the 1 in 100 dilution—and 228 reacted to either or both forms of tuberculin.

In Table III the results are compared by measurement of the mean diameter. In 60.1 per cent the reactions were equal in 27.2 per cent the reaction with PPD was the

greater, the indication of greater potency of the dilution of PPD is repeated.

It is important to note that despite the allowance of 25 per cent in measuring the reactions to cover experimental error there is considerable divergence in the results showing that if the Mantoux technique is to be used as a means of standardization it is necessary that tests be made on considerable numbers of patients before any reasonable assessment of potency can be made. Maden and Holm (1935) consider the intracutaneous test in humans a method of standardization preferable to test in the sensitized guinea pig. The necessity for a large series however has to be met. Multiple tests on the one subject have obvious objections although Philip (1930) considered it a practical method using serial dilutions with the cutaneous (Pirquet) technique.

The reactions obtained from PPD are similar in character to the response to old tuberculin. They could not be said to be more clear cut and easier to interpret.

#### (b) Mantoux Tests. Additional Investigations The Stability of Old Tuberculin

1 TESTS BY G. GREGORY KAYNE

On the basis of tests on guinea pigs Parish and Okell (1929) and Okell (1930) found that dilutions (1 in 100 to 1 in 4000) of old tuberculin in saline had lost about 40 per cent of their potency after three months' storage at 4°C at room temperature or at 37°C. As a working rule they consider that sterile dilutions of old tuberculin in saline may safely be used even after being kept for one month at room temperature. Douglas and Hurtle (1934) detected no loss of activity when dilutions of international standard old tuberculin in 0.5 per cent phenol saline were stored at 2°C and at room temperature for fifty-three days. Deterioration was observed however when they were stored at 37°C for fifty-three days.

The opinion is commonly expressed nevertheless that dilutions of old tuberculin should not be used when more than two weeks old. Mantoux tests in human subjects were therefore carried out to investigate this statement and a test made of the stability of dilutions of international standard old tuberculin in 0.5 per cent phenol saline kept at various temperatures.

The different dilutions were used orally—that is they were labelled with symbols at the Wellcome Laboratories and the key was supplied to me later. This procedure is necessary so as to avoid the influence of preconceived ideas in reading reactions that are not sharply outlined. Since as many as four injections were made on one arm the order in which dilutions were injected in each patient was varied to obviate the possible influence of the texture of the skin. Readings were taken at forty-eight and seventy-two hours and for these investigations a dilution of 1 in 10,000 was used.

The results are shown in Tables V and VI.

TABLE V—Three Dilutions of Old Tuberculin kept in the Ice-chest 9 Weeks, 7 Weeks and 5 Weeks respectively and a Dilution Prepared the Day it is Used

Readings	Results (Number of Positive Reactions)			
	Fresh	5 weeks old	7 weeks old	9 weeks old
At 48 hours	15	15	17	17
At 72 hours (19 patients only read)	15	17	15	17

Allowing for some experimental error in reading, there appears to be no deterioration of the tuberculin even after nine weeks at 4°C.

TABLE III—Comparison of Purified Protein Derivative and Old Tuberculin by Measurement of the Mean Diameter of Reactions

Comparison of Mean Diameter	Dilution						Total	Per Cent	
	1 10 000			1 1 000					1 100
	A 1 D	G G	J S W	A 1 D	G G	J S W	A 1 D	G G	J S W
PPD = OT	44	23	19	14	20	3	7	2	-
P.P.D > OT	25	15	3	10	6	-	2	1	-
† PPD < OT	11	4	4	5	2	2	1	-	-
	Total						228	100	

\* Includes 24 cases in which reaction to PPD was positive and to OT negative.

† Includes 5 cases in which reaction to PPD was negative and to OT positive.

greater while in 12.7 per cent it was smaller than the response to old tuberculin. This would suggest that the dilutions of PPD were slightly more potent as they appeared to be in tests on guinea pigs. The possibility of the greater stability of PPD being a factor in eliciting a stronger reaction must be borne in mind although the care taken to use the dilution of the old tuberculin within three weeks of preparation was considered to eliminate this

TABLE IV—Comparison of Purified Protein Derivative and Old Tuberculin by Incidence of Positive and Negative Reactions

Reactions	ATD	GG	J.S.W.	Total	Per Cent
PPD + OT +	97	64	35	196	86.0
PPD - OT -	19	7	—	26	11.4
PPD - OT +	3	2	1	6	2.6
	Total			228	100

factor and Kayne's and Doig's observations (given below) confirm this view. In Table IV comparing the tuberculins simply by the incidence of negative and positive

\* Twenty-three subjects were injected by one of us (G.G.) in both arms at comparable sites with the same material taken from the same batch—namely 0.1 ccm of PPD diluted 1 in 1000 or for some tests 1 in 10,000. The difference in the mean diameter of the individual reactions on both arms was usually 2 mm or less the extreme difference being 6 mm in one comparison. The mean of the mean diameters of all the reactions on right and left arms respectively were almost identical—namely 22.4 and 22.6 mm. These results suggest that the margin of error—namely 25 per cent difference—was adequate which was taken into consideration for the comparison of PPD and old tuberculin.

TABLE VI—Four Dilutions of Old Tuberculin kept at Room Temperature (22° C) for 11 Weeks at 37° C for 11 Weeks at Room Temperature for 7 Weeks and at 37° C for 7 Weeks Respectively

Results (Number of Positives)					
Patients Read	At 48 Hours		Patients Read	At 72 Hours	
	Fresh	11 weeks 22° C		Fresh	11 weeks 22° C
20	14 (70%)	10 (50%)	20	16 (80%)	9 (45%)
26	Fresh 18 (70%)	11 weeks 37° C 9 (35%)	26	Fresh 17 (65%)	11 weeks 37° C 11 (42%)
23	Fresh 17 (74%)	7 weeks 22° C 14 (61%)	22	Fresh 12 (54%)	7 weeks 22° C 12 (54%)
22	Fresh 16 (73%)	7 weeks 37° C 12 (54%)	21	Fresh 15 (71%)	7 weeks 37° C 12 (57%)

Since I consider the reading at seventy-two hours should be the one adopted for the Mantoux test, it appears that there is no deterioration of the tuberculin kept for seven weeks at room temperature, but definite deterioration occurs if kept for this period at 37° C. After eleven weeks there is definite deterioration if the tuberculin is kept at either of these temperatures.

In conclusion, the common opinion that dilutions kept for two weeks should not be used errs very much on the side of caution. Dilutions may be employed with safety up to six weeks, at all events if kept at room temperature, and for nine weeks if kept in an ice chest.

## 2 TESTS BY A. T. DOIG

On the lines described above a test was made of the stability of 1 in 10,000 dilutions of old tuberculin kept at 4° C for four weeks and for eleven weeks. The injections were made about the middle of the forearm (one on the right arm and two on the left), and in the same order on each patient. The skin in the elbow and wrist regions was avoided, but otherwise possible differences in the texture of the skin were disregarded.

Twenty-six patients were tested, of whom four did not react to any of the dilutions. The readings, taken at forty-eight hours, were

1 in 10,000 dilution OT	3 days old	21 positive (1 doubtful)
	4 weeks old	22
	11 weeks	21

It is therefore concluded that old tuberculin, even in dilutions of 1 in 10,000 is a considerably more stable substance than is commonly believed, and storage for as long as eleven weeks at 4° C causes little appreciable loss of potency.

## Experiment to Test the Accuracy of the Mantoux Test with Old Tuberculin

BY G. GREGORY KAYNE

When one of the dilutions investigated was 1 in 10,000 of international standard old tuberculin a 40 per cent difference in potency between two dilutions was barely detectable, although a 60 per cent difference had an appreciable influence on the number of positive reactions obtained (Table VII).

The differences in potency shown in the table suggest that we should examine once again the results of the Mantoux tests with PPD and old tuberculin presented earlier in this paper. It will be remembered that the dilutions of the two preparations supplied from the Wellcome Laboratories were about equal in potency on intracutaneous tests in guinea pigs; differences in the size of

the reactions were trifling, PPD appearing to be the stronger only on the most sensitive animals.

TABLE VII—Four Dilutions of Old Tuberculin 1/10,000 1/12,500 1/16,600 and 1/25,000 Corresponding to 100 per cent 80 per cent 60 per cent and 40 per cent of a Dilution of 1 in 10,000

	Results (Number of Positives) in 24 patients			
	100%	80%	60%	40%
At 48 hours	16	18	17	13
At 72 hours	19	19	17	12

It is perhaps worthy of comment that few tuberculous guinea-pigs are sensitive to 1 in 10,000 dilutions of tuberculin, whereas many patients in sanatoria give large positive reactions to this dilution.

We are indebted to Dr. J. W. Trevan for the following statistical note.

The experiments on guinea-pigs recorded earlier in this paper show a distribution which would, I calculate, occur by accident about eight times in a hundred trials on groups of forty-six guinea-pigs. Any difference between PPD and OT for the guinea pig is therefore not large enough to be established by the use of forty-six guinea-pigs with the degree of probability that is usually taken as significant, but the results are suggestive.

The experiments recorded in Table III (228 patients), whether the total or only the 1 in 10,000 dilution figures are used, give a highly significant excess of PPD > OT over PPD < OT. It can be taken as established that PPD in the doses used is more potent than OT. This is borne out by Table I (119 patients) and Table IV.

But it cannot be established that PPD is more potent than OT for man when given in doses which are identical on guinea-pigs, for there are more observations on man. It must not be assumed that since the differences in man are highly significant whereas those on the guinea pig are not significant by the ordinary criterion, there is a real difference between the relative potencies on man and on the guinea pig. Further multiplication of tests on the guinea pig might quite well result in the establishment of a significant difference between the dilution doses of PPD and OT used for that animal.

## Summary and Conclusions

1 Attention is directed to purified protein derivative (PPD) as the most suitable reagent for the Mantoux test. It is the active principle isolated in a pure state as a dry powder from a synthetic medium old tuberculin. It corresponds to Seibert's SOTT (synthetic medium old tuberculin trichloroacetic-acid-precipitated). It is almost invariably of constant potency on a weight basis, is very stable in the dry state, and is of a non-sensitizing nature. It is therefore particularly suitable for use in large scale surveys where uniformity in the amount of the active principle injected is essential.

2 'Dried dilutions' which are likewise of uniform potency and quite stable can also be prepared from PPD. As a precautionary measure the potency of these dried dilutions is checked from time to time against the international standard old tuberculin, the intracutaneous test in the tuberculous guinea pig being used for the comparisons. On no occasion has any variation been observed from the calculated potency. The dried dilutions may be redissolved easily and quickly in a suitable borate buffer solution immediately before use.

3 A series of dried dilutions of PPD have been compared with corresponding dilutions of international

standard old tuberculin by means of the Mantoux test the two tuberculins having been titrated previously on sensitive guinea pigs. On intracutaneous test in a large number of guinea pigs the preparations were almost equal in potency, only the most sensitive animals indicating that the dried dilutions were a trifle stronger.

4 The reactions obtained with PPD were very similar in character to the response with old tuberculin both in guinea-pigs and in human subjects.

5 Clinical comparison both by measurement and by the relative number of positive and negative reactions obtained indicated that the PPD was slightly more potent than the old tuberculin a fact that was only evident on the most sensitive guinea pigs.

6 The results of the four clinical workers suggest that if the Mantoux test were to be used as a method of comparing the potency of two tuberculins it would be necessary to have observations on a large number of patients before any conclusion could be drawn. There would appear to be no advantage in using human subjects instead of guinea pigs for the titration of old tuberculin.

7 In practice the deterioration of dilutions of old tuberculin in phenol saline is not sufficient to prevent their use for Mantoux tests if they have been kept up to six weeks at room temperature or nine weeks in the ice chest. Dried dilutions of PPD are much more stable and have shown no detectable loss in potency after three years at room temperature.

Our grateful acknowledgments are due to Drs M. L. Berv F. R. G. Heaf L. E. Houghton J. Johnstone R. A. O'Brien F. A. H. Simmonds and J. W. Trevan.

# REFERENCES

- Aronson J. D. (1934) *Amer. Rev. Tuberc. Suppl.* 30, 727.  
— and Nicholas R. V. (1933) *J. Immunol.* 25, 282.  
Davis L. J. and Guzzard J. S. (1935) *J. Hyg., Camb.* 35, 300.  
Douglas S. R. and Harvie P. (1934) *Tubercle* 16, 105.  
Hart P. D. A. (1932) *Med. Res. Cncl. Spec. Rep. Ser.* 164, 47.  
London.  
Kavne G. G. (1936) *Brit. J. Child Dis.* 33, 20.  
Long E. R. (1934) *Amer. Rev. Tuberc. Suppl.* 30, 77.  
— and Seibert F. B. (1926) *Amer. Rev. Tuberc.* 13, 9.  
Madsen T. and Holm J. (1935) *Quart. Bull. Hlth. Org. L. O. N.* 4, 475.  
Okell C. C. (1930) *Med. Res. Cncl. System of Bact.* 5, 703.  
London.  
— and Parsh H. J. (1927) *Brit. J. exp. Path.* 8, 170.  
Parsh H. J. and O'Brien R. A. (1935) *British Medical Journal* 1, 1018.  
— and Okell C. C. (1929) *J. Path. Bact.* 32, 21.  
Philip R. W., McKendrick A. G., Beattie R. S., Kerrack W. O. and Stewart D. (1930) *J. Hyg., Camb.* 30, 221.  
Quigley J. J. (1935) *Amer. J. Hyg.* 20, 218.  
Reichel J. and Clark L. T. (1934) *Amer. Rev. Tuberc. Suppl.* 30, 721.  
Seibert F. B. (1925) *Amer. Rev. Tuberc.* 17, 402.  
— (1932) *Ibid.* 25, 724.  
— (1931) *Trans. Nat. Tuberc. Ass.* 29th Ann. Mtg. p. 16.  
New York.  
— (1934) *Amer. Rev. Tuberc.* 30, 713.

W. Knoll (*Med. Klinik*, April 8 1938, p. 464) has followed up the life history of 880 Oxford and Cambridge Blues and refutes the theory that as a rule they die before the age of 50 as a result of the severe strain on the heart during the training period. Of the 880 investigated 27.5 per cent took part in one inter-university boat race 29.7 per cent in two 24.5 per cent in three 14.5 per cent in four and 4 per cent in more than four races. A statistical survey shows that by 1929 five-eighths of all the living participants in the races were above the age of 50 the average age being 61 years and many having reached the age of 70 and over. Of 155 deaths eight were due to infective diseases, seventeen to tropical diseases, twelve to accidents and forty-five died in the war, thus the mortality from natural causes was 81 per cent which figure is relatively low.

## THE CAUSES OF HAEMORRHAGE FROM THE RECTUM\*

BY

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Visible blood may be passed per anum under a variety of circumstances and from many different causes. Such an occurrence is always alarming to the person concerned and the medical attendant will at once be called upon to give a reason for it and reassure the patient as to its meaning. It will be necessary to account for the bleeding at once or at least to arrange for some examination to be made which will reveal the cause. While it is advisable to reassure the patient, it is never safe to tell him or her that a little bleeding is of no serious consequence and to treat it by ordering a few supportive remedies. Such guesswork methods are dangerous to the patient's well being and to the doctor's reputation. It is therefore of some importance to consider the various causes of the haemorrhage and how the source and reason for the bleeding may best be ascertained.

Naturally a large haemorrhage will give rise to much more alarm than a small one, but it does not follow that the former condition is the more serious or has the gravest significance. Any bleeding, whether small in quantity or not, calls for immediate attention and should never be neglected as not infrequently very slight intermittent bleeding is the first sign of a malignant growth somewhere in the intestinal tract, nor is it safe to assume that because the patient is quite a young person malignant disease can be ruled out. I have seen a child of 8 years with carcinoma of the rectum and although the condition is rare under the age of 40 there are quite enough cases to make us very cautious.

It is a curious and not unimportant fact that patients who have suffered for some months from what they describe as slight bleeding at stool often exhibit a much more serious degree of anaemia than those who have had one large haemorrhage. The probable reason for this is that patients are prone to attach much more importance to small, often repeated bleedings than to a single severe one.

### Internal Piles

The commonest cause of haemorrhage from the rectum is unquestionably internal piles and this probably accounts for quite two-thirds of all the cases of bleeding from the rectum. I have seen patients who as the result of frequent haemorrhages due to piles have been blood white and whose blood count had been reduced to under 3,000,000 red cells per cmm. Not long ago I had in this hospital a patient with internal piles who was a professional pugilist. He had been bleeding at stool for over a year and he was so reduced by it that he could hardly walk across a room without feeling faint. His hair was a greenish white and his red cell count was under 3,000,000 per cmm. Before operating for the piles it was necessary to transfuse him with human blood. But such severe anaemia is unusual as the result of piles.

Bleeding due to piles can generally be recognized because a simple examination of the rectum with a speculum will reveal the presence of small prolapsing internal piles and also because the characteristic form of bleeding is for the blood to drip or squirt after the bowel

\* A Postgraduate Lecture given at St. Mark's Hospital on March 10 1938.



has been relieved. It is well to remember that the presence of internal piles does not exclude the possibility of a carcinoma higher up the bowel.

#### Carcinoma

The next commonest cause of bleeding from the rectum is carcinoma. When the blood is coming from a growth in the rectum or colon it is generally mixed up with the stool instead of being passed after it, as is usual with piles, so that the evacuations are red or brown from the presence of blood. The amount of blood, as a rule, is not considerable and often it is present only intermittently. It occasionally happens that a sudden and very severe rectal haemorrhage is the first symptom of a growth in the rectum or colon. When this occurs it is due to the growth having ulcerated into a small artery. I have known several such cases but they form only a very slight proportion of the total cases of carcinoma of the large bowel.

The diagnosis is as a rule readily established if a finger is passed well up into the rectum. Quite 80 per cent of rectal growths occur within reach of the finger, especially if the patient is examined bimanually. If nothing is felt an early examination with the sigmoidoscope should be made. It is hardly necessary to stress the paramount importance of diagnosing a growth in the bowel at the earliest possible moment, when alone a satisfactory chance of curing the patient by operation exists—a chance which will be seriously jeopardized by a delay of some weeks or months. In diagnosing the cause of the bleeding, therefore, the first requisite is to eliminate the possibility of a growth in the rectum or sigmoid, and the only way to do this is by making a careful digital and sigmoidoscopic examination of the rectum. I often find that patients have been examined by means of a barium enema and radiographs when a simple digital investigation of the rectum would have revealed the lesion. An x-ray examination should only be ordered after a digital and sigmoidoscopic examination has given negative results.

Apart from carcinoma of the rectum, an innocent adenoma will cause haemorrhage. The amount and frequency of the bleeding may be quite considerable if the adenoma is a large one. These adenomata can usually be felt by the examining finger, but as they often are soft and velvety they may be missed by those who are not accustomed to examining the rectum. They can, however, be very easily seen if a speculum is passed. They should always be freely removed, as there is grave risk of their becoming malignant. They should be looked upon as a precancerous condition.

#### Peptic Ulcer

Haemorrhage due to a bleeding duodenal ulcer, as is well known generally results in tarry stools or melaena, owing to partial digestion of the blood on its way down the alimentary tract. When, however, the bleeding is very copious, or occurs rapidly, and the bowel is not loaded, the blood may be seen in the stool as bright fresh blood, similar to that which is present when the source of bleeding is in the rectum or lower colon. This is rather confusing, as in the absence of very definite symptoms of duodenal ulcer the source of the blood may be unsuspected. I have known this happen on several occasions, and in one case it was some time before it was realized that the patient was bleeding from a duodenal ulcer and not from his large bowel.

A very rare and obscure cause of rectal haemorrhage is a peptic ulcer in a Meckel's diverticulum.

A few years ago a girl aged 15 was sent to me from South Africa for treatment. The history was that since the age of

6 she had been liable to sudden and very severe haemorrhages from the rectum. In three of the attacks she had nearly died, and on five occasions it had been necessary to give transfusions. Beyond the bleeding there were no symptoms at all. Most careful examination and x-ray investigation had entirely failed to reveal any cause for the condition, and except for a secondary anaemia her blood picture was normal. I was quite unable to make a diagnosis, and finally decided to explore her abdomen. I then discovered a Meckel's diverticulum five inches long with a peptic ulcer at the end of it. I removed this, and since then she has had no further bleeding.

Cobb (1936) collected 100 cases of peptic ulcer in a Meckel's diverticulum. Of these, seventy one had haemorrhage, and in nearly half the cases there was no other symptom. In cases where there are repeated attacks of profuse rectal haemorrhage, especially in young persons, the presence of a peptic ulcer in a Meckel's diverticulum should be suspected. It is usually impossible to demonstrate the diverticulum by radiographs, but this was achieved in one of the cases described by Cobb.

#### Angioma of the Rectum or Sigmoid

This curious condition is congenital, and resembles a cirroid aneurysm of the skin or a cavernous naevus. The wall of the rectum and colon is occupied by a mass of huge blood vessels just beneath the mucous membrane. These enlarged vessels may be arteries or veins, or a combination of both.

In a case which I have under my care at the present time some of the vessels when looked at through the sigmoidoscope are as large as the aorta, and can be seen pulsating. The angioma in this patient starts about four and a half inches up the rectum and extends for fifteen inches almost to the descending colon. This patient had to have an abdominal section, and I thus had the opportunity of examining the bowel from the abdominal aspect. The engorged blood vessels in the affected portion of the colon made the tissue quite firm and stiff, like erectile tissue and this applied also to the mesentery, which consisted of masses of enormous blood vessels.

This patient is now over 60 years of age, but all his life he has suffered from occasional severe haemorrhages.

There are some twelve of such cases on record, and most of them resulted in death from bleeding. One patient, whom I attended for some years, eventually died in Paris from a sudden severe haemorrhage. The condition is not one which lends itself to surgical treatment. The great size and number of the feeding vessels preclude the possibility of excising the affected portion of bowel.

#### Local Injury

A few years ago I was consulted by a lady, 60 years of age, who had a sudden rectal haemorrhage while in apparently good health. During the following twelve hours the bleeding was continuous and she lost over two pints of blood. On examination nothing could be found, except that the lower bowel was full of blood clots and fresh blood was still coming away. The patient was put to bed and treated with cold rectal douches containing hazeline and the administration of morphine. This stopped the bleeding, or at any rate considerably diminished it and next day after washing out the bowel I was able to make a thorough examination with a sigmoidoscope. I then saw that there was a small cut about a quarter of an inch long in the wall some two and a half inches up the rectum. This cut had partly divided a small artery which could be seen pumping when the clot was removed. The bleeding was stopped by cauterizing the bleeding spot and there was no further trouble.

It subsequently transpired that this lady had swallowed some broken pieces of china a fortnight previously and I have no doubt that a fine chip had cut the mucous membrane.

I have also seen bleeding from the rectum due to injury resulting from a man breaking a shooting stick while out shooting pheasants and impaling himself on the lower broken end. The haemorrhage in this case was much less important than the question of damage to the bladder and peritonum. Although the broken shooting stick had gone into the rectum for six inches or so the peritonum was not injured but the back of the bladder was torn. The patient was fortunate enough to survive this injury.

Haemorrhage from the rectum may of course complicate operations upon the rectum and this I shall refer to again later.

### Ulcerative and Haemorrhagic Colitis

Ulcerative colitis or proctitis may cause serious bleeding but as a rule the septicaemic condition quite overshadows the bleeding. A blood count should always be made from time to time as any considerable degree of anaemia is certain to prejudice the patient's chances of recovery and should be corrected by transfusion.

Haemorrhagic colitis causes very serious bleeding and in this condition the bleeding is the chief symptom. The aetiology of this variety of colitis is still uncertain many people believe it to be a form of ulcerative colitis but in typical cases there is no ulceration and my own opinion is that it resembles pellagra of the skin without its characteristic blood picture. The great majority of the sufferers are young adolescent women in whom the condition appears intermittently often over many years.

One patient of mine who was married and had one child lived in a garden suburb on the outskirts of London. One evening her husband returned home to find a large pool of blood just outside the front door and a trail of blood all along the passage inside the house. He not unnaturally thought that his wife had been seriously injured or even murdered but on reaching the kitchen he found her cooking the dinner. She was standing in a pool of blood but was unaware of the fact.

Although the bleeding in these cases may be very considerable it is seldom really serious and I have never heard of a fatal case. Rest in bed and hypodermic injections of thrombokinase in the shape of haemoplastin or one of the other similar preparations usually soon control the bleeding. Recurrences are common however and until we know more about the aetiology of the condition we can do little to prevent them. It is usual to administer calcium in these cases but there is some doubt about the efficacy of this treatment.

### High Blood Pressure

Bleeding from the rectum may occur in persons with very high blood pressure and may be profuse. The bleeding almost certainly comes from a vein in the rectum or colon that has ruptured. I have seen several such cases where the patient had had a really severe haemorrhage but when subsequently examined with the sigmoidoscope the source of the bleeding could not be determined accurately. In one patient an elderly lady the blood pressure previous to the haemorrhage was as high as 260 mm Hg and there were signs of hardened arteries.

The haemorrhage in such cases is beneficial rather than otherwise and if the cause is known the patient should be treated by occasional venesection when the pressure gets high instead of being allowed to bleed vicariously from the bowel. When a sudden and severe haemorrhage has occurred in an elderly subject this cause should be considered and the blood pressure taken. Naturally after

the haemorrhage the blood pressure will have been considerably reduced so that it is important to ascertain it possible what it was before the haemorrhage.

A case is reported by Elgood (1930) of a woman who had profuse haemorrhage from the rectum resulting from an extra uterine pregnancy having ruptured into the lower end of the colon.

A cause of rectal bleeding which is very uncommon in this country but common enough in Egypt is infection with the parasite *Bilharzia haematobia*. There are two varieties of this parasite in one case the ova perforate into the bladder and cause haematuria but in the other they perforate the rectal mucosa and cause rectal haemorrhage. I have seen two such cases in England. An examination with the sigmoidoscope reveals numerous minute haemorrhagic ulcers in the mucous membrane and if one is fortunate the characteristic parasites can be recovered from scrapings from these ulcers. The only treatment is by means of tartar emetic injections. In Egypt such cases are very common and at times the rectum becomes a mass of granular material.

### Methods of Controlling Rectal Haemorrhage

Haemorrhage from the rectum is a complication which may follow any operation upon the rectum and it happens in about 1 per cent of cases after all such operations. The most common time for a haemorrhage is about the eighth day after operation. It is essential that anyone who is going to look after rectal operation cases should know how to control the bleeding as it always occurs unexpectedly and the necessity for immediate attention will be urgent.

The first thing to do when bleeding of any consequence is noticed is to pass a short piece of rubber tubing about three eighths of an inch in diameter and three or four inches long through the anus. The tube should have a safety-pin or a piece of thread through the outer end to prevent it slipping entirely into the rectum. If the bleeding is coming from some small vessel this simple procedure will generally stop it and if the bleeding is more serious the tube will allow the blood to escape and not accumulate in the rectum. In other words the tube will prevent a concealed haemorrhage. If the bleeding restarts after a few minutes it is clear that it is not under proper control and the surgeon should proceed to pack the lower end of the rectum. As a rule this can quite well be managed without an anaesthetic if done by the following method. A piece of rubber tube about six inches long and three eighths of an inch in diameter is taken and a thin strip of dry gauze about an inch wide is wrapped tightly round one end in a figure of 8 so as to form a bulge. This should be just small enough to be pushed through a tubular speculum. The speculum is well greased and is passed into the rectum. The tube with the bulge at one end is then pushed through the speculum until the bulge is above the speculum and the latter can be removed. The bulge of gauze on the tube will now be in the rectum and the end of the tube protruding from the anus. When the tube has been drawn down as far as it will come a large safety pin is put through it about one inch from the anal opening. A long strip of gauze is then wrapped round the tube outside the anus but inside the safety pin. As the wrapping increases it will tend to pull the gauze bulge on the other end of the tube hard down against the bleeding point and if properly done this will at once stop the bleeding. The plug should be left in place for forty-eight hours the patient being given morphine if he feels much

discomfort Should the bleeding restart it will at once be evident, as fresh blood will come through the tube

Another way to stop bleeding is this Cut off the finger of a rubber glove and after passing the end into the rectum, plug gauze into the open end so as to well distend the closed end inside the rectum To prevent the plug slipping in a safety-pin and a roll of gauze are used outside the anus The tube method is the more satisfactory as the glove finger is apt to tear If a plug such as this fails to control the bleeding the patient should be given an anaesthetic and when all the blood has been douched away the bleeding-point can be looked for with a speculum It is generally very difficult, or impossible, to pick up the vessel satisfactorily, and it is better to plug the rectum properly with a gauze plug and tube of suitable size

## REFERENCES

- Cobb D B (1936) *Ann Surg* 103, 747  
 Elgood J (1930) *British Medical Journal* 2 903

## OBSERVATIONS ON THE DYSENTERIC CONDITIONS AMONG EUROPEANS OF CALCUTTA

BY

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Acton and Knowles (1928) observed 'Chronic and relapsing dysentery we believe to be matters of very serious concern to the large European business firms in Calcutta Although very few deaths from dysentery occur among them, the disease causes a tremendous amount of sickness in that community, and it is responsible for much invalidation and repeated and often prolonged absence from duty We also believe that dysentery is a very important cause of sickness among the general European community in India' In consideration of the importance of the subject we here record some facts which we have come across during our routine diagnostic laboratory work from 1930 to July, 1937

All the materials for study were obtained from Europeans who were either residents of Calcutta or worked in various commercial firms and Government departments Most of the specimens were collected and sent to us but some of the patients personally attended and passed their stool in the laboratory As a rule the specimens were examined within a reasonably short time of being passed, except when this was not possible owing to unavoidable reasons

### The Careful Examination of Stools

Before giving the details of our observations we would like to make a few remarks about our experiences in the course of these examinations The first thing is with regard to the occurrence of amoeba infection This parasite is sometimes encountered in specimens where the physician has hardly any suspicion of it and in which the appearance of the stool is not in the least suggestive of such infection Some symptoms of dyspepsia, vague

unaccountable pain in the abdomen, occasionally more severe before or during passage of a stool, liquid loose stools without obvious cause, pain in the liver with some degree of enlargement of the organ, a low grade pyrexia of unknown origin, and even loss of flesh and strength, are some of the conditions for which an investigation of the stool had been suggested, and often we were amply rewarded by discovering the parasites in their active vegetative forms Another point we would like to emphasize is the tenacity with which these parasites persist in the alimentary tracts of many persons We had had occasion to follow up some cases in which *Entamoeba histolytica* could be found in the stools at any time during the course of seven years The patients reported that whenever they took a course of treatment they felt better and remained well for some time, but any digestive upset or exposure to chill caused a return of some of the symptoms, and it was at this stage that the parasites always made their appearance We may remark in this connexion that the character of the stool was often misleading These parasites had on many occasions been seen in specimens which could easily have been passed as well formed, hard, and to all intents and purposes perfectly innocent-looking A cursory examination of the material showed nothing, but when the specimen was very carefully inspected tiny shreds of mucus were found on the surface, and these contained a great number of the parasites In the same way the examination of a specimen after the patient had taken a saline purgative was more often attended with positive results It is no doubt well known that delay is frequently responsible for many negative findings, but we would lay particular

TABLE I—Showing the Findings in All Cases and Both Sexes

	Number of Cases per Year								Total No	Per cent age
	1930	1931	1932	1933	1934	1935	1936	1937		
Non dysenteric	19	21	40	65	83	49	100	18	395	78.8
B. Flexneri	0	37	44	21	43	12	0	0	157	11.5
B. Citrinus	0	10	12	21	16	6	0	0	65	4.7
B. Shigae	2	4	6	2	1	1	2	0	18	1.3
B. Flexneri	10	28	37	34	45	16	18	10	198	14.4
B. Morganii	2	4	3	6	4	5	6	2	32	2.3
B. Sonnei	0	0	1	0	0	0	0	0	1	0.07
Ps. Procyanea	1	0	2	1	0	0	3	0	7	0.5
Shig. 1 and Flexner Comb	0	0	1	0	0	0	0	0	1	0.07
Entamoeba Histolytica Vegetative	2	10	18	15	28	14	12	8	107	7.7
Entamoeba Histolytica Cystic	0	2	3	6	11	0	2	0	24	1.7
Vegetative and Cystic Comb Histolytica	0	0	1	0	3	0	2	2	8	0.6
Trichuris Trichiura	0	0	0	0	0	1	0	0	1	0.07
Ascaris	0	0	0	0	0	1	1	0	2	0.14
Ankylostoma	0	0	0	0	0	1	0	0	1	0.07
Tapeworm	0	0	0	0	0	1	1	0	2	0.14
Strongyloides	0	0	0	0	0	0	2	0	2	0.14
Trichomonas	0	0	0	0	1	0	0	0	1	0.07
Giardia	1	0	0	0	5	3	8	5	22	1.6
Other Protozoa	0	3	3	0	0	3	6	4	19	1.4
Charcot Leyden Crystals	0	0	0	0	0	1	6	4	11	0.8
Non specific	14	28	67	57	78	45	37	13	47	3.5
Amoebic and Bacillary Comb	0	1	3	3	0	0	0	1	5	0.4
Totals	50	140	226	220	309	164	204	67	1130	



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# DYSENTERY IN EUROPEANS OF CALCUTTA

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Western countries. He further notes however, that in industrial centres, with their associated overcrowding, there are always a certain number of cases. In Calcutta the Europeans live as a group by themselves, isolated from the general population. The latter are confined to the northern portion of the city, from which the European residential quarters are separated by the office quarters, where people collect only during working hours. In the European quarters the municipal authorities have provided underground dustbins and refuse pits, which are kept covered. With regard to the possible dissemination by flies and to the dysenteric infections coinciding with rainfall our curves of incidence for the dry and the monsoon months tell a different story.

Examination of the chart shows that, with regard to the amoebic infections, the highest peak of course is in August but the incidence in the drier seasons is quite high too, and it will be noted that the other high peaks, excepting those of August and July, occur in the months of February, March, May, and October, all of which are dry periods with the lowest rainfall. On the other hand we find a very low incidence in September, a month which would be expected to provide the highest figures, as it corresponds to the end of the monsoons in Bengal.

With respect to the incidence of bacillary infection the curve in the chart tells the same story—namely, that the highest incidence does not always follow the periods with the highest rainfall. The highest peak is in April and the next highest is in January. So, taking all these factors into consideration we might reasonably conclude that the incidence of dysenteric conditions among Europeans in Calcutta does not strictly follow any seasonal variations. Rogers's (1921) figures were from the jail population in India, mainly composed of Indians, with a negligible European element in it, so that the conditions which are responsible for dysentery in the Indian community need not necessarily be the same as with the material we are reviewing.

The people now under consideration were Europeans employed in various commercial and business houses in Calcutta and their families, and resident in that city for fairly long periods. Some of them, of course, go out of the city in their various business pursuits, but we understand that these out-of-station journeys are very few and far between, and for practical purposes they do not alter the conditions.

TABLE III—Showing Sex Incidence and Age Groups

	Amoebic	Bacillary
Children	6	30
Adult Male	96	100
Adult Female	42	102

It is evident from Table III that the number of cases of dysentery in males is not so much in excess as to suggest infection from outside-station areas. It is to be noted, however, that the male population is double that of the female.

It appears from Table II and the chart that the prevalence of the infection is more or less constant with very slight periodic rise and fall, but quite unlike an epidemic curve so it may be supposed that the factors responsible for this disease are constantly present somewhere. It is however needless to point out that if the source could be traced it would go a long way to solve the problem.

From the curative point of view amoebic infection is extremely hard to deal with. The cure of cases of chronic bacillary dysentery is also far from satisfactory. If any light, therefore, could be thrown on the method by which dysenteries spread among the Europeans in Calcutta we might cut the chain of events and thereby arrive at a solution of the problem, moreover, the data thus obtained might be of use in solving the dysentery problem of the country as a whole. *B. melitensis* infection in Malta is a familiar example. When the mode of spread was discovered that disease was stamped out in very little time. Similarly with tuberculosis infection in Western countries by severing the chain of events in the dissemination of the disease this has been brought well under control.

With the same object in view it appeared to us that, taking into consideration the constant prevalence of the infection, the comparatively isolated position of the community, and their standard of life, the personal element—namely, carriers—came uppermost, and that the most likely human factor might be found among the Indian servants and cooks. Another possibility was the green unboiled foodstuff. This latter point required investigation, and we began by periodically collecting green food stuffs from the markets which supply the Europeans here to see if they were dipped in potassium permanganate solution before they are put on the table, but this is never strictly adhered to. That there are carriers among the servants is a very strong possibility, and the scanty evidence that we have been able to collect points towards this conclusion. It appears, from the report of the medical officers attached to the business houses, that cases of dysentery do occur in certain families, and several of them suffer, one after another. Moreover, the worst instances are found in office messes and chummers, where those who are ill invariably contract the same type of infection. Our own endeavour was to investigate the possibility of carriers being present in such isolated foci of infected places, and the few cases we have been able to examine from this angle lend support to this hypothesis.

Before concluding we would like to make a few observations. Acton and Knowles (1928) found the same preponderance of the bacillary infection, and especially the Flexner type, as we encountered. We have included *Ps. pyocyanea*, *Bact. morganii*, *B. carolinus*, and *B. faecalis* in our observations because there are good reasons for believing that they might cause intestinal disorder. In Table I, under the heading "non dysenteric," we have included those cases in which there was no evidence to indicate any abnormal condition of the intestinal tract. Under the heading "non specific" will be found those cases which gave a definite indication of abnormalities of the bowels—namely, mucus, cellular exudate, etc.—but we failed to isolate any of the bacteria included in the chart or any of the amoebae. The association of Charcot-Leyden crystals with amoebiasis seems to be slight, the positive cases of amoebiasis in our series being only 0.8 per cent. In certain cultural examinations of faeces we had the curious experience of seeing a sterile plate even on seventy-two hours' incubation with MacConkey's and bromeresol media, naturally the question of faulty technique arose, but on repeated cultural examinations of other samples from the same patients similar results were obtained. Whether it was due to the presence of a lytic enzyme or an abnormal alteration in the pH of the faeces, or was due to some other factor, we are as yet quite undecided.

### Summary and Conclusion

1 Analyses of 1370 specimens of stools from Europeans resident in Calcutta are recorded

2 The incidence of dysenteric condition—amoebic and bacillary—is noted

3 Possible sources of infection are discussed the probable disseminators seemed to be carriers among the Indian menial staff

4 Although among the Indian population there is a definite seasonal correlation with the disease this was not found to be so in the case of the Calcutta Europeans

5 The association of Charcot-Leyden crystals with amoebiasis could not be found to extend far

Finally we express our grateful thanks to Colonel Vere Hodge professor of medicine Calcutta Medical College Dr G Brandon and his colleagues Drs M C O'Connor and A D Pegg of 21/2 Harrington Street and Lieutenant Colonel A Denham White late civil surgeon of 24 Parganas Bengal for helping us in our work our thanks are also due to the staff of the Pathology Department Medical College Calcutta for giving us every help and to the Director of the All India Institute of Hygiene for supplying us with the numbers of the European population in Calcutta

### BIBLIOGRAPHY

- Acton H W (1918) *Indian J med Res* 6 157  
 — and Knowles R (1925) *Dysenteries of India* 1 S Calcutta  
 Carter H S (1937) *J Path Bact* 45 447  
 Fletcher W and Jepps M W (1924) Report of the Institute for Medical Research Kuala Lumpur No 19 London  
 Gutteridge H S (1913) *J med Sci* 59 608  
 Manson Bahr P H (1912) Report of London School of Tropical Medicine from Topley and Wilson 19 6  
 — (1925) *Manson's Tropical Medicine* 8th ed London  
 Rogers L (1913) *Dysenteries Their Differentiation and Treatment* London  
 — (1921) *Bowel Diseases in the Tropics* London  
 Taylor J F (1919) *Med Res Cncl Spec Rep Ser* No 40 London  
 Topley W C and Wilson G S (1926) *Principles of Bacteriology and Immunity* 19 6

## PREVENTION OF MEASLES IN A CHILDREN'S HOSPITAL

BY

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Measles should no longer be considered a minor infection. It is a major illness causing a considerable mortality and a much greater morbidity among young children affected by it.

The occurrence of measles in a children's ward is a catastrophe as children already ill are exposed to the risk of a second serious illness which they may not be able to overcome. Moreover such an occurrence dislocates the work of the ward and impairs the utility of the hospital. Every effort should therefore be made to prevent the entry of measles into a children's hospital and to check its spread once it has appeared. These objects can best be attained by the system of nursing children in cubicles as by this means it is possible to avoid one child infecting another. In the absence of cubicles the problem which all too often presents itself is how to prevent the disease from spreading among or alternatively to modify its virulence in the children already exposed. In the light of our present knowledge the only measures available are the passive immunization of contacts by one of the following substances (a) serum from patients convalescing from measles (b) serum from adults who have had measles (c) an immune substance (immune

globulin) obtained from the placenta of women who have had measles. Another method sometimes used is to inject whole blood taken from the parents.

During the past winter a considerable number of cases of measles arose in the wards of Alder Hey and Olive Mount Hospitals with the result that it was necessary to immunize many contacts. The substances used for the purpose were (1) serum from adults who have had measles and (2) immune globulin from placental exudate in varying doses. All susceptible contacts were given an immunizing dose as soon as a case of measles was diagnosed in the ward. In practice this meant on the appearance of the rash and there were possibly on the third or fourth day of exposure. The results are tabulated below.

Table showing Results of Immunization with Adult Human Serum and Immune Globulin

Substance used for Immunization	Number of Children					Remarks
	11-15 Days	1-10 Days	0-10 Days	1-10 Days	1-10 Days	
Adult human serum 15 c.c.	1	1	0	13	1	(a) 1 case not immunized (b) 1 case not immunized (c) 1 case not immunized
Placental extract 10 c.c.	0	10	2 (5)	0	0	(b) 1 case not immunized (c) 1 case not immunized
Placental extract 6 c.c.	6	4	9 (1)	19	0	(a) 1 case not immunized (b) 1 case not immunized (c) 1 case not immunized
Placental extract 4 c.c.	12	10	6 (4)	0 (e)	0	(d) 1 case not immunized (e) 1 case not immunized

In assessing the results no attempt has been made to work out a percentage of immunity as in my opinion this tends to convey an impression which may be on the optimistic side. For example one may immunize 100 children and of these only twenty may contract the disease. It is impossible in hospital practice to say with certainty that any or all of the remaining eighty children were actually infected. It is however reasonable to assume that on the average the risk of infection is the same in any one hospital and it is on this basis that comparison should be made.

It will be seen from the above table that the best results were obtained from the use of a 15 c.c. dose of adult human serum or 10 c.c. of immune globulin. Smaller doses of immune globulin did not give the same degree of protection and of the forty-eight children receiving 4 c.c. of that substance twelve did not obtain sufficient immunity to modify the course of the disease. It must be stated here however that no complications or sequelae occurred in these twelve children.

One effect of passive immunization against measles is this method is the prolongation of the incubation period. This is important when quarantining such immunized contacts because one should wait for a certain number of days before admitting other susceptible children to the ward. In considering the cases which developed measles after a period of twenty-one days following the immunization it should be borne in mind that some of these were exposed a second time through contact with children developing a modified form of the disease. We therefore

must face the fact that a child may not be protected against measles even if he has been immunized twelve to fourteen days previous to exposure to infection

As it was thought that the age of the children might have some influence on the results obtained these results were classified as follows

Age	Number Immunized	Number Developing Measles
0-1 year	44	14
1-2 years	88	28
2-3	52	27
3-4	33	12
4-5	19	8
5-6	14	7
Over 6	39	4

Consideration of this table would suggest that the dosage of human serum or immune globulin should not be influenced by age, and that children between 1 and 5 years require a full immunizing dose

While making this investigation it was noticed that the rate of infection tended to be higher in those wards which contained a greater number of children between the ages of 1 and 5 years, although these small children were separated so far as possible and confined to bed in order to avoid intimate contact. It was also noticed that the secondary cases were not always those nearest to the original case. To my mind this suggests that in hospital practice droplet infection is not the sole means by which the infective material is carried from one patient to another, but that the nurses' hands may also be an important medium of conveyance.

A further point of interest to those connected with children's hospitals may lie in the fact that it was not necessary to shut a ward which had become infected with measles. The procedure followed was to remove the case of measles, immunize all susceptible contacts, and use the ward for admission of all cases (preferably older children) who had had the disease previous to admission. Another method employed when more than one ward was infected was to concentrate susceptible and immunized contacts in a single ward, thus freeing the others for 'clean' cases. A third procedure found to be of advantage was to transfer to vacant beds in the infected ward those older children in other wards who had had measles. By these means beds were vacated in clean wards and the hospital could be used to its fullest capacity.

#### Summary and Conclusion

1 From an analysis of different methods of passively immunizing susceptible contacts against measles it is found that the best results are obtained by using the larger doses of immune globulin.

2 Fifteen cubic centimetres of human adult serum and 10 ccm of immune globulin gave approximately the same results.

3 Four cubic centimetres of immune globulin did not modify the disease in some cases.

4 Young children require as large a dose as older children (perhaps larger).

5 Some suggestions are made for the judicious use of beds in infected wards so that the work of the hospital as a whole may not be seriously dislocated.

6 It is suggested that in hospital practice infective material may be conveyed from patient to patient by means other than direct droplet infection.

Finally, no reactions were noted following the injection of immune globulin or human serum.

## Clinical Memoranda

### Tetanus Supervening on Middle-Ear Disease

The following case appears to afford a parallel to that reported in the *Journal* of February 19 by Captain F V Stonham, I.M.S. In his case there was evidence of the introduction of a potentially tetanus-infected medium—namely, dried scum from a stream or dirty powdered cuttlefish—into the discharging meatus. In this case there is no such evidence, but there is direct evidence of an acute exacerbation of chronic otitis media within the incubation period of tetanus, suggesting strongly that the middle ear was the open wound through which accidental infection gained entrance.

#### CASE REPORT

An actress, aged 22, touring small provincial towns in a family troupe, had a history of chronic intermittent discharge from the left ear since childhood. About January 20, 1938—fourteen days before admission to hospital—her left ear became painful and tender. Relief was experienced when a purulent discharge occurred a day or two later. With instillations of hydrogen peroxide the discharge diminished considerably. On January 31 her jaw became stiff, and her dentist, suspecting an impacted molar, removed two molar teeth on the left side. As trismus did not lessen she was referred to Mr C J Macauley, surgeon to this hospital, as a case of tetanus or possibly left-sided parotid abscess.

At 1 p.m. on February 3 she was admitted to this hospital. Temperature 100.6° F, pulse 80, respirations 20. No history of wound or abrasion during the previous three months. Patient lay rather rigidly on her back, but was able to sit up with a little help. Trismus did not allow of the teeth being separated more than half an inch. Neck rigidity present. Spinal, abdominal, and limb muscles showed some hypermetrism, not amounting to rigidity. Tendon reflexes were exaggerated. There were no abnormal eye signs. Palpation of the left mastoid region caused the patient to wince with pain. Tympanic perforation and slight purulent discharge noted.

Consultation with Mr P Dempsey, otologist to the hospital, confirmed the diagnosis of acute suppurative otitis media, and ruled out mastoid involvement or intracranial spread. Trismus and general rigidity increased during the following day, risus sardonicus was noted, and swallowing became somewhat difficult.

Treatment consisted in administration of serum to a total of 140,000 units by the intramuscular route over the first four days. Sodium luminal, 3 grains in 1 ccm, was used twice or thrice daily to prevent spasm, relax rigidity, and secure sleep. The disease ran a relatively mild course and showed definite improvement, until on February 8 signs of bronchopneumonia appeared. The case was transferred to the care of Dr E T Freeman, but despite treatment, which included the free use of an oxygen tent, death supervened on February 12, nine days after admission, from bronchopneumonia and cardiac failure.

#### COMMENTARY

A case of tetanus is reported in which the occurrence of an exacerbation of otitis media during the probable period of infection was a definite feature. In the absence of any other obvious route of infection that of the middle ear must be considered as a probable one. Efforts to establish something more than mere coincidence in this combination may well explain some of the 'idiopathic' cases of tetanus.

I beg to thank Mr C J Macauley for his permission to publish this note.

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# Reviews

## ST THOMAS'S REPORTS

*St Thomas's Hospital Reports* Edited by O L V S De Wesselow C Max Page assisted by N R Barrett J St C Elkington A J Wrigley Second Series Vol II (Pp 271 illustrated 10s) London St Thomas's Hospital 1937

The second volume of the new series of *St Thomas's Hospital Reports* contains an interesting and instructive group of articles. Dr Letheby Tidy's monograph on glandular fever and infectious mononucleosis traces the history of the recognition of this disease which even now is liable to be overlooked though occurring sporadically and in mild epidemics in this country. It is possible to differentiate three clinical types of glandular fever: first the original form described by Pfeiffer in which after slight discomfort in swallowing and complaint of sore throat, the cervical glands rapidly enlarge usually to subside in a few days; a second rarer type (monocytic angina) in which after a more prolonged onset the fauces are covered with a membrane indistinguishable in appearance from that of diphtheria and again the cervical glands are much enlarged; a third more prolonged febrile type appears with headache and constitutional disturbance often with eruptions the commonest being erythematous maculo-papular or rubelliform. The blood changes are interesting and occur in all these types. After an initial polynucleosis there is a reaction of the mononuclear tissues resulting in an increase of lymphocytes and monocytes. For diagnosis as well as the blood picture the presence of (heterophile) antibodies in the patient's serum which agglutinate and haemolyse sheep's red cells is almost pathognomonic. The prognosis in all types is good.

Dr Hebert reviewing the progress of anti-tuberculosis work during the last fifteen years points to the more rapid and certain recognition of early cases with the help of x-rays the more accurate estimation of the character and extent of the disease the better arrangements for treatment, especially with collapse and surgical treatment when pneumothorax is ineffective and the increased help afforded by general practitioners to the tuberculosis officer. Apart from the discovery of a cure the chief need appears to be some means of estimating the patient's resisting power to tuberculosis. Dr Tchaperoff believes that primary cancer of the lung is on the increase. Pain in the chest cough dyspnoea and haemoptysis in an elderly person should lead to radiological investigation and possibly bronchoscopy. The method of treatment for most cases is with x-rays though in the majority this is only palliative.

Dr Hearn discussing the diet and treatment of peptic ulcer points out that the possible defects of the strict diet-alkali regime are alkalosis iron deficiency vitamin C deficiency and a low total caloric intake. Alkalosis has been widely discussed, it is probably not common and should be recognizable. Alkali therapy may however interfere with the absorption of iron. A strict ulcer diet may be deficient in vitamin C and it continued long the patient may show scorbutic symptoms the monotony and restrictions may induce states of subnutrition. On the whole the rest-diet-alkali regime appears to be more satisfactory in the medical treatment of peptic ulcer than the high caloric diet of Meulengracht provided sufficient vitamins are added in the form of orange juice and

marmite and adequate iron if there is anaemia. Commenting on the factors influencing the mortality of perforating peptic ulcers of which cases one in four admitted to hospital is fatal Mr Boggon finds the risk rises after twelve hours of perforation ulcers high up on the lesser curvature are specially lethal and patients over fifty years of age do badly. Improvement or results will follow earlier diagnosis and more rapid admission to hospital and careful pre-operative preparation and anaesthesia. The methods of preparing these and other patients for operation are discussed from the anaesthetist's point of view by Dr H B Wilson and Dr Nesworth pleads for more care in keeping anaesthetic records especially for assessing the various factors in post-operative morbidty. Gastro-enterostomy though less often performed than formerly had clearly defined indications. A serious complication is secondary gastro-jejunal ulceration which Mr Romanis points out may occur in two distinct positions—gastro-jejunal at the site of anastomosis closely related to the mesocolon which it may invade and lead to gastro-jejuno-colic fistula and jejunal less common but more likely to perforate into the general peritoneal cavity. Medical treatment with rest dieting and alkali often avails but in most cases a radical operation has to be faced one which will tax the skill and ingenuity of the surgeon.

Mr Kilner deals in detail with the delicate and often remarkably successful technique of cleft lip and palate repair. Dr Jewesbury and Mr Max Page review the pre-operative treatment operative technique and post-operative management of congenital hypertrophic pyloric stenosis. The operative mortality of just over three hundred cases was 12½ per cent. Comparing the results of twenty years figures on cases of carcinoma of the breast operated on in the hospital Messrs Mitchiner Bailey and Price found the mortality practically the same whether the Halstead radical operation or a much more conservative removal of the breast had been performed and urge that this conservative and much less mutilating operation should be more generally adopted in all cases combined with post-operative radiation. Other surgical papers include the treatment of otosclerosis by labyrinthectomy often with remarkable immediate result and the management of imperfect descent of the testis. A follow up of patients operated on for femoral hernia showed a recurrence rate of at least 9 per cent. Dr Goadby describes the surgical treatment adopted in cases of Graves's disease operation is the quickest and most efficient method of relieving the patient's distress while a cure rate of 40 per cent and an 88 per cent chance of sufficient improvement to lead a normal life again are offered by a judicious combination of medical and surgical treatment in this often serious disease. Dr Anwyl Davies has used gonococcus antitoxin with encouraging results when combined with satisfactory drainage and sulphamidamide in the treatment of gonorrhoea. Dr Bowes in a critical review discusses the investigation and treatment of sterility. Cases may be considered absolutely in type when gross defect of uterus or adnexa is present or the tubes are demonstrated to be sealed off completely. Probably not more than 20 per cent of cases of sterility are of such type. Tubal occlusion is an overrated cause since 12 per cent of cases only are irreparable and another 21 per cent have spasm or incomplete occlusion—one third of the cases in all in another third genital hypoplasia is found and in 20 per cent the male is responsible. Much information can be gained from examination of the penile and endometrial smears. Dr Prosser Thomas gives a useful account of occupational



dermatitis, for various reasons there is a poor prognosis. Dr. Oliver concludes from his own work and his survey of the literature that modifications of the Bendien test are of little or no value for the diagnosis of cancer. The volume contains articles on these and other diverse subjects and is well worth study.

### ACTINOMYCOSIS

*Actinomyco-sis*. By Zachary Cope B.A. M.D. M.S., F.R.C.S. (Pp. 248. 52 figures. 8 coloured plates including 1 frontispiece. 15s. net.) London: New York and Toronto: Oxford University Press, 1938.

This monograph deals with a disease which is not very common but which is of very great interest both from biological and from clinical standpoints. It is widely scattered over the whole world, and about sixty cases in man occur in the United Kingdom annually. Among cattle it is far more common, and is, in fact, a disease of considerable importance. After many difficulties arising from the almost universal presence in the lesions of ordinary pyogenic bacteria, the organism was finally established by Homer Wright in 1905 as the actinomycotic fungus.

After a historical introduction and a discussion of the biological incidence and aetiology of the disease, Mr. Zachary Cope passes on to a close study of its clinical pathology and features. Its technical characters are discussed in the many regions in which it appears, such as the tongue, the abdominal cavity, the genito-urinary tract, the liver, and the thorax. There follow examples of its appearance in the skin, in the bones and joints, and in the central nervous system. The treatment of the disease is discussed in detail, and the difficulties which it presents may be realized from the large number of apparently unrelated drugs which have been tried. Potassium iodide in large doses is, of course, the traditional remedy, but Chitty's method of giving comparatively small doses of iodine in milk would seem to be quite as effective, and to present great advantages. Various vaccines and even tuberculin have been tried, but with uncertain results. Where the whole focus can be removed by surgery, this would seem to be the best method of treatment, but it is rarely possible.

The book is beautifully illustrated with both black-and-white and coloured drawings, which one suspects to be from the author's own hand. He is to be congratulated on a most attractive monograph, which sets out clearly all that is known about a most interesting disease.

### MICROSCOPY

*The Microscope: Theory and Practice*. By Conrad Beck, C.B.E. (Pp. 264. 217 figures. 7s. 6d. net.) London: R. and J. Beck Limited, 1938.

*Handbook of Microscopical Technique for Workers in Animal and Plant Tissues*. Edited by C. E. McClung, Ph.D. Second edition revised and enlarged. (Pp. 698. 82 figures. 42s. net.) London: Humphrey Milford, Oxford University Press, 1937.

The little book entitled *The Microscope* will be useful to the practical microscopist and to students of microscopical technique. The author is Mr. Conrad Beck, a member of the firm R. J. Beck, the long-established makers of microscopes. The aim of the book has been to explain "the theory and use of the instrument without reference to mathematics and without scientific details that, although necessary for the designer, are not required for its use." In this the author has in part been successful, though mathematics and scientific details have not been entirely

eliminated. To medical readers the book will make no appeal, the amateur-microscopist will be able to renew his acquaintance with the science of optics, and will find much of interest in the account of refraction, illumination including polarized light, dark-ground illumination, testing of lenses, and various forms of microscope stands and accessory microscope fittings.

*Handbook of Microscopical Technique* is a second edition, and its appearance is justified by the surprising statement that the first has been exhausted. The book is a compilation by many contributors, edited by Professor McClung, Director of Zoological Laboratories, University of Pennsylvania, who claims that this edition has been enlarged by 200 pages up to 700 pages. The volume contains a large amount of information, which is unfortunately embedded deeply in a medium of redundant verbosity—naïve platitudes and superfluities—for example, "a machine called a microtome." It purports to be a 'handbook' for workers in animal and plant tissues. It would certainly not appeal to medical students. It is difficult to conceive that any technician would use it. The chief object of the editor was apparently to make a big book and to use ten words where two words would serve. The book could not be described as a handbook. The reader cannot hold it while reading, and needs the help of a bookrest. Many of the illustrations are unnecessary and help to account for the use of "surface" paper, which contributes to the weight (4 lb. 6 oz.) of the volume.

### BIOCHEMISTRY, ACADEMIC AND APPLIED

*Biological and Clinical Chemistry*. By Matthew Steel, Ph.D. (Pp. 770, illustrated. 36s. net.) London: Henry Kimpton, 1937.

The author of this fairly large work is frankly sanguine in his outlook upon the future developments of his subject, for in his introduction he commits himself to the following view:

"In the not far distant future the subject of biochemistry will show the same degree of development as has been attained in the realm of organic chemistry. When this is the case the composition of protoplasm and the factors that control its production will be as clear as the structure and properties of a simple organic compound. The same will hold true regarding the causes of our bodily ills and the treatment of disease will be as sure and certain as the neutralization of sodium hydroxide by hydrochloric acid."

After this flight of imagination he settles down to produce a book of considerable merit. In so far as the title may be slightly misleading, the relation of the book to clinical chemistry should be first explained, for it is intended for students in their pre-clinical years, and only a relatively small part is devoted to what is normally understood by that subject. Those sections which impinge upon clinical medicine really constitute only an approach to the clinical applications of biochemistry, and rely rather upon the study of normal or physiological material than upon the pathological. However, there is no doubt as to the essential soundness of the idea of linking up at an early stage the academic and applied sections of the subject, and this blend of the two is an important feature of the work.

In other fields, apart from a chapter on the vitamins which is excellent in regard to its carefully designed practical tests, the best chapters are those dealing with the physical chemistry and biophysics of cells and tissues, though that on hydrogen ion concentration is marred by misprints in some of the formulae, and in another place the reader is suddenly confronted with formidable terms

—as for example specific inductance capacity—which demand but do not receive preliminary explanation. The main defect of the book is that it has evidently been published without very careful revision for minor errors are all too frequent and may prove at times disconcerting to those for whom it is written.

## AGRANULOCYTOSIS

*Clinical and Experimental Investigations in Agranulocytosis With Special Reference to the Etiology* By Preben Plum (Pp 410 125 figures) London H K Lewis and Co Ltd Copenhagen Arnold Busch 1937

This report by Dr P Plum of Copenhagen is the most important monograph that has yet appeared on agranulocytosis. It is based on some ninety cases thirty six necropsies with microscopical examination in nineteen and 422 references to the literature. Although credible accounts of agranulocytosis can be traced back to the first years of this century the onset of the recent epidemic was in 1922 when Schultz reported five cases. After 1928 the incidence of the disease increased rapidly reaching a maximum in 1934 and falling off considerably in the next two years. The discovery that most cases of agranulocytosis were associated with the ingestion of amidopyrine came in 1933. There is a striking parallel between the ascending curves for the incidence of agranulocytosis and for the sale of amidopyrine and an equally striking parallelism between the fall of both as soon as the leucotoxic propensity of amidopyrine became generally known.

We owe much of our knowledge of the disease to Plum and he has now provided an able account of the history occurrence clinical picture pathology aetiology diagnosis prognosis and treatment of agranulocytosis. A year or so ago we should have been prepared to accept this as a funeral oration on a serious but interesting disease but the emergence of the sulphonamide group of drugs opens new possibilities for a variety of medicinal diseases including agranulocytosis.

## Notes on Books

The little book entitled *Milestones in Medicine* (London and New York D Appleton Century Company 7s 6d) is as its subtitle indicates a series of lectures delivered at the New York Academy of Medicine in 1936-7 by various eminent authorities. The introduction is supplied by Dr James Alexander Miller president of the Academy and the lectures are by Smith Ely Jelliffe on the Historical Background of Psychiatry Charles R Stockard on the Mechanisms of Heredity Karl Vogel on Medicine at Sea in Days of Sail Frederick Tilney on the Evolution of the Human Brain Henry S Sigerist on the History of Medical History Newton E Wayson on the History of Leprosy and Walter Timme on the Story of the Glands of Internal Secretion.

That a third edition of Dr H M TRAQUIR'S monograph on *Clinical Perimetry* (Kimpton 30s) should have been called for within eleven years is a gratifying sign of the recognition by others than ophthalmologists of the value of perimetry—an achievement largely due to the author's own efforts for as Mr Norman M Dott reminds readers in the foreword to the present edition Dr Traquair has been insistent that the function of vision is equally deserving of study by neurologists as are those of motion and sensation. A book like the present which has become recognized as the standard publication on the subject calls for no commendation from a reviewer. It is only necessary to point out that Dr Traquair has utilized the opportunity of a new edition to add the newer work

on the subject though on some of the aspects one would have liked a rather fuller discussion. The subject of optic aspheric arachnoiditis is worthy of more than the isolated sentence it has been given although the completeness of the book is well illustrated by the fact that the two most significant references to the subject are given in this one sentence. Another minor point to which attention may perhaps be drawn is the fact that in the excellent bibliography the names of authors are sometimes given with initials and more frequently not. In a book of the standing of *Clinical Perimetry* this is almost a major offence.

*Harlow Brooks Man and Doctor* by JOHN J MOOREHEAD M.D. is published in this country by Hamilton Hamilton at 10s 6d. Harlow Brooks was related to as H B is said to have made in his young days the best damned autopsy in New York City a story what remarkable testimonial. Starting in New York in 1895 Brooks became in twenty years one of the most popular physicians in that city and was especially interested in cardiovascular disease as shown by the bibliography of his seven or four publications. He had enormous energy a human dynamo and would take any amount of trouble for his patients and friends and is described as literally a one man social service organization. Outspoken and kindly he had a full life was spoken of as the perfect patient and his biographer says no man in our day and generation so nearly filled the position of the renowned Osier—very high praise. Harlow Brooks died in a hospital after he had been instrumental in founding and opening a suppurative pyelophlebitis which he practically died for himself. The book is a labour of love of a contemporary.

## Preparations and Appliances

### A NEW CHLORINE ANTISEPTIC

Azochloramid (Wallace and Tiernan Ltd, Power Road, Gunnersbury, W.) is an antiseptic with the chemical title of N N dichloroazodicarbonamide. The manufacturers claim that it represents an advance on chloramine T in that it is considerably more stable in contact with exudate and its bactericidal action is relatively slow but is particularly non-selective. A concentration of 1 in 1000 is sufficient for the presence of horse serum desfero bacteria and is also effective against anaerobic Gram positive or Gram negative. The compound is non-irritant to the skin on exposure to air. It is soluble in an oily solution (1 in 100 in ether) and also in a concentrated saline solution which when diluted up to 1 in 1000 gives a 1 in 3000 solution in 1000 c.c. of water. Azochloramid has been tested in several clinics and the favourable reports have been published regarding its action on infected wounds.

The war provided a unique experience in the treatment of infected wounds and the value of the hypochlorite and chloramine was fully proved. Certain disadvantages and inconveniences attending their use have limited the popularity of these substances in civil practice. The new chlorine compound appears to prevent important disadvantages—namely stability, duration of action and non-irritancy and hence represents an interesting advance in therapeutic practice.

### A LAXATIVE ANTACID

Entacarb powder (Messrs Reed and Carter Ltd) is a mixture of carbonates and bicarbonates of calcium magnesium potassium and bismuth together with a small amount of silicate. The proportions of the various elements are arranged so that the powder has a gentle laxative action. The aim of the mixture is to produce an efficient antacid which does not produce calcium depletion. The preparation is particularly suitable for use in very convenient of a number of patients.

## BRITISH MEDICAL JOURNAL

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## EPIDEMIC INFLUENZA

Ever since the discovery in 1933 by Smith, Andrewes, and Laidlaw that influenza was caused by a filterable virus the attention of the medical profession has been focused on this field of medical research. This interest is hardly to be wondered at, for with exact knowledge of the aetiology of this disease the possibility of the solution to various contingent problems came at last within our reach. What, for instance, is the aetiology of that collection of infections of the upper respiratory tract which in the past have been labelled "influenza" for want of a better term—are they all due to the same virus? Will it be possible to apply specific prophylaxis to the control of epidemic influenza and what chances are there of preparing a curative serum for this disease? These are probably the more important questions to which answers have been anxiously awaited.

From time to time since the publication of the original paper by the Hampstead workers in 1933 readers of this *Journal* have been informed as to the progress which has been made in influenza research at home and abroad. All are aware of the confirmation of this work, at first by Francis in America in 1930, next year by the British workers themselves, and subsequently by workers in different parts of the world. The virus aetiology of influenza rests on a firm basis. What of the progress which has been made with these other problems? A recently published report to the Medical Research Council by C. H. Stuart-Harris, C. H. Andrewes, and Wilson Smith, together with D. K. M. Chalmers, E. G. H. Cowen and D. L. Hughes,<sup>1</sup> provides an answer to this question. This study of epidemic influenza has special reference to the investigation of the 1936-7 epidemic, and since in reporting their work advances in influenza research abroad are discussed the whole gives an excellent up-to-date account of the influenza problem.

As in previous epidemics, no difficulty was encountered in recovering virus from typical cases, the ferret being employed for the purpose. The announcement by Andrewes, Laidlaw, and Smith and by Francis in America independently in 1934 that the mouse could be infected with ferret-passage

virus led one to hope that this animal might eventually be used instead of the ferret for recovering virus from man. This would have been a great advantage and would have brought this line of work within the reach of practically all laboratories. But although last year Francis and Magill reported having isolated virus direct from man by means of mouse inoculation, it would not appear that for this purpose, the mouse will replace the ferret. The American workers found that a number of passages were necessary before the infection in the mouse became apparent, and Andrewes, Wilson Smith, and Stuart-Harris now report that a few attempts made by them to infect mice directly from man were unsuccessful, though they consider that had they persisted with these experiments, they would without doubt have obtained results similar to those of Francis and Magill. The mouse has proved extremely useful for experiments with ferret-passage virus, but it does not seem to be susceptible enough for the isolation of virus direct from human material. The laboratory diagnosis of influenza therefore would still seem to depend on the isolation of virus by ferret inoculation, though Francis in America and Fairbrother over here both find that the complement-fixation reaction is almost as valuable.

In connexion with the strain of virus isolated during the 1936-7 epidemic Andrewes, Wilson Smith, and Stuart-Harris have interesting and important observations to make. It was at one time thought that all strains of influenza virus were the same but this belief was shaken when Magill and Francis reported some eighteen months ago that two strains which they had considered identical could be differentiated by means of antisera made in the rabbit. The British workers now confirm this observation, different serological strains of influenza virus exist. This is rather disappointing, for although these serological strains possess antigens in common, their differences would appear to be sufficiently great to be of importance in attempts at specific prophylaxis. With regard to the question of specific prophylaxis Section VI of this report to the Medical Research Council contains further evidence concerning the immunization of ferrets and mice. The new facts here concern the possibility of immunizing ferrets so that they resist contact infection satisfactorily, and the question of the relation between the level of circulating antibody and degree of immunity. Previous work had suggested that the amount of circulating antibody was a measure of immunity, but Francis and Shope (1936) showed that this was not always so and Wilson Smith, Andrewes and Stuart-Harris now confirm this. They conclude

<sup>1</sup> Medical Research Council. Special Report Series No. 223. A Study of Epidemic Influenza with Special Reference to the 1936-7 Epidemic. H.M. Stationery Office, 1938. (2s. 6d.)

that a high titre of antibody against a given strain indicates a good immunity against that strain but that the converse is not necessarily true. So far as the effective immunization of man is concerned no great advance is reported. It has been shown previously that man can be inoculated subcutaneously with influenza vaccines consisting either of active virus (Francis and Magill) formalized virus (Andrewes and Smith) or heat killed virus (Fairbrother and Hoyle) with the production of little in the way of reactions but with good antibody response. The British workers now report the result of certain experiments designed to test the efficacy of prophylactic immunization. At the time of these trials the existence of a plurality of types of virus was not recognized and unfortunately the vaccinated men were unavoidably exposed to infection too soon after immunization so that the experiments remained inconclusive and we shall have to await further trials before it can be known whether specific prophylaxis is to help us in combating epidemic influenza.

A large section of the report deals with the clinical picture produced by influenza virus in man and its differentiation from other conditions which have gone under the name of influenza. The recovery of virus from the pharynx by ferret inoculation has been relied on in differentiating influenza from other conditions. Several epidemics of respiratory disorders including the 1936-7 influenza epidemic were investigated clinically, epidemiologically and aetiologicaly and from this inquiry Stuart Harris and his colleagues Chalmers and Cowen conclude that influenza is not only an aetiological entity but a clearly distinguishable clinical entity as well. They find no evidence of the existence of gastric and nervous types of influenza and in view of their observation that catarrhal symptoms dominate the picture early in the non-influenzal epidemic respiratory conditions they suggest for these the name of "febrile catarrhs." Admittedly these conclusions may need modification in the light of future observations but Stuart Harris and his colleagues are to be congratulated on what they have achieved. It forms an important contribution to this valuable report.

### STATUS OF THE RADIOTHERAPIST

For some years past it has been evident from reviews and articles which have appeared both in these columns and elsewhere that there are certain difficulties attending the practice of radiotherapy which deserve a thorough and careful investigation. The matter is not one of mere academic interest but is of fundamental and far reaching importance both to the medical profession as a whole and also

indirectly to the general public. The last report of the Radium Commission frankly states that considerable anxiety has been aroused on account of the difficulty in obtaining suitably qualified men and women who are competent to undertake the control of radiotherapeutic departments. In our review of that report<sup>1</sup> two reasons were advanced for this difficulty. The first is an entirely personal one. For its efficient practice radiotherapy demands a very unusual combination of interests for in addition to a thorough and expert knowledge of practical surgery there must be a no less thorough and expert knowledge of the clinical applications of x-rays and radium and of their methods of action. It is now generally recognized that as a preliminary to undertaking special training in radiology the prospective radiotherapist should obtain one of the higher surgical qualifications such as are necessary to qualify for appointment to the honorary surgical staff of one of the large general hospitals. For the successful or even safe practice of radiotherapy itself prolonged and intensive study with routine practical work in a recognized radiotherapeutic department is essential. During this work one of the special diplomas in radiology will be taken which though generally insufficient so far as the therapeutic side of the work is concerned nevertheless assures that the candidate has received some training in the necessary branches of physics. In this connexion the warning issued by the Radium Commission on more than one occasion cannot be too strongly emphasized—namely that radium is not only valueless but dangerous in the absence of knowledge and experience." The same remark is of course equally applicable in the case of x-rays. The problems of dosage and distribution of the radiations are fundamental as regards either success or safety and are themselves dependent upon physical measurements. No rule-of-thumb methods can be laid down each individual case requires specially planned treatment and after-treatment. Such considerations are enough to demonstrate that attendance at a short post-graduate course though interesting as showing the main principles of technique is altogether insufficient for anybody who contemplates the practice of radiotherapy. The use of radium should be rigidly confined to those who have had proper training in its use. Here the following remarks by a surgeon<sup>2</sup> are worthy of quotation.

"It cannot be too strongly asserted that nothing is worse than niggling, meddling, intervening in cancer cases. In every case it should either be thorough treatment by irradiation or thorough treatment by surgery and in many cases it is now a question of the right treatment by radium for the primary focus and thorough

<sup>1</sup> *British Medical Journal*, December 25, 1937, p. 1299.  
<sup>2</sup> G. Grey Turner, M.S., F.R.C.S., Lecturer in Audiology to the Section of Surgery, Royal Society of Medicine, November 1937.

treatment by surgery for the path of probable malignant invasion. Nothing can be worse, and nothing is more wicked, than the attitude which relies on a spot of x rays or a dash of radium, combined perhaps with 'a trifling surgical interference.' Such means of dealing with cancer are nothing short of criminal, and the cases would probably be very much better if they were left alone."

It is evident that special and unusual combinations of professional knowledge and skill are necessary to form an efficient radiotherapist, and therefore that such people will not be easy to find. There is also, however, as indicated in our review of the Commission's report, a second factor which enters largely into the problem. This is the inadequate status accorded to the radiotherapist at certain hospitals. For reasons which we have set forth on previous occasions, radiotherapy cannot be satisfactorily carried out except in institutions where there are ample facilities for laboratory investigation and where the necessary research work can be carried out. As a general rule such a combination will usually be found in connexion with existing hospitals, medical schools, and universities. From the nature of his work the radiotherapist will almost necessarily be a full-time officer. The work is far too dangerous to allow of its being delegated to non-medical assistants, no matter how well trained and experienced they may be. As a consequence of this the radiotherapist must be a salaried officer of the institution, and this appears to be the source of all the trouble as regards his or her status in the hospital. For many years, as the Radium Commission points out, it has been customary to appoint "salaried pathologists who have permission to treat private patients within the hospital. If this latter practice were extended to radiotherapists in charge of centres there would be greater inducement to senior men to take up such appointments." The Commission further strongly emphasizes its recommendation that a radiotherapist should have the status of a member of the honorary staff, should be in effective control of all the radium, and either in charge of or in close association with the x-ray department of the hospital. It is a particularly fortunate thing that much of the radium available for use in our hospitals is national property and that its use is supervised by the Commission and the Medical Research Council, which work in close and harmonious co-operation.

In some cases the expressed views of the Commission are loyally carried out, but in others the conditions of working leave much to be desired. A careful perusal of the last report will show that reference is no longer made to the "radium officer" — a term which in itself was calculated to mark a distinction in status between the radiotherapist and members of the honorary staff. In the past there

were serious misapprehensions as to the nature and scope of the duties involved. Thus in an advertisement inviting applications for the post of "radium officer" which appeared about 1931, one of his duties was "to apply radium under the direction of the honorary staff," and about the same time a surgeon was heard to remark apropos of the same subject, "What I want is somebody to put the radium in for me." These two instances are enough to indicate the difficulties that have had to be contended with. Even at the present time there are institutions where patients who are clearly subjects for radiotherapy have to be admitted under the care of a member of the honorary staff, in whose *nominal* charge they remain during the whole of their stay in hospital. With paying patients the injustice of such arrangements may be accentuated, the bulk of the fees being paid not to the person who has planned and executed the treatment but to the honorary surgeon under whose nominal care the patient has been admitted.

A state of affairs like this is clearly not calculated to attract the type of man or woman who is competent and qualified to undertake radiotherapeutic work, and such being the case it is time that it should be put an end to, before further mischief is done. It is gratifying to note that the Radium Commission not only fully appreciates the difficulties of the situation but has the power to insist upon its recommendations being put into practice. There does not to the average mind appear to be any fundamental distinction between honorary and salaried medical officers of a hospital. The former make their living from their hospital appointment indirectly, the latter directly. As regards the value of the services rendered by either the one or the other, this must always be very largely a personal matter. In the great medical schools there are teachers and research workers holding professorial rank, since the conditions of their appointments render whole-time attendance necessary, they must also be salaried officers, but nobody in his senses would regard them as on that account subordinate to the ordinary members of the visiting staff. With the adaptation of scientific progress to clinical work the number of whole-time workers must increase, and it is only common justice that they should be placed in full control of their various departments. It is perhaps less than a century ago that surgeons were admitted to full equality with physicians, the claim now advanced is that those in control of special departments shall have accorded to them the status and privileges to which their professional qualifications and experience give them an undoubted right. It is in the interest of all concerned that the best brains should be attracted and encouraged to take up the study and practice of

such a subject as radiotherapy where the smallest errors of judgment may have far reaching and disastrous consequences

### MUSCULAR WORK IN GAS-PROTECTIVE CLOTHING

In the recent discussion on the medical organization of air raid precautions at the Royal Society of Medicine (reported on April 23 at p. 910) the point was raised as to the physiological effects of wearing protective clothing. One speaker said that he had seen a number of healthy men taking part in decontamination and anti gas measures who owing to the clothing were unfit to carry on for longer than a few minutes. It has always been obvious that the difficulty and distress produced by any degree of work when carried out in full anti-gas protective clothing were due to incipient heat stroke. The basic factor of this is the combination of rising temperature and saturation by water vapour of the air within the impervious suit. That it would be impossible from the practical standpoint to deal with the situation either by absorption of the moisture or by the mechanical inflow of cool dry air was easy to demonstrate—both have been tried. Attempts to absorb the moisture with calcium chloride produced no effect upon the physiological state of observers clothed in these garments and there was the definite disadvantage that the calcium chloride gets most unpleasantly hot. Attempts have also been made to remove the saturated air by pumping fresh air in at one end of the suit and out at the other but the rate of flow required to produce measurable amelioration is so high as to make the method impracticable. Some important experiments on the control of body temperature and physiological reactions during muscular work in gas-protective clothing have been undertaken by Dr G. P. Crowden of the London School of Hygiene and Tropical Medicine.<sup>1</sup> He discovered first of all that if wet cloths were applied to the outside of the protective oilskin garment the impending heat collapse of the subject was averted and work was able to be resumed. This led him to test the effectiveness of a water-retaining garment of khaki drill worn over the single piece protective suit and in a series of experiments he proved that despite the weight of the additional clothing the increased rate of loss of body heat due to the evaporative cooling of the protective garment was continuous (not a mere temporary sensation as the first experiment might have suggested) and that the subject was able under such conditions to carry on muscular work in a very warm environment without fatigue or discomfort. The feasibility was next explored of bringing the cooling wet surface even closer by giving a wettable external fabric facing to the protective layer—an expedient which has also the advantage of limiting the protective clothing to the one suit. Accordingly a service pattern protective clothing consisting of jacket trousers and hood made

from rubber was faced externally with an absorbent fabric wetted with water. In this apparel the subject was found in even better condition at the end of an equivalent period of work. Such clothing is more easily put on and of looser fit than either the single piece garment of oilskin or the double garment of oilskin and khaki drill but it is considered doubtful whether it would be as effective in its protection against mustard gas because the separate jacket trousers and hood fail to envelop the subject as completely as the single piece.

Dr Crowden's first results were obtained in laboratory experiments on young assistants and were so convincing that it seemed justifiable to make a test of the effectiveness of wetted protective garments under field conditions in warm weather. Accordingly such tests have been carried out at an Officers' Training Corps camp at Svanage and the results have again shown that if the outer surface of the clothing is maintained wet during the performance of muscular work then the accumulation of body heat is prevented, the sweating much reduced, and the risk of heat collapse even under hot summer conditions eliminated. An outer suit of wetted material worn over the oilskin proved effective and the facing of the gas proof material with an outer fabric periodically wetted proved even better in maintaining the heat balance essential for comfort and for the continued performance of muscular work. The men who wore the wet overall's outside the protective outfit or put on the fabric faced rubber suit were apparently no more fatigued than if they had been wearing ordinary clothing permeable to the air. The ingenious incorporation of a water holding layer in the actual fabric of the suit seems as if it might have other advantages. If it could be attached to the oil film coated surface (so far it seems only to have been added to a rubberized material) it might give considerable mechanical protection to the delicate surface. Moreover when wet as it is intended to be it should give added protection against mustard gas because of the relative insolubility of this gas in water and against lewisite because of its relatively rapid hydrolysis. On the other hand it seems doubtful whether when so attached the protective fabric would stand boiling for the prolonged periods necessary for decontamination.

### A STANDARD FOR PREMATURITY

In the course of a periodical revision of the well known clinical report of Queen Charlotte's Maternity Hospital the question of the definition of prematurity came up for discussion. It was decided to refer this matter to the British Paediatric Association and to the Section of the Study of Disease in Childhood of the Royal Society of Medicine. These two bodies nominated a joint committee consisting of Dr Norman Capon, Dr Helen Mackay, Dr Kenneth Tallerman and Dr Alan Moncrieff. After due consideration of the various aspects of the subject this committee suggested a definition based upon a standard of 5½ lb or under and the result of their deliberations was circulated to

various interested bodies including the Royal College of Physicians of London and the British College of Obstetricians and Gynaecologists. Neither of these two organizations was completely satisfied with the wording of the definition, and a joint committee was set up consisting of Sir Ewen Maclean (B C O G), Sir Arthur MacNalty (R C P and Ministry of Health), Professor W W Jameson (R C P), Professor Fletcher Shaw (B C O G), Dr H C Cameron (R C P), Dr Percy Stocks (R C P and General Register Office, Somerset House), Dr Alan Moncrieff (R C P). This committee came to the conclusion that it was impossible to define prematurity in any satisfactory manner, but, with regard to the purposes for which the proposed definition would be used, the committee agreed that some standard was desirable. It therefore put forward a recommendation which was subsequently somewhat modified, and the final proposal reads as follows:

"That in conformity with the standard in international use an infant whose birth-weight is  $5\frac{1}{2}$  lb (approximately 2,500 grammes) or less shall be considered, for the purpose of comparison of records, as either immature or prematurely born, according as the estimated period of gestation is full time or less."

It is hoped that this standard will now be utilized by all maternity institutions, public health authorities, and others concerned with the newborn baby, so that some uniform comparison of results may be possible.

### THE SIR JOHN McFADYEAN FESTSCHRIFT

Fifty years ago the *Journal of Comparative Pathology and Therapeutics* was started as a private venture by Sir John McFadyean, now the octogenarian doyen of the veterinary profession who has since edited it almost single-handed. During its jubilee year the editor was prevailed upon by his colleagues to give them a free hand: they have dedicated the last quarterly number of the *Journal* for 1937 as a jubilee number<sup>1</sup> to the father and editor of the *Journal*. Sir John's long services recall, and it is to be hoped will rival, those of Virchow (1821-1902) whose *Archiv* began in 1847. It is hardly rash to predict that some day the *Journal of Comparative Pathology and Therapeutics* will remind generations to come of its founder by an eponymous title. The tributes in this number of more than 200 pages have been world-wide and are generously illustrated; there are four portraits of Sir John at different dates in his professional career between 1890 and 1937, and twenty-three of his many admirers who here praise a famous man. Among these Sir Robert Muir and Sir John Ledingham are foremost in expressing appreciation of his work on tuberculosis, viruses, infection and immunity, epizootic abortion, foot-and-mouth disease, Johnes disease and nephritis in animals. Other colleagues deal in more detail with the subjects he has advanced and adorned: thus Dr R E Glover of the National Institute for Medical Research, Farm Laboratories, Mill Hill describes his contributions to tubercu-

losis, and Mr L G Wright shows how Sir John has influenced clinical veterinary surgery. Lists of his contributions to his *Journal* and that of the Royal Agricultural Society of England appropriately find a place in this number. Professor G H Wooldridge, now vice-president of the Royal Veterinary College, London, writes with forty years' experience of the greatness of this former Principal and Dean of the College, and the same story is told as pleasantly, but more fully, in the three unsigned articles on "the journal," "the man," and his "disciples."

### TEMPORARY STERILIZATION BY X RAYS

The production of an artificial menopause by irradiation of the ovaries in women approaching the menopausal age has been the subject of numerous reports, so that there is now general agreement as to the indications, dosage, and technique. It is far otherwise when younger women are considered, and a recent paper by Corscaden, Kasabach, and Lenz<sup>1</sup> emphasizes rather than solves the difficulties. Their report deals with fifty-eight patients under the age of 40 who were given what the authors call a "substerilizing dose of radiation." The term is not to be recommended, since if the treatment is successful the patient is in fact rendered sterile, although recovery of ovarian function may occur after an unpredictable interval. In twenty-four cases radium was used. The authors agree that the effect of radium is on the ovaries, as is the case with x-rays, destroying ripe Graafian follicles; they admit also that the dose delivered to the ovaries from intra-uterine radium cannot be estimated with any accuracy greater than  $\pm 50$  per cent, so that these cases cannot be further discussed. In the cases treated by x-rays their results lend strong support to the view generally held in this country that it is very difficult to produce a permanent artificial menopause in young women: for bleeding returned in all but three of their patients within a few months to five years. The problem is, however, a wider one than merely that of dosage. It may be accepted that while a dose of 260 r to the ovaries in a woman over 45, or of 300 r between 40 and 45, will result in a permanent menopause, a dose of even 400 r in a young woman may result in only temporary sterilization. Since the menopausal symptoms in young women are apt to be severe, the only justification for x-ray sterilization is the desire to preserve reproductive function, and the question then arises whether there is any risk of abnormality in the children of mothers who have been thus temporarily sterilized. Although in Corscaden's series there were five abortions and two deaths in infancy out of eleven pregnancies subsequent to x-ray sterilization, the larger collections of cases—for example, the 600 collected by Murphy—have shown that radiotherapy does not lead to foetal abnormalities in subsequent pregnancies. The geneticist, however, has shown that the gene mutations produced by radiations are generally recessive and that abnormal offspring would therefore

<sup>1</sup> *Journal of Comparative Pathology and Therapeutics*, Dec. 1937, pp. 217-246. Jubilee number. A Festschrift to Sir John McFadyean.

<sup>1</sup> *Radiology* 1938, 30, 203.  
<sup>2</sup> *Amer. J. Roentgen* 1929, 22, 207.



appear in the next generation only if two such recessive genes were mated. So long as a ray sterilization of young women is confined to strictly medical indications the probability of marriage between two of their offspring is infinitesimal so that as Waddington states the possibility of an increased mutation rate in so small a group of potential mothers may be considered of minor importance. It must also be remembered that the results of genetic experiments in *Drosophila* may not be directly applicable to man: for example while repeated doses of radiation appear to be arithmetically cumulative for *Drosophila* genes there is no evidence that such is the case in man: indeed the International Protection Regulations allow a dose of 1 r per week and no cumulative effects are known from dosage of this order over periods of many years. Approaching the problem from another aspect Demerec<sup>1</sup> has found that there is a difference in radio sensitivity between the genes of two strains of *Drosophila*. He points out that since gene mutations may occur in somatic cells just as in germ cells such differences in sensitivity would readily explain the differential lethal effect of radiation on various tissues. The lack of evidence of such gene mutations in human tissues may be due to the difficulties of observation and cannot absolve the radiotherapist from caution where germ cells are concerned. Fortunately on purely clinical grounds temporary x-ray sterilization cannot be advised other than in exceptional cases.

### TETANUS FROM A CANCER CURE

From time to time new methods of treating cancer are devised which have a plausible theoretical basis and appear to yield promising initial results, but almost invariably they cause ultimate disappointment. Their first announcement from a reputable source creates a situation of some difficulty both for the would be user and we may add in editorial policy since the available evidence may justify neither approval nor condemnation and the cynicism bred of bitter past experience may just possibly be misapplied. Such an announcement was made in Canada by H. C. Connell in 1935: we drew attention to it in these columns and expressed the opinion that the theoretical basis of the proposed treatment though ingenious required more experimental justification than it had received. In a letter to the *Journal* about the same time Dr W. E. Giv wrote:

We have prepared from mouse tumours in accordance with directions received the solutions which Dr Connell calls 'ensols' and have tested these 'ensols' on the appropriate tumours of mice. In no case has the growth of a tumour been checked or affected in any way. The treatment was based on the action of *Cl. histolyticum* which as its name implies produces a ferment with a solvent action on tissue. It was claimed that when this micro-organism was cultivated in a suspension of a malignant growth it formed lysins

specific for the cells of that growth: this proposition is doubtful and does not appear to have been proved. Nevertheless the method advocated was the lysis by bacterial action of a portion of the patient's own growth and injections of a filtrate of this preparation supposed to contain a lysin which would act upon the remaining growth in the body. It appears that the exigencies of widespread application in America have led to the abandonment of this method of preparing autogenous lysins and a preparation from cancerous tissue whatsoever obtained has been considered efficient for the treatment presumably of similar growths in any patients. It is now reported from the United States that eleven deaths have rapidly followed injections of some of the material and investigation has already made it clear that the batch concerned must have contained tetanus toxin. This was a danger obviously to be feared from such a product. *Cl. histolyticum* and *Cl. tetani* belong to the same genus and grow under the same conditions and contamination of the tissue used could easily lead to such a result. The account given of the conditions under which the product has been manufactured is far from reassuring. Although this disaster has of course no bearing whatever on the possible usefulness of this treatment properly applied and safeguarded it will doubtless and rightly serve as a setback to the indiscriminate application of treatments which have been insufficiently tested and are not under adequate control. The responsibility of anyone who publicly advocates a new method of treating cancer is heavy: one the credulity of despair will rapidly bring many patients to his door. An endless series of melancholy failures on lines which were made at first to appear promising should serve as a warning against accepting new claims of this kind unless they are backed by acknowledged authority.

Dr E. Arnold Carmichael will deliver the Marston Lectures on 'The Study of Reflex Action in the Human Autonomic Nervous System' in the Hall of the Royal College of Physicians of Edinburgh on Thursday and Friday, May 26 and 27 at 5 p.m.

We regret to announce the death of Dr W. H. Maxwell Telling, formerly Professor of Medicine in the University of Leeds and for thirty-two years physician to the General Infirmary at Leeds, and of Mr Percival Furnivall, consulting surgeon to the London Hospital.

*J. Amer. med. Ass.* 1938 110 1133-1134

Dr I. W. Maill, senior anaesthetist to the Westminster Hospital, has been awarded the triennial Human Medal for original work on outstanding mental anaesthesia or in subjects directly connected therewith. The award is made by the Council of the Royal Society of Medicine on the recommendation of the Council of the Section of Anaesthetics.



# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## TREATMENT OF OTITIS MEDIA

BY  
MYLES FORMBY, F.R.C.S.

For the purpose of description and the consideration of treatment inflammatory conditions occurring in the middle ear are conveniently classified as (1) catarrhal, and (2) suppurative. Each variety may be met with in an acute or a chronic form. No sharp line of demarcation exists either clinically or pathologically between these four types of otitis media, but an account of the treatment of a case representative of each provides a suitable means of discussing the subject.

### Acute Catarrhal Otitis Media

This condition is characterized by its sudden onset, pain in the ear, some disturbance of hearing, and pyrexia, and is usually associated with inflammation of the nasopharynx. The diagnosis is determined from the appearance of the tympanic membrane. The external meatus must be thoroughly cleared of wax and debris before an attempt is made to study the condition of the drum. In a typical case the changes seen are a general loss of detail, absence of the cone of light, thickening of the whole membrane, poor outline of the handle of the malleus, and a dilatation of the blood vessels, particularly round the periphery and down the handle of the malleus. The tension and mobility of the drumhead are important and should be tested in every case. This is best carried out by means of Siegle's otoscope which provides a magnification of two dioptries and a ready means of watching the movements of the drum in response to gentle alterations of air pressure in the external auditory meatus. The thickening of the tissues resulting from acute catarrhal inflammation increases tension and diminishes mobility, but the latter is not absent, as it usually is in suppurative otitis media.

The pathological changes which provide the clinical picture of acute catarrhal otitis media may either resolve or progress to suppuration. To aid resolution, general treatment for an acute febrile illness is given and special attention directed to the nasopharynx. Congestion is relieved and drainage facilitated by spraying the nose with 1 per cent ephedrine in normal saline every four hours. Steam inhalations of tinct benzoin or menthol an hour or so after spraying the nose with ephedrine solution are both soothing and beneficial. It is particularly important that the patient be kept warm after having an inhalation.

The discomfort in the ear is relieved by local heat and the oral administration of aspirin. The local heat is best applied by the instillation of warm oily drops, 2 per cent to 5 per cent phenol in glycerin, or sedonan (Napp), into the meatus and by covering the ear and adjacent parts with cotton-wool warmed before a fire, by a hot-water bottle, or by an electric pad if available.

### Acute Suppurative Otitis Media

A most important factor in the management of acute catarrhal otitis media is the keeping of a careful watch for the development of suppurative changes. These are to be suspected where the constitutional symptoms tend to

increase, the temperature remains high, and there is a more rapid pulse rate, with persistence of pain. Repeated examinations of the membrana tympani will reveal the progress of events taking place in the middle ear. The alterations from the normal seen in acute catarrhal otitis media become more pronounced. The dilatation of blood vessels increases, but the reddening of the drum may be obscured by the desquamation of the surface epithelium, which is greyish, by the presence of red or purple haemorrhagic bullae on the drum, or by a collection of yellow pus in the middle ear. If the outer ear is carefully and thoroughly cleansed the meatus at its junction with the tympanic ring, particularly above, will be found to be acutely inflamed. In most cases a part or the whole of the membrane will be bulging into the meatus and gentle compression with a Siegle's speculum will fail to produce any movement. Frequently pressure over the tip of the mastoid process causes pain. When suppuration is present or is suspected in the middle ear adequate drainage must be provided by incision of the tympanic membrane.

### Myringotomy

In itself this is a small operation, but one requiring great care and precision, it should only be attempted with the correct instruments on a patient properly prepared.

*Instruments*—The aural speculum should be the largest that will fit comfortably into the meatus, an electric

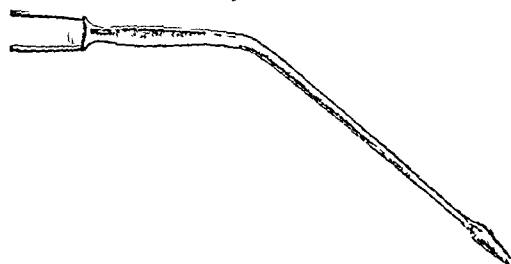


FIG 1—Agnew's myringotome

auriscope provides an efficient and suitable illumination, or the usual frontal mirror can be employed, but a good light is essential. There are several suitable patterns of knife, but Agnew's myringotome is probably the most

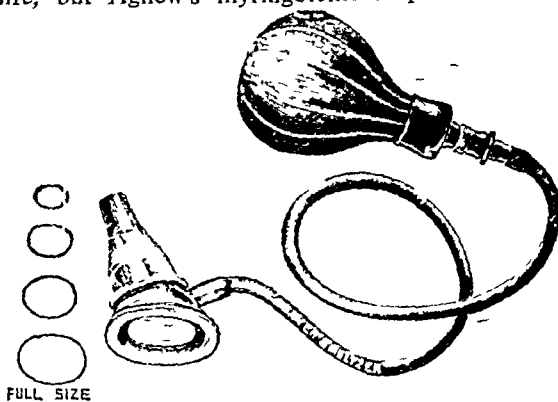


FIG 2—Siegle's speculum

convenient. The important features are that it should be small enough to pass easily down the speculum and the meatus, have a short blade and a fine point (special care being taken to see that this is not bent) be very sharp, and be capable of being held so that the view of the

drumhead is not obscured. Aural dressing forceps and Siegle's speculum are not essential but are most useful adjuncts.

**Anaesthetic**—No local anesthetic effectively anaesthetizes an acutely inflamed tympanic membrane and general anaesthesia must be employed. Nitrous oxide and oxygen ethyl chloride or intravenous ether are all suitable anaesthetics for this operation if properly administered.

**Preparation**—The patient is prepared for a general anaesthetic the outer ear being cleansed by washing and the application of spirit. The depths of the meatus should be swabbed out with spirit when the patient is anaesthetized.

#### OPERATION

Careful asepsis must be observed. Under direct vision carefully insert the aural speculum into the cartilaginous meatus and identify the drum. Maintaining a good view

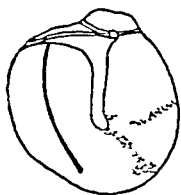


FIG 3—Right tympanic membrane showing position of incision

of the field of operation incise the membrane from below upwards throughout its length by means of a slightly curved incision just posterior to the handle of the malleus. The drum is immediately obscured by the escape of blood and pus into the meatus. They are removed by gentle mopping with pledgets of cotton-wool. With the aid of the Siegle's speculum any fluid remaining in the middle ear is aspirated and the incision carefully inspected to be certain it is large enough to provide adequate drainage. The meatus is again mopped out and the ear covered by a large pad of cotton-wool or tomentation.

#### AFTER CARE

The most important point in treatment is the maintenance of adequate drainage. The condition to be dealt with is an acute abscess and any interference with the free escape of pus will retard resolution. Such interference may be encountered at any of three stages during resolution.

1 Immediately after incision of the tympanic membrane the opening may become filled with blood-clot thus preventing all drainage and defeating the one object of the operation. To prevent occlusion in this manner the ear should be inspected two to four hours after myringotomy has been performed. If any blood clot is present this is gently extracted with aural forceps or removed by carefully syringing with warm boric lotion after the application of a few drops of hydrogen peroxide (10 vols). When cleansed by this means the meatus is dried out with pledgets of cotton wool.

2 When the discharge of pus from the middle ear is profuse and cleansing either by syringing as described above or by frequent mopping is inadequate the accumulation in the depths of the meatus causes irritation and sets up oedema with further obstruction to drainage. In cases where the discharge is large in amount constant cleansing is required.

3 As resolution of the inflammatory process nears its end the discharge frequently tends to become thick and viscid. Neglect at this stage again leads to some obstruction to the escape of pus and consequent retardation of healing. The application of peroxide drops and syringing with boric lotion is the method of choice for cleansing.

Other causes of inadequate drainage are a perforation that is too small or is badly situated and the formation of granulations on the edges of the perforation. The former is overcome by enlarging the perforation employing the technique described for myringotomy and the latter by cauterizing the granulations. To do this clearly the external auditory meatus introduce eight to ten drops of 10 per cent cocaine and keep in contact with the drum for ten minutes. Dry then gently touch the surface of the granulations with solid silver nitrate fused on the end of a fine probe. While proper drainage is of prime importance the prevention of an otitis externa has also to be borne in mind. A good prophylactic measure is to grease the meatus thoroughly with ung. hydrarg. ovi. flav. 1 per cent at least twice daily.

Numerous kinds of drops, lotions and powder have been advocated in the treatment of acute suppurative otitis media. For the most part their effect is confined to the external auditory meatus and provided they are non-irritant their use is harmless. If the principles of surgery described above are adhered to their use is unnecessary.

(To be continued)

## HEALTH OF SCOTLAND

### REPORT FOR 1937

The report for 1937 of the Department of Health for Scotland states that the improved standards of health generally have been maintained. The death rate per 1000 showed no significant change or even a slight increase in 1937 being largely accounted for by the influenza epidemic of the spring which was the most serious visitation of the kind since 1929. A distinctive feature was the low record maternal mortality rate of 4.8 per 1000 births which was slightly less than that for 1936 though still in excess of recent rates for England and many other countries. Changes are taking place in the relative seriousness of disease—for example morbidity statistics indicated that some 40 per cent of the increase among insured persons was attributable to chronic disease. School health statistics and inquiries showed that there was little malnutrition in the country although shortages of important elements were noted in the diet of the very poorest and deficiency of milk in the diet of a large section of the population.

#### Infectious Diseases

During 1937 some 94,000 persons were recorded as suffering from infectious disease a decrease of 1-10 per cent compared with the previous year. The main factor in the decrease was a fall in the number of cases of measles while against this whooping-cough was responsible for some 7,000 more cases and scarlet fever and influenza pneumonia for 2,000 more in each instance. Tuberculosis as a cause of death maintained during 1936 and 1937 the low record death rate of 7.4 per 100,000 established in 1935. The report points out that during recent years a good deal of research has been undertaken in Scotland to determine the extent to which human and bovine tubercle bacilli respectively are responsible for cases of death in human beings. In 1937 pulmonary tuberculosis was investigated the bovine type of bacillus was found to be responsible for the disease in 37 per cent of the 211 meningeal cases the percentage of bovine origin was 46.4 in children under 5 and 20.0 in cases of 15 years and over. In 208 cases of bone and joint tuberculosis the percentages were 46.0 and 29.7. There has been a marked incidence of diphtheria in Scotland during the past few years and in 1937 there were 10,960 cases with 426 deaths. It is pointed out that antitoxins of immunized cattle and diphtheria have made little progress and are not effective.

in the areas of only some half dozen local authorities, so that a wide extension will be necessary if the general incidence of the disease is to be influenced in future. A central register of available supplies of malarial blood for the treatment of general paralysis has been continued by the Department, but during the year only six sources of malarial blood were notified and eleven applications for an available supply received.

### Maternity and Child Health

The outstanding feature of the year was the passing of the Maternity Services (Scotland) Act, 1937, of which the general object was to secure that the standard of domiciliary maternity services in Scotland should be comparable with that of institutional services. Local authorities under the Act must arrange that there will be available to any woman who is to be confined in her own home, and who makes application, the joint services of a medical practitioner and of a certified midwife throughout pregnancy, labour, and the lying-in period, with the advice or help of an expert obstetrician if the practitioner should think this necessary. It is assumed that all confinements attended under these arrangements and expected to be normal will be conducted by the midwife alone, while the medical practitioner will attend only those cases in which either he anticipates some difficulty or he is summoned by the midwife. The present position is that the schemes of individual local authorities are being submitted to local representatives of the medical profession, and it is expected that the new service will shortly be in operation. Maternal deaths numbered 423, seventy-one less than in 1936, and the mortality rate for the year was 4.8 per 1,000 births as compared with 5.6 for 1936. This was the lowest maternal mortality rate in Scotland since the beginning of the present century. Infant mortality during 1937 was 7,050 as compared with 7,315 in 1936, the rate being 80 per 1,000 live births as compared with 82 in 1936. The chief causes of infantile deaths were congenital malformation and bronchitis with pneumonia. Among children between 1 and 5 years, whose estimated number was 318,000, the total deaths were 2,195 and the mortality rate 6.9 per 1,000, as compared with 7.6 in 1936. Among children of school age at 5 to 14 years deaths numbered 1,454 compared with 1,501 in 1936, and gave the lowest rate for this group yet recorded. The arrangements made by local authorities under the Notification of Births Act, 1915, for attending to the health of expectant and nursing mothers and of children under 5 years are based on home visitation by health visitors. In the large burghs health visitors are mainly whole-time officers of the local authorities, while in country areas local authorities usually arrange for the services of district nurses as part-time health visitors. At the end of the year there were 502 whole-time and 644 part-time visitors in Scotland with 254 welfare centres provided under the schemes. There are in Scotland approximately 767 beds allocated to maternity patients in local authority institutions and 624 in voluntary hospitals, a total of 1,391, in addition certain voluntary institutions take maternity patients as occasion requires. The report shows that cases of damage to the eyes as the result of ophthalmia neonatorum are still prevalent. The number of cases of ophthalmia neonatorum notified during 1937 was 1,688 as compared with 1,379 in 1936, and in the past ten years there have been fifty-eight cases in which there was appreciable loss of vision including seven of total blindness. Under present arrangements a routine medical examination of school children is made on three occasions during school life. The incidence of defects varies little from year to year. A remarkable fall has taken place in the incidence of rickets during the past twenty-seven years from 9 per cent in 1910 to 1.5 per cent in 1937 and this is attributed as regards Glasgow largely to the provision of new open-air schools and open-air classrooms.

### Highlands and Islands

During the year the county council of Caithness appointed a consultant surgical specialist in that county and the trustees of the Belford Hospital at Fort William appointed a whole-time surgical officer and superintendent of the hospital. A scheme is now in progress for the erection of a new general hospital for Shetland, with the aid of a substantial grant from the fund. The Department has also instituted a scheme of grants for surgeons in the Highlands and Islands who undertake an approved refresher course at one of the large hospitals. The Highlands and Islands (Medical Service) Scheme now operates in regard to 151 medical practices. Grants were paid to county councils in respect of twenty removals by aero plane ambulance of urgent cases.

### National Health Insurance

There were 30,754 cases of "chronic" invalidity in the year to June 30, 1937, accounting for 11,225,210 days of incapacity, or about 40 per cent of the total days of incapacity in the year. This is equivalent to one insured person in every sixty being unfit for work throughout the entire twelve months. In order of importance, nervous diseases (mostly insanity), rheumatic conditions, circulatory conditions, tuberculosis, and bronchitis together account for two-thirds of the chronic cases. So important did this matter appear that the Department instituted an intensive investigation into it, which was being actively prosecuted during the closing months of 1937. Dental benefit continued to be the most important of the additional treatment benefits, and accounted for £271,060 during the year under review. The number of insurance practitioners in Scotland has varied little in recent years and on January 1, 1937, was 2,025. The total sum paid to them in capitation fees (excluding mileage) was £867,150. The mileage allowances to doctors in county areas of the Lowlands amounted to £42,500, and £10,000 was paid from insurance funds towards expenditure on the Highlands and Islands Medical Service. The number of prescriptions issued by doctors and dispensed by chemists for insured persons was 3,073,038, the number per person being 1.73, as compared with 1.72 in the previous year.

The report may be obtained from H.M. Stationery Office, 120, George Street, Edinburgh, price 3s 6d net.

## RHEUMATIC DISEASE A TRANS-ATLANTIC BROADCAST

An international broadcast on rheumatic heart disease, arranged by the American Heart Association in co-operation with the Empire Rheumatism Council, took place on Monday, May 2.

### England to America

Lord HORDLER, chairman of the Council, speaking from London, greeted America as the sturdy warrior in all campaigns against disease. The greatest monument to the triumphs of medical research, he said, was the Panama Canal which American engineers were able to build only by first abolishing tropical disease in the area. He hoped that America would do as good work against rheumatic disease which if cancer was excepted was 'public enemy No. 1'. In the United Kingdom rheumatic disease was the greatest of all the killers though it concealed its murders under the mask of heart disease. The line of combat must be first by research to discover the causative factors, and then by diligent effort in the field of preventive medicine to build up effective barriers. There was much evidence that the type of rheumatism which affected the heart was closely associated with bacterial infection, and it would surely not be long before

this association was clarified. But sociological factors, environment and possibly heredity must also be considered. Lord Horder said that he had recently had the opportunity of studying the figures of the incidence of acute rheumatic disease among 30,000 youths in certain training institutions. All of them had been examined and passed as first class lives. The greater proportion were drawn from the poorer classes and among these the incidence of acute rheumatism in a year was nearly 5 per thousand and of other forms of rheumatism over 7. But in the smaller proportion who were drawn from well-to-do classes the cases were so infrequent as to be almost negligible. Here was a clear indication of a sociological factor. Acute rheumatism was an infectious disease but some circumstances of early environment made the child's body a more favourable soil in which infection could flourish. Lord Horder then described the work of the Empire Rheumatism Council which he said welcomed the prospect of a close alliance with the United States in its investigations. He closed with a splendid vision of a world from which all preventable illness had been banished in which sickness was only the penalty of wickedness or of folly. The vision might be made a reality if men were wise enough to see the futility of fratricidal strife.

### Speeches from the U.S.A.

Three speeches were made from America. Dr WILLIAM J. KERR of San Francisco expressed the co-operative spirit of the American Heart Association. According to statistics of the U.S. Public Health Service half the deaths due to heart disease occurred before the individuals had lived their normal span. Rheumatic heart disease alone caused 40,000 deaths every year and the average age of the victims was 40. Many clinical and laboratory studies were being undertaken in America on the subject and the American Heart Association was in a position to suggest how funds might be usefully employed. Dr HOMER SWIFT of the Rockefeller Institute for Medical Research followed with a short discussion on the causes of rheumatic disease. Climatic factors he said seemed very important along the North Atlantic seaboard. In some southern climates the incidence was less and the attacks as a rule more mild. Rheumatic heart disease rarely occurred among inhabitants of the Tropics unless they had contracted it elsewhere. Unfortunately it was not often possible for the susceptible individual to remove himself permanently to a favourable climate but sanatoriums in good situations comparable with those existing for tuberculosis were being provided either by voluntary endowment or by the public health authorities. Dr T. DUCKETT JONES of Boston Mass. added some remarks on the treatment of rheumatic heart disease dealing especially with the need for prolonged rest in bed which allowed the body to conserve its energy for the fight against the disease process. But it was also important concurrently with rest to protect the patient from anxieties and emotional difficulties and to educate both the patient and his family. Recently attention had been drawn to the possibility of the transportation of patients to a tropical or semi-tropical environment, but a word of caution must be spoken for such a method had not proved so far entirely satisfactory and was by no means a panacea. The establishment of small isolated non-tourist centres was desirable but the difficulty was to arrange medical and nursing care.

The day on which the broadcast was made was National Child Health Day in the United States. The broadcast was made at midnight (London time) but was received in New York and other cities early enough to allow of meetings being held the same evening to discuss the subject.

Dr Robert Richard has devoted his inaugural thesis (*These de Paris* 1937 No 790) to a description of the floods which have devastated Paris from the sixth century down to the present day. The floods were followed by epidemics of enteric fever, bacillary dysentery and malaria as well as by famine until the middle of the nineteenth century, since when they have been prevented by hygienic measures.

## OPHTHALMOLOGICAL CONGRESS

The annual congress of the Ophthalmological Society of the United Kingdom was held in London at the house of the Royal Society of Medicine on Thursday, Friday and Saturday April 28, 29 and 30.

### Causes of Exophthalmos

Mr R. FOSTER MOORE opened an interesting discussion on the differential diagnosis of the causes of exophthalmos. His paper included an analysis of 114 consecutive cases of proptosis not due to Graves's disease. Mr J. H. DOUGART followed with a consideration of the differential diagnosis in children. Mr T. E. CAWTHORNE discussed the problem from the point of view of the ophthalmologist. Among many interesting cases he mentioned that of a man who developed extreme proptosis after he had his nose suddenly. The proptosis was due to surgical emphysema probably caused by the rupture of an ethmoidal air cell. Such cases were no unusual after severe trauma as in boxing. Dr W. RUSSELL mentioned a South American gentleman who could locate either globe forward from the orbit, the mechanism being doubtful. Mr D. V. GORDON described a similar forward dislocation in a Pekingese dog. In these animals the condition was not uncommon and not always reducible so that the eye might have to be removed. Mr F. W. LAW gave an account of a sudden proptosis in a well-known oarsman following an orbital haemorrhage. Dr E. E. POCHIN discussed a not uncommon illusion in Graves's disease where unilateral proptosis was sometimes diagnosed though the actual condition was in fact a unilateral retraction of the upper lid. Close examination revealed a marked superior palpebral crease on the affected side. The lower lid was also at a slightly higher level in such cases. Mr A. F. MCCALLAN discussed the inflammatory causes of proptosis.

### Arteriovenous Aneurysm of the Cavernous Sinus

Arteriovenous aneurysm of the cavernous sinus region was the subject of a paper by Mr A. D. GRIFFITH and Mr J. ELLISON. The condition was usually traumatic in origin and ligature of the common carotid for its relief might be followed by hemiplegia. In view of this Mr Griffith described the procedure of temporary ligation of the common carotid, the ligature could be released if cerebral signs became manifest. Dr GORDON HOWES, the president of the Society, emphasized the possibility of cerebral complications following the attempted cure of cavernous sinus arteriovenous aneurysm by ligation of the carotid and considered the method of temporary ligation worth a trial.

Dr SPENCE MEIGHAN and Mr MICHAELSON described the clinical and pathological features of a case of glaucoma of the retina. They suggested that perhaps something more was required than the usual enucleation of the eye in such cases, possibly exenteration of the orbit or in some cases radium therapy. Mr M. H. WHITING discussed the so-called "meningoceles" of the orbit pointing out that they were usually meningo-encephaloceles.

Mr L. H. SAVIN described a case of acute iritis associated with acute gout of the great toe. Both conditions subsided dramatically after treatment with colchicum and dieting. Several other patients were described in whom gout appeared to have been the cause of ophthalmic disease. Mr Savin reviewed the literature of ophthalmic gout pointing out that in the last century many cases which would now be diagnosed as gonococcal in origin were then termed cases of "gout." He could find a number of instances in which ophthalmic gout had been verified pathologically. Mr F. W. LAW referred to argemone seeds as those mysterious white or brown vessel-like lines in the fundi which always puzzled ophthalmic surgeons. In

one instance an angioid streak seemed to be a retinal fold on histological examination, though by reason of the method of fixation adopted exact correlation by measurement could not be carried out. Miss E. E. CASS, Miss M. B. DOBSON and Mr E. B. ALABASTER discussed abnormal retinal correspondence and kindred topics.

### Anatomy and Physiology

On Friday morning Mr E. WOLFF described certain aspects of the anatomy of the optic nerve-head. The disk was pink after embolism of the central artery because it received its blood supply from the circle of Zinn. Miss IDA MANN gave a most interesting survey of the history of contact lenses, ranging from the hydrodiascope of Young in 1801 to the modern Dallos lens, with its individual scleral fitting and its ground and optically accurate corneal segment. Dr DOUGLAS ROBERTSON brought forward data which disproved the theory that the aqueous humour was a dialysate, he considered that the aqueous humour was a secretion. Sir STEWART DUKE-ELDER agreed that the aqueous was not a dialysate, but doubted whether available evidence went so far as to prove that it was a secretion. Mr F. T. RIDLEY suggested that normally the aqueous might be a dialysate, but the mechanism of its production might be modified under certain pathological and physical conditions. Mr T. H. HODGSON did not find from his experiments that the aqueous could be considered a dialysate. Fallacies in previous work had been due partly to the fact that no allowance had been made for alterations in blood-osmotic pressures due to the method of anaesthesia adopted for experimental animals.

Mr HARRISON BUTLER, next year's president, described a case of recovery from a severe post-operative iridocyclitis with hypopyon after the administration of prontosil; the patient had previously had gonorrhoea. Mr F. A. JULER pointed out that severe iritis with hypopyon sometimes cleared spontaneously. Mr R. LANG described a case of gonococcal conjunctivitis in which prontosil had proved valueless.

### Treatment of Epiphora

On Friday afternoon Mr A. GAYER MORGAN read a paper on the treatment of epiphora. In occlusion of the nasal duct in infants he always tried conservative measures first. When probing was necessary he passed the probe through the upper punctum. Intranasal lupus was a cause of epiphora in older children likely to be overlooked. In adults 80 per cent of infected sacs were seen in females. He analysed twenty-five cases in adults in which he had performed the operation of Dupuy-Dutemps, the sac being drained into the nasal cavity through a hole in the bony partition with the two mucous membranes anastomosed. The results in nineteen cases were completely successful, in two partially so, four cases were failures.

Mr A. SORSBY and his colleagues reported on cases of phlyctenular disease seen at White Oak Hospital, Swanley. Considerable evidence was produced to show that tuberculosis played a part in the aetiology of most of the cases, but in a minority group of a slightly different clinical type no evidence of tuberculous disease could be obtained. In the evening Mr Sorsby demonstrated two patients with fundi stained by a harmless green dye. This was injected either intramuscularly or intravenously, and brought out details which might otherwise be obscure, such as small holes in a detached retina.

### Methods of Anaesthesia

On Friday evening there was an interesting discussion on methods of anaesthesia applicable to ophthalmic operations. Mr T. K. LYLE reported on 930 cases in which evipan anaesthesia had been used at the Royal Westminster Ophthalmic Hospital. He said that even children now-

adays were "injection-conditioned," and so suitable for evipan anaesthesia. Jactitation was unusual under evipan anaesthesia, particularly if omnopon and scopolamine were given before operation, the airway had to be maintained. Mr BASIL GRAVES and Dr E. S. ROWBOTHAM discussed the advantages of paraldehyde analgesia. Considerable discussion followed on the technique of cataract extraction under such analgesia (see *Journal*, 1937, 2, 319). Mr Graves and Mr H. B. STALLARD described their experience with corneal stitches. Mr E. R. TRIVY thought that excessive attention to detail slowed down the normally quick course of a cataract extraction. He did not believe that any special advantage was gained by the unduly slow performance of the operation or by unnecessary mutilation of the eye by redundant procedures.

Dr T. R. HILL read a paper on the relation between neuromyelitis optica and certain cases of disseminated sclerosis.

On Saturday a new apparatus was demonstrated by Mr R. H. RUSHTON for measuring the axial length of the human eye *in vivo* taking advantage of the fact that the dark-adapted eye is sensitive to x rays, it was thought that this apparatus might be of assistance in investigating the problem of myopia. Dr E. C. DAX described how he had found a substance in the urine of eleven cases of retinitis pigmentosa which would disperse the melanin granules of frogs. This substance had never been found in the urine previously except in pituitary disorders. Miss D. R. CAMPBELL and her colleagues described a form of abiotrophy of the retina in rats, considered analogous to human retinitis pigmentosa. Dr T. J. NICHOLL disputed the validity of the Wagenmann experiments on which the vascular theory of retinitis pigmentosa was based. Mr M. L. HEPBURN supported this theory. Mr HAINES showed a new instrument for investigating dark adaptation. Mr P. MCG. MOFFATT described the use of acetylcholine in the treatment of tobacco amblyopia.

### THE ANNUAL BANQUET

On the evening of April 26 the annual banquet of the Ophthalmological Society was held at the Langham Hotel, with the president, Dr Gordon Holmes, in the chair. In proposing the toast of "The Society" Dr Holmes said that it was founded in 1880, and of the sixty-three original members three survived—Sir George Berry, Sir Thomas Barlow, and Sir Lindo Ferguson of Dunedin. The twofold aim of the founders—the scientific study of the eye and its disorders, and the bringing together of all interested in ophthalmology—had been pursued throughout. Ophthalmology to-day held the position it deserved in the medical profession, its eagerness to keep contact with medicine as a whole brought reciprocal benefit. The health of the guests was proposed by Dr Percival J. Hay of Sheffield, who welcomed in particular Sir Cuthbert Wallace, P.R.C.S., Surgeon Vice-Admiral P. T. Nicholls, Medical Director General, R.N., Air Commodore A. V. J. Richardson, Director of Medical Services, R.A.F., the Master of the Clothworkers Company, whose interest in the welfare of the blind was well known to the members, and the Editors of the *Lancet* and the *British Medical Journal*. Sir John Parsons, who replied as President of the Royal Society of Medicine, found difficulty in thinking of himself as a guest at this gathering of fellow ophthalmologists. Major General W. P. MacArthur, Director General A.M.S., also responded to the toast, and acknowledged the Society's hospitality in a few graceful words. The health of the President was proposed by Mr Leslie Paton, one of his earliest friends in England, who called up memories of long-past days at Queen Square, and claimed a share in linking neurology and ophthalmology in the person of G. H. He said that Gordon Holmes, as a neurologist, president of the Ophthalmological Society, was a worthy successor to Hughlings Jackson.

## TRAVELLING FELLOWSHIPS IN MEDICINE

The Medical Research Council invites applications for its Rockefeller Medical Fellowships for the academic year 1935-36. These are provided from a fund with which the Council has been entrusted by the Rockefeller Foundation of New York. They are intended for British graduates who have had some training in research work in clinical medicine or surgery or in some other branch of medical science and who are likely to profit by a period of work at a centre in the United States or elsewhere abroad before taking up positions for higher teaching or research in the United Kingdom. The stipend will ordinarily be at the rate of £360 per annum for a single Fellow and of £480 per annum for a married Fellow. Travelling expenses and some other allowances will be paid in addition.

The Council also invites applications for four Dorothy Temple Cross Research Fellowships in Tuberculosis which are awarded from a special endowment of which the Council is trustee. The object of these Fellowships as defined in the trust deed is to give special opportunities for study or research to suitably qualified British subjects of either sex intending to devote themselves to the advancement by teaching or research of curative or preventive treatment of tuberculosis in all or any of its forms. The stipend will ordinarily be at the rate of £360 per annum for a single Fellow and of £480 per annum for a married Fellow with an allowance for travelling and incidental expenses.

Completed applications for Fellowships of either type must be lodged with the Council not later than June 1, 1936. Further particulars and forms of application are obtainable from the Secretary, Medical Research Council, 58 Old Queen Street, Westminster, S.W. 1.

## Reports of Societies

## THE HANDICAPPED CHILD

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on April 27, Sir ARTHUR MACNALLY, presiding, an address was given by Dr W. ALLEN DALEY of the London County Council on *School Life and After for the Handicapped Child*. It was illustrated by a film showing the special services of education in London and by specimens of the handiwork of children in special schools.

Dr Daley said that by a handicapped child he meant one who by reason of mental or physical disability was at a permanent disadvantage both at school and in after life. Certain American writers termed these children the "underprivileged." They comprised mental defectives, cripples, deaf and partially deaf blind and partially sighted and epileptics. Parliament had required local education authorities to provide special education for the blind and deaf since 1893 and for the mentally and physically defective since 1899. The present law relating to the education of handicapped children was contained mainly in Part V of the Education Act 1921 and briefly was to the effect that education authorities had certain duties as to (1) the ascertainment of the defective and (2) the provision of special education.

## Extent of the Problem

He next considered the size of the problem taking for this purpose the London figures as ascertainment was probably as complete there as anywhere in the country. The numbers of children in London attending special schools in 1936 (excluding those attending open air schools for delicate children and those in hospital schools) were as follows:

## Children at Special Schools

Defect	Number	Rate per 1,000 School R.
Verall defective	3,752	6.9
Physically defective	3,451	6.3
Epileptic	117	0.2
Blind	111	0.2
Partially blind	63	1.2
Deaf	6	0.01
Partially deaf	1-3	0.01
	3,66	1.7

In the case of the mentally defective the big figure was reached just before the war. The physically defective showed a continuous tendency to rise but this was due to the increasing number of cardiac cripples admitted. Those crippled in limb were less numerous than formerly. The figures for the blind and partially sighted showed a decrease during the period 1918 to 1925 after they had steadily until two or three years ago since when they had declined. There had been little change in the figure for the deaf and partially deaf. The decline in the certifications of both the mentally and the physically defective since 1930 was an indication of the rapid fall in the number of London's school children and the falling birth rate.

## Mental Defectives

Children might be required to attend schools if they were mentally defective from the age of 7 and might be retained until 16 if when due to leave the local education authority was of opinion that further institutional care, guardianship or supervision was required; the names of the children had to be forwarded to the local mental deficiency authority. The feeble-minded with whom he was specially concerned in this connexion were capable of deriving benefit by education in special schools and classes and so possibly taking a place in the community later on although that place might be a lowly one. They could be taught usually to do a varied range of very simple often of low grade and occasionally learnt a simple expert process. The mentally defective child usually came to notice in school by his failure to adapt himself to his surroundings and to learn. It was the duty of his head teachers when satisfied of this failure to bring such children to the notice of the school doctor who in his turn must satisfy himself that there existed no marked physical defect such as deafness or defective vision which of itself might account for the backwardness. It was then his duty to refer the child for statutory examination by the approved medical officer. The diagnosis of mental defect was not the mere arbitrary application of a scale of intelligence tests such as the Binet-Simon scale or one of its modifications. It was based upon a complete survey of the child's physical and mental reactions supported by evidence of his medical and educational history and was very properly the province of the medical man alone. In practice it was shown that educable mental defectives had intelligence quotients between 20 at the lower limit and 70 at the upper. The number of children in the schools for the mentally defective in London in 1907 was 3,840 being 7.9 per thousand of the children in the elementary schools. In 1917 the rate was 10.6 in 1927 9.2 from which figure it had fallen continuously until in 1936 it was 7.4. Dr Daley thought that it must be concluded that there had been some slight decline in the proportion of feeble-minded children in the London school population during the last ten years.

The functions of the school for mental defectives were two: to teach the defective by means of a modified curriculum.

culum directing his footsteps to some occupation he could usefully follow, and to stabilize him. The stabilization resulting from years of discipline and training under the care of specially experienced teachers was by far the more important function. When a child in such a school attained the age of 15 the question arose whether he needed the protection of the Mental Deficiency Acts. The head teacher reported on a special form setting out the child's attainments; the school medical officer signed the certificate of feeble-mindedness except in the rare cases where at this late stage, it was decided that the diagnosis was not justifiable and it was for the education committee to decide after careful scrutiny of the reports whether the case should be passed over to the mental deficiency committee for supervision, guardianship, or institutional care. Of the 563 children notified to the Mental Deficiency Committee in London in 1936, 486 were placed under supervision and of this number two-thirds had found work and one-third were out of work. The occupation followed by defectives under statutory supervision was chiefly factory work, but the list included lorry drivers, plumbers, soldiers, tailors, and even canvassers and travellers.

### Physically Defective Children

The number of children in the schools for the physically defective in London in 1936 was 3,451, being 6.8 per thousand of the elementary school population. The rate ten years ago was 6.0, and twenty years ago 5.4. An analysis of the causes of crippling showed that children crippled in their limbs had been replaced by those crippled by heart disease. The proportion of cardiac cripples now in the special schools approached 50 per cent of the total. There had been a considerable decline in the proportion of children crippled by tuberculous disease of bones or joints.

*Children Admitted to Schools for the Physically Defective*

	1921	1926	1931	1936
Tuberculous bones and joints	254	255	215	100
Rheumatism, chorea, and acquired heart disease	282	327	611	325

Inquiry had been made in 1,900 unselected cases on the register of the After-Care Association in December, 1937, and showed that 85 per cent of these children had had some work since leaving school. The proportion certified as unfit for industrial employment was 3.3 per cent.

### Children Deaf or Blind or with Mixed Defects

The London County Council provided six day and two residential schools for the deaf. Recently twenty-three group hearing aids had been installed in the special schools for children with defective hearing. These were powerful amplifiers which give the ordinary radio signals, but which by means of a control converted the radio amplifier into a microphone to convey the sound of the teacher's voice to the children through their earphones. Children who could not develop speech naturally, and hitherto had been taught by lip reading, now had the advantage of sound stimulation through the normal channel and could thus learn by sound patterns in conjunction with visual patterns. The deaf had little difficulty in obtaining and retaining employment.

There had been a very gratifying reduction in the number of blind children of school age in London. The number on the school roll in 1914 was 415 or 0.62 per thousand; in 1936 it was 85 or 0.17 per thousand. All the day schools for the blind had now been closed as it was impossible to find enough blind scholars to fill them and the work was limited to two residential schools. The

classes for the partially sighted were a more difficult and controversial problem. London was the home of such classes, which were first established in 1908 on the advice of Mr. Bishop Harman, then consulting ophthalmic surgeon to the Council. There were now ten such schools in London. The number of scholars reached its maximum (981, or 1.57 per thousand) in 1929. In 1936 the number was 632 (1.25 per thousand), and was still declining. It had lately been suggested that a stricter selection of myopes should be exercised, and criteria for admission were recommended which would exclude certain children. These were based on an attempt to differentiate between physiological and pathological myopia, selecting only the latter for the special classes. It was admitted, however, that there was no certain method of differentiating between the two, and as damage might result while ordinary education of a pathological myope was continued, the position was by no means satisfactory. It was clear that further research into the problems of myopia was urgently necessary.

The outstanding feature of the London special school service was the Rayners School (residential) at Penn for children with mixed defects. All were deaf, and some were, in addition, mentally defective, some deaf and blind, or partially sighted, and some deaf and crippled. It was a finely situated country house in delightful grounds, and the patience of the teachers was beyond praise. In fact, in such a school the teacher's art reached its highest point. Of 264 pupils who passed through this school between 1921 and 1936, 161 were now self-supporting and thirty-nine others were in employment, though not of a self-supporting nature. With regard to epileptics, it was only when the fits were really troublesome that arrangements were made for the child to be sent to a colony. London maintained 117 epileptic children in the various colonies, this being 0.23 per 1,000 on the school roll, and the ratio had not altered appreciably for some years.

Dr. Daley concluded with some remarks on the hospital schools of London, of which there were eleven; the number of children in these schools at the end of last year was 2,738. Of this number those described as suffering from rheumatism amounted to 773, and from tuberculosis 652. These hospital schools played a very important part in both the public health and educational services of the county. The bodies of the children were restored to health, which often took many months and sometimes years, and meanwhile their minds were not neglected. Their lessons often had a therapeutic value and ensured also that when their in-patient treatment was completed they could take their part in the educational system, either in ordinary or in special schools.

Dr. BERNARD SCHLESINGER followed with a film illustrating the routine in hospital schools for cardiac cases, in particular at the Children's Heart Hospital at West Wickham. Dr. J. G. JOHNSTONE, orthopaedist to the London County Council, mentioned that the incidence of non-pulmonary tuberculosis in London had fallen by 69 per cent during the last fifteen years. He mentioned the great importance of continued after care, after care of these patients should not cease on leaving school.

Dr. C. E. THORNTON, divisional medical officer in charge of the Council's rheumatism scheme, said that in 1926 the school doctors found, out of about half a million children examined, that 0.2 per cent were suffering from some form of acquired valvular disease. In 1936 the percentage was 0.8 per cent. Dr. A. G. WELLS gave some account of schools for the deaf, and dealt with the special handicaps of the partially deaf. He pleaded for the passing into legislation on behalf of the deaf some measure corresponding to the Blind Persons Act. Two headmistresses of schools for the physically defective gave an encouraging account of their experience, and Dr. CLARA TROTTER, as medical officer of health for London, brought paid a high tribute to the work of the London County Council.



## THE NEW DIVORCE LAW

At a meeting of the Medico Legal Society on April 28 with the President SIR TRAVERS HUGHREYS in the chair Mr WILLIAM LATEY (barrister at law) read a paper on the medico legal aspects of the Matrimonial Causes Act 1937

## Questions of Unsound Mind

Mr Latey said that Mr Herbert's Act introduced several elements about which the court would depend for guidance and elucidation on the medical profession. The court would have to determine whether a respondent in a divorce suit brought under sect 2 had been continuously under care and treatment for at least five years, was of unsound mind, and was incurably so. The Act contained no definition of the words of unsound mind and a court appeared to be prevented by the word and from basing a finding of unsound mind merely on the fact of five years continuous care and treatment. It could not be taken for granted in all cases that a person who had been under detention or supervision for five years was of unsound mind. A petition could not be served on a respondent alleged to be of unsound mind unless the medical attendant was satisfied that the communication would not be detrimental to the respondent's mental condition. This threw a heavy responsibility on the medical officer. A famous divorce judge Sir Gorell Barnes in *O'drovd v O'drovd* (1896) had applied the test. Is the condition of unsoundness of mind such as makes married life impossible or intolerable? That test however had only been used in considering a question of restitution of conjugal rights and in the far more serious issue of dissolution of marriage the court might be disposed to give a stricter interpretation.

To a layman the terms of unsound mind presented a bewildering variety but he could see that medical science had made enormous advances in prognosis and cure. It might be surmised that the courts would require cogent evidence from the medical attendant of the degree of the respondent's insanity. The evidence would need to be still stronger if the patient had not been certified but had sought treatment voluntarily. An important question when the courts would have to consider was whether the evidence should show that the patient would never be fully mentally sound again or whether he would never be certifiable again should he be discharged at any time from care and treatment. In one case the court might feel bound to dissolve a marriage where the doctors thought that the patient might recover sufficiently to take his place in society and lead a harmless life but that his mind would not achieve complete normality. A difference of opinion between doctors has already appeared in certain instances, and some medical attendants and superintendents had at first declined to give an opinion for the purposes of the Act. A letter in the *Times* of March 12 had questioned whether giving information would constitute a breach of professional confidence. Refusal would stultify the law especially for poor persons who could not afford an outside specialist. Moreover the outside specialist would need access to the records before forming his opinion. The difficulty could be overcome if there were a panel of medical inspectors of the court functioning in the same way as medical inspectors in cases of nullity and impotence.

## Grounds for Annulment

The Act provided for a decree of nullity on grounds of insanity at the time of the ceremony. The Marriage of Lunatics Act, 1811 made it impossible for a lunatic to contract a legal marriage even during a lucid interval. In a certain number of cases during the last thirty years decrees of nullity had been granted on the ground of mental incapacity to understand the nature of the contract. Some people had only heard of this old law

as a result of making inquiries about relief under the new Act. Lawyers would be interested to know whether epilepsy in any form could be regarded as one of these diseases of the mind which incapacitated a sufferer from truly appreciating the implications of marriage. Further the Act provided that a marriage could be annulled on the ground of wilful refusal and the new Matrimonial Causes Rules did not oblige the petitioner in such a case to go through the formality of medical inspection but merely permitted an application by either party, to examination by the medical inspector of the court. If the putative wife petitioned it was possible that the court would require proof of her virginity though probably the evidence of a private practitioner and examination would suffice. Where the petitioner was the putative husband it was an open question whether or not the court would require an examination of the respondent in an undetected case. It was well known to be extremely difficult to determine virginity. Probably in this kind of case gynaecologists would often be called upon to give expert evidence. The Act further provided that a spouse might petition for nullity within a year of the ceremony, the husband or wife had been at the time of the ceremony suffering from communicable venereal disease. Any spouse who contracted venereal disease except from the one spouse was already held *prima facie* to be guilty of adultery. A divorce had been granted on these grounds because a husband was suffering from cutaneous venereal itch (*Stead v Stead*, 71 Sol J 391). Whether or not his disorder should properly be regarded as a venereal disease within the meaning of the new Act would probably depend on expert medical opinion. It would also be to decide to decide whether inherited venereal disease was communicable.

## General Discussion

The PRESIDENT said that the question of incurability would not be left to medical witnesses to decide any more than were a great many other matters on which they gave evidence. *Prima facie* the court would be guided by the opinions of experts. The judge would as in every other kind of case come to his conclusions of fact upon the evidence before him. Mr. F. J. MCCANN spoke of the fallibility of the appearance of the human as a guide to virginity.

DR J. L. MOIR declared that the Act had been a failure. Before its passing the law of lunacy, detention and detention should have been entirely reformed and put on a safe sure and scientific basis. Before a man was branded as of unsound mind he should be examined by a panel of experts and they should also assess the curability of his condition. There would then be a record of five years be a record which the court could use if a petition were presented. The British Medical Association had been advised that if a doctor gave an opinion upon the curability of a patient he would not be protected by the Mental Treatment Act from an action for damages. Venereal disease could be contracted innocently and the Act would apparently make it a ground for nullity even if it were not genital.

SIR ROBERT ARMSTRONG JONES declared that it was almost impossible to detain a curable mental patient more than five years. Apart from the formalities of certification before a year had expired a medical statement of his condition must be made to the Board of Control. Statements must be made at the end of the second, fourth and sixth years and every five years afterwards to the effect that he is still of unsound mind and a proper person to be kept under care and treatment. Moreover the Board of Control was to deliver an opinion in each calendar year every five years and in every licensed house in the London area six times and out of twice the justices having to make four visits. It was highly improbable that a patient would recover after five years. Cases were reported from the



to time, but they made up less than 5 per cent of all mental patients

DR R D GILLESPIE said that the Bill had filled medical men with a considerable amount of anxiety. Mental hospitals were already unpopular enough with the public and he was surprised that medical superintendents had not stressed the possible effects of the Bill when it was passing through Parliament. Perhaps it was an aftermath of this realization that made medical superintendents reluctant to give information about a patient's condition. They were deterred by a natural loyalty to their patients, apart from any desire to protect themselves. If a medical man were carrying out the law, he might state the facts without being accused of breach of confidence, just as he did when he was called in to grant a certificate without the patient's knowledge. Patients occasionally recovered after very long periods of insanity, but an extreme conservative attitude to this possibility might stultify the intentions of the Act. "Curable" and "recoverable" were not identical terms.

The PRESIDENT in closing the discussion, said that the court would have to decide whether the respondent, who must have been of unsound mind for a substantial period, had been shown by the evidence to be so unlikely ever to be cured as to be for practical purposes incurable. All that any doctor could be expected to do was to say that, taking all the known facts into consideration, he had formed the opinion that the patient could not recover. Incurability would be judged with regard to the necessities of married life. Perfection in prophesying the future was not to be expected, and the court would have to do its best.

### THYROTOXICOSIS

At a meeting of the Manchester Medical Society on April 6 Mr F H BENTLEY read a paper on an inquiry into thyrotoxicosis.

Mr Bentley described the late results of partial thyroidectomy for thyrotoxicosis, and discussed the relationship between thyrotoxicosis and gastric acidity. General clinical examinations, estimations of the basal metabolic rate, blood counts and fractional gastric analyses (with histamine) were carried out on eighty-four patients—twelve males and seventy-two females—more than six years after partial thyroidectomy had been performed for thyrotoxicosis. The average lapse of time since the operation was eight years. The clinical results showed 40 per cent of the patients completely well with no symptoms of any kind, 23 per cent completely well except for some palpitation on exertion, 30 per cent improved and working but still with some complaint such as nervousness, tiredness, dyspnoea or irritability and the results in 7 per cent were unsatisfactory. One third of the cases had at the present time a basal metabolic rate of plus 20 per cent or more, and a quarter of the cases had palpable thyroid tissue in the neck while a few of these belonged to the 'completely well' group. The majority belonged to the less satisfactory groups. It was suggested that there was some evidence in this series that the sympathetic hyperactivity continued in many cases after thyroidectomy, and that the sympathetic hyperactive state preceded the thyrotoxic one being an agent in stimulating the thyroid into the increased activity of thyrotoxicosis. The gastric acidity had been studied in ninety thyrotoxic cases pre-operatively—seven males and eighty-three females—as well as in the later post-operative series. In the pre-operative series there was anaecidity in 22 per cent after correction of the figure for the normal incidence of anaecidity and 81 per cent of the cases had a maximal acid secretion of less than 40 units following the injection of histamine. The corresponding figures in the late post-operative series were 7 per cent and 69 per cent respectively. Thus the secretion of acid which was depressed during thyrotoxicosis showed

improvement after thyroidectomy, but acid secretion did not return to a normal level. While there was no relationship between depression of acidity and the duration of symptoms, a tendency for the depression to be more marked in the severe thyrotoxic cases was noted. Apparently two factors were involved in the depression of gastric acidity in thyrotoxicosis, one was removed by thyroidectomy, so permitting acid secretion partially to rise, and one continued to act, maintaining acid secretion at a subnormal level. The former factor was probably thyrotoxic sympathetic stimulation resulting from the thyroid toxæmia, and the latter sympathetic stimulation—a part of the sympathetic hyperactivity in which thyrotoxicosis originated and which continued after thyroidectomy.

## Local News

### ENGLAND AND WALES

#### International Red Cross Conference

The preliminary programme has now been issued from 14, Grosvenor Crescent, SW 1, for the sixteenth International Red Cross Conference to be held in London next month (from Friday, June 17, to Saturday, June 25) under the auspices of the British Red Cross Society. After business meetings on June 17 and 18 the opening session presided over by the Duke of Gloucester, will be held in St James's Palace on June 20, followed by a plenary session and an evening reception by the Government at Lancaster House. On June 21, 22, and 23 there will be meetings of commissions at British Medical Association House, Tavistock Square, with a reception at the Guildhall on the evening of June 21. June 24 will be given up to a plenary session, the closing session of conference, and a meeting of the Board of Delegates. On the last day the Board of Governors of the League of Red Cross Societies will meet at 14, Grosvenor Crescent, and a thanksgiving service at St Paul's Cathedral will follow at 3.30 p.m. Delegates from over sixty nations and National Red Cross Societies will attend the conference, which had originally been arranged to meet in Madrid. Prominent on the agenda is the consideration of the revision of the Geneva Convention. It is hoped that new principles dealing with war in the air will be proposed, and that the Geneva and Hague Conventions may be merged so that land, sea and air warfare will be dealt with in a single code of laws. A plan for the creation of neutralized hospital zones in war areas, sponsored by the International Congress of Military Medicine, will also be discussed.

#### Extensions at Staffordshire General Infirmary

The extensions to the Staffordshire General Infirmary are to be opened by Lord Horder on Saturday, May 7. They consist of an 'L'-shaped wing of three floors. The ground floor is occupied by a new x-ray, electrotherapeutic and massage department, and other improvements to be housed here are an electrocardiograph and a larger clinical laboratory. On the second floor is a male surgical ward of twenty beds and a children's ward of sixteen beds, together with the usual sanitary annexes, kitchen, and duty rooms. The upper floor is an up-to-date private nursing home, a complete unit in itself, containing four teen single bedded rooms for paying patients, with bath rooms, kitchen, visitors waiting-room, duty room and sterilizing room. Each room is fitted with a built-in wardrobe, wash-basin, connexion with the public telephone and a luminous call system worked from the beds. Special attention has been given to making the building soundproof, and the colour schemes throughout are light and pleasing. Each ward kitchen has a refrigerator. The walls and ceilings are sound- and heat insulated, and the

heating is by a low pressure hot water system capable of sustaining a minimum temperature of 65° F when the outside temperature is at freezing point. The Infirmary was founded in 1766 and is one of the oldest voluntary hospitals in the provinces. William Withering one of the most famous figures in medicine and renowned for the discovery of the use of digitalis in certain forms of heart failure spent some ten years of his career as physician on the staff of the hospital. Modern medicine has still no better drug to offer for the treatment of heart failure than this extract of the common foxglove and Stafford should always be remembered as the place where Withering made his early pharmacological studies.

#### Presentation to Dr Spurgin

The jubilee dinner of the Metropolitan Police Surgeons Association was held on April 28 at the Holborn Restaurant with Dr Percy B Spurgin the retiring president in the chair. A large number of members and their friends were present among the guests being the Commissioner Sir Philip Game Dr P B Skeels Sir William Willcox Dr Isaac Jones and other members of the headquarters medical staff and Dr G C Anderson. The evening was most successful the main feature being the presentation of a silver salver to Dr Spurgin by his colleagues as a mark of their appreciation of the work he has done for the Metropolitan Police Surgeons Association for many years, both on the council and as treasurer.

## IRELAND

### The Public Health

Recent annual reports of the Department of Local Government and Public Health for the Irish Free State have noted a gradual decline in the incidence of infectious diseases. The report for 1936-7 however states that the number of cases of the principal infectious diseases notified during 1936 increased from 7,478 the figure for 1935 to 9,924. This increase was due almost entirely to the epidemic of scarlet fever which was widespread throughout the country during the latter part of 1936 and the greater part of 1937. The incidence of diphtheria however continues to decrease the total number of cases reported during the year was 2,569 as against 3,091 in 1935. The fall is attributed to the vigorous immunization campaign which has now been carried generally into rural districts. On the subject of maternal mortality the report states that notwithstanding the attention this problem has received no substantial reduction in the death rate from pregnancy or child bearing has taken place in recent years. The rate in 1936 was 4.7 per 1,000 births the figures for the two preceding years were 4.67 and 4.65 respectively. It is considered that improvement could be gradually effected by extending maternity and child welfare schemes to all districts developing existing schemes to provide ante natal care for expectant mothers and institutional accommodation for difficult cases or for women whose home conditions are unsuitable encouraging closer co-operation between the mothers health visitors midwives and medical practitioners, and making arrangements for adequate feeding of expectant mothers whose family circumstances are not sufficient to enable them to obtain the extra foods necessary during pregnancy. Infant deaths reached a total of 4,309 representing a mortality of 74.15 per 1,000 births the highest rate recorded since 1926. This high figure was due largely to an increase in the rate in Dublin county borough and Dr Russell the medical superintendent officer of health stated in his annual report that deaths from diarrhoea and enteritis were mainly responsible and that cows milk carelessly handled during transit from the cow to the infant is frequently the vehicle for these infections.

### Puerperal Sepsis in Dublin

In the *Journal* of April 20 there appeared at page 95 an annotation on the planning of maternity hospital. The same subject with special reference to the needs of Dublin was discussed at a recent meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland. Dr A H Davidson Master of the Rotunda Hospital thought that a special isolation hospital was necessary for cases of puerperal sepsis it should be in the charge of an obstetrician who would have the assistance of a bacteriologist and a house surgeon. Dr C J McSweeney suggested that such an isolation block should be in the charge of a physician with the assistance of a consultant obstetrician and might well be part of the new Dublin fever hospital. He said the Queen Charlotte Septic Block a unit of thirty beds cost £7,503 exclusive of the bacteriological department which was estimated to cost over £4,000. Situated in a fever hospital such a unit would not cost half as much. Dr J F Cunningham Master of the National Maternity Hospital believed that the problem would be better solved by the establishment of a special department connected with one of the general hospitals. Dr R M Corbett Master of the Coombe Hospital thought the arrangement of the Frith Auxiliary Hospital in Shemeld three miles from the Jessop Hospital with which it was affiliated ideal for the treatment of puerperal infection. Dr Falkiner supported the suggestion that the cases should be nursed in an isolation block connected with the fever hospital. He agreed that it would be necessary to accommodate some 200 cases a year and thought it would be advisable to make puerperal pyrexia no more in Ireland. The discussion ended inconclusively but there was general agreement on the need for special accommodation for cases of puerperal sepsis though some difference of opinion as to how this could best be provided.

### Radiological Conference in Belfast

The programme has now been issued for the fourth annual general meeting of the British Association of Radiologists to be held in Belfast on Friday May 13 and Saturday May 14 at the Whitley Medical Institute, College Square North. The proceedings will open with the installation of the president Dr R M Beath who will give an address followed by a paper on Chronic Flaccid Paralysis as seen from a Radiological Standpoint by Professor P Flemming Moller of Copenhagen. The first part of Friday afternoon will be devoted to Radio-diagnosis the discussions being opened by Dr T Garrett Hardman of Dublin Dr J F Brailsford of Birmingham and Dr Peter Kerley of London. After tea at the Royal Victoria Hospital there will be an inspection of the Hospital Centre and the annual dinner of the Association at Thompson's Restaurant. On Saturday morning a symposium on Radiotherapeutics will be led by Dr S Cochrane Shanks of London Dr J Ralston Paterson and Margaret Todd of Manchester and Dr R McWhirter of Edinburgh. In the afternoon there will be golf at New Eddlestone and an excursion to Larn and Ballinacastle. Full particulars can be had from the Secretary British Association of Radiologists 32 Welbeck Street London W1.

An announcement regarding the award of Farnham Research Foundation fellowships for cancer research was made in the columns on November 20 1937 (p 1057). The secretary of the Foundation Dr William A Farnham Medical and Chirurgical Faculty Building 1211 Cathedral Street Belfast more than now apply a statement of how they are selected for one year at a recent meeting of the Board of Directors. One of the selectors Mrs Margaret E Farnham for years with Professor E L Kennaway at the Royal Cancer Hospital London. Applications for next year should be in the hands of Dr Fisher on January 1 1939 the appointments being made in March 1939.

## Correspondence

### The Incision for Appendicectomy

SIR—The annotation on the incision for appendicectomy in your issue of April 16 (p 860) entirely ignores the oblique muscle cutting incision in the right iliac fossa, which was brought before the profession by Emeritus Professor Rutherford Morison many years ago (*Edin med J* March, April, May, 1897, *Lancet* February 23, 1901). This incision is almost universally employed by the surgeons of the Newcastle School, and, having been used in thousands of cases of all variety, it can now be said to have stood the test of time and to have come out with flying colours. Since coming to London I have frequently had the opportunity of demonstrating this incision to numbers of postgraduates, and I know that many of my younger friends have not only adopted it but are enthusiastic as to its possibilities and advantages.

I would, however, like to take this opportunity of emphasizing the necessity for care in closure. This must always be done carefully in layers with interrupted sutures, and the surgeon must always use sufficiently strong catgut. I always employ No 3 for the deeper muscles and No 1 for the aponeurosis and in both cases I use catgut of the chromicized variety. It would be wrong to say that incisional hernia never occurs but I think it is quite fair to claim that it is not more frequent or more troublesome than the hernia which may occur after any of the other incisions which are commonly employed in dealing with acute appendicitis—I am, etc.,

London W 12 April 28

G GREY TURNER

### Origin of Cancer

SIR—Although the papers by Drs W E Gye and W Cramer which have recently appeared in the *Journal* are of the greatest possible interest as indicating the trend of present-day investigations, I find the letter of Dr J V Fiddian (April 30 p 973) of exceptional importance. In it he suggests a line of approach to the problem which so far has been neglected. The current idea seems to be that as the essential nature of cancer is a purposeless increase of proliferative cellular activity, such activity is due to some factor or factors which enter the cell from without. It does not seem to have occurred to the pathologists that an alternative explanation may be that the important factor is really an intrinsic one which has been all along inherent in the cell and only fulminates when a certain controlling mechanism has been put out of action.

In order to follow this latter line of thought we may take as a simple example the grandfather clock. Here the impulses to function are two in number and are inherent in two weights which are wound up weekly, the force is due to the gravitational pull of the earth and its potential is greatest when the weight is at the top. The descent of the weight in each case is controlled by a certain mechanism—in the one instance an escapement regulates the rate of revolution of the hands, in the other a striking mechanism fixes the striking times. By altering the length of the pendulum we may cause the clock to go too fast or too slow but it still ticks along at an even rate. If however we were to knock out the escapement altogether the clock would race so fast that it would soon destroy itself. Altering of the escape-

ment" may possibly explain the occurrence of benign tumours such as adenomata, lipomata, etc., and "complete elimination of the escapement" would explain the occurrence of malignant growths.

Thoughtful American palaeontologists when they observed long ago the sequence of changes occurring along certain definite lines during the slow upward evolution of great morphic groups of plants and animals found themselves impelled to postulate an evolutionary driving force, which as it acted in an apparently purposeful manner they called orthogenesis. More recently other thinkers have revived the same idea under the name of emergent evolution. As to the actual nature of these factors, although neither of these schools seems to be more clear than Topsy was when she speculated as to how she "grewed," they both agree that without some form of driving force phylogenetic evolution would have been impossible.

Some years ago it occurred to me that there is a remarkable parallelism between the development of the individual and the development of the group. Both begin in the simple and proceed to the complex, and each, after it has reached a certain culminating point, passes steadily to extinction. The life of the group is simply a long series of individual lives, working from below upwards, and there seems to be in the case of each group, as there is in the case of each individual, a certain definite fixed point beyond which further progress is impossible. It would seem as if the upward evolution of the group is dependent on the presence in the germ cells of a certain definite quantum of developmental energy or driving force. This is carried on through the successive generations at a slowly diminishing rate until it is exhausted, when the group dies. At each conjugation of ovum with spermatozoon a certain definite amount of developmental energy is liberated from a potential state and placed at the disposal of the zygote, just enough to carry on the ontogeny of the individual then starting its career. The ontogenetic process is controlled and governed by the genes which keep the driving force within bounds until the end of the individual's life when, the supply of force being exhausted, the individual dies.

In my opinion Dr Fiddian has definitely indicated a line of approach to the solution of the cancer problem when he states that the act of conjugation between spermatozoon and ovum "endows the resulting zygote with sufficient reproductive impetus to carry on cell division at a gradually reduced speed until the final exhaustion and death of the organism. Whether Dr Cramer's "sudden change" is due to conjugation between two pre-cancerous cells or is due to a process which first damages and finally knocks out the controlling (escapement) mechanism, as I am suggesting remains to be seen. Perhaps we are both very wide of the mark—I am, etc.,

Ramsey, Isle of Man May 1

E G FENTON

SIR—To say that our want of success in handling the cancer problem is due to ignorance of fundamentals is to stress the obvious. As conditions of viability are so narrowly defined a minute change in them can throw the whole system out of gear. Colloidal lead which although it has been used systematically, defeats its own purpose as it acts more powerfully constitutionally than locally. There are a number of chemicals which act locally and so exert only negligible general effects which might be employed to disorganize new growths. We are constantly making leather when treating patients suffering from severe burns as the action of tannic acid can be greatly accelerated by

an electric current surely it would be worth while to determine its effect on a superficial tumour. It by means of this or any other coagulant a practical method of treatment be found our knowledge of fundamentals will remain just about the same. If we are to employ the method used with such striking success by the great physicists, and seek to determine the unknown by establishing the quantitative relationships of two or more known properties we cannot afford to neglect any means which will broaden the foundation on which we base our reasoning. While we cannot use the flying particles which have enabled the recent great advances in physics to be made we can turnish moving pictures of systems in actual operation and so compare pathological and normal tissues. Moving pictures of cell life enlarged and appropriately slowed would afford marvellous revelations of intracellular action and allow ample time in which to study them. With a system at work under his eyes anyone accustomed to correlating quantities could not fail to increase our knowledge. Recurring problems in biology which involve multiple variables probably simply indicate that we have not found the common denominator which will reduce them to a single term. Apparently we shall have to seek to interpret vital action in terms of electric potential, to extend Volta's pile to include organic electrolytes, and to correlate potentials, valencies and the pH. It is a chastening reflection that while the physicist can tell us so much of bodies of the order of one millionth of one-millionth of a centimetre we know so little of the cell—a relatively huge organism—I am, etc.

Montreal April 12

RICHARD KERRY

### Fracture of Neck of Femur

SIR—The greatest barrier to progress is complacency. Mr Eric I Lloyd (*Journal* April 16 p 871) is commendably determined that we shall not be complacent about fractures of the femoral neck. But his pessimism calls for some of my optimism. He says Watson-Jones at Belfast this year, frankly admitted that his figure of 91 per cent had proved optimistic. I was reporting a subcapital fracture nailed and apparently cured in which removal of the nail after twelve months had been followed by re-fracture within a few days. Union was less sound than had appeared. What I frankly admitted was that I did not know how many more of my 91 per cent of apparently successful results were of this variety. I still do not know and I am certainly not proposing to remove any more nails to find out. I shall be content to wait for post mortem examinations to satisfy my scientific curiosity.

But there is more pessimism to neutralize. Nails break completely across in 8 per cent of cases. I am astonished. I have yet to meet one single personal case of a fracture of the femoral neck in which the nail has broken. Nails slow down union considerably. Where is the evidence? We cannot compare cervical fractures with each other because some have a normal blood supply to the head some an impaired blood supply and some no blood supply at all. It is the vitality of the two fragments which determines the rate of union. Because a few nailed subcapital fractures are not united even after twelve months we must not blame the nail. These are the cases which do not unite at all without a nail. Trochanteric fractures can be more closely compared because there is no vascular disturbance. In these cases the evidence suggests that union is accelerated not delayed by nailing. And it is because recovery is accelerated and facilitated that it is worth nailing many basal fractures.

On the other hand I entirely agree that it is not worth nailing impacted abduction fractures. These unite so rapidly without any treatment at all that operative procedures must surely be superfluous.

Mr Eric Lloyd's most profound observation is that the bad results of nailing are the results of bad nailing. One wishes that this aporism might be stamped on the head of every three flanged nail—I am, etc.

Liverpool April 24

R WATSON JONES

SIR—The statement that the abduction fracture of the neck of the femur should not be nailed must be examined with care.

We know that in reducing the ordinary abduction fracture perfect reduction cannot be obtained and a degree of slight coxa valga gives a good functional result. But these abduction fractures have frequently got an associated posterior displacement which is only shown in the lateral photograph and though the impaction may appear to be a disimpaction may occur or union may be delayed. I have recently seen three abduction fractures which had been treated conservatively—for example fixed in bed on a Thomas splint or plaster of Paris—and in which severe arthritis developed within five years. In the first patient the displacement shown in the antero-posterior radiogram was slight but when performing the arthrodesis one could see that displacement had occurred in the antero-posterior plane. It is for this reason that I object to the statement that the abduction fracture should not be nailed. However I admit that coxa valga *per se* can even be an advantage.

In my experience the disadvantages of the Smith Petersen nail enumerated by Mr Lloyd are rather common nor serious. I should have said that nail erosions were so unimportant that nobody mentioned it. I find it difficult to believe that nails break completely across in 8 per cent of cases. It has occurred twice in my sixty-six cases, one of which was nailed six months after fracture. I assume that a patient has bony union when six months after nailing clinical and radiological evidence appear to show that union has taken place. Presumably why Mr Lloyd considers that the Smith Petersen nail is superior to union is because it is acting as a foreign body but this is more than counterbalanced by the complications which it affords. I agree that one should wait three years before finally assessing ones end results but not three years before determining whether or not union has taken place.

The advantage of nailing the per trochanteric fracture is not the advantage of getting union as I admit that this occurs in any event but of getting union in good position without adduction and in this fracture adduction occurs only too frequently. One also obviates the drawback of having to restore mobility in the knee and there is the added benefit of never losing the mobility of the patient—I am, etc.

Norwich April 26

H A BRITAIN

### Injection Risks

SIR—In your annotation on injection risks (*Journal* April 30 p 955) the statement is made that the usual way is to autoclave every syringe and needle after each use, or an ideal unattainable in practice. This prompts me to mention a method which I have used for some years in preparing Record syringes (Maw's heat resisting) for blood cultures and hypodermic injections.

Three squares of Kraft brown paper about 8 inches by 8 inches are prepared. In one the plunger is wrapped with collar in position, the barrel is enclosed in a paper

and the two small parcels thus formed are wrapped together in the third piece which is secured by string. The divided syringe is then autoclaved at  $105^{\circ}\text{C}$  for fifteen minutes. After sterilization the paper is dried thoroughly, and it has been found that sterility is maintained for months in bag or cupboard if the paper is unopened. Needles are autoclaved point downwards in small test tubes (4 inches by  $\frac{1}{2}$  inch), a small plug of cotton-wool protecting the point. The tubes are stoppered with cotton-wool and a Kraft paper cap is tied in position to prevent drenching of the wool. From such a tube the needle can be dropped on to the syringe without handling. By this method a supply of sterile dry syringes and needles is available for instant use. The method works with all sizes up to 20 ccm. It is extremely inexpensive because the paper and string can be used repeatedly. Its efficiency has been shown by a long series of uncontaminated blood cultures often collected under unsatisfactory conditions in hotels and private houses.

A practical point concerns the method of wrapping the barrel and plunger. The component is laid diagonally on the paper, two opposite corners of which are brought together and the parcel then rolled up. In this way when the outer cover is removed the paper of each smaller parcel presents two corners which when grasped and gently pulled apart open the package, exposing the sterile component lying untouched on a sheet of sterile paper. In private practice a domestic pressure cooker would probably be quite effective as an autoclave.

The method is an adaptation of that used in bacteriological laboratories for the preservation of the sterility of pipettes—I am, etc.,

Bath April 30

H J GIBSON

### Dosage of Tuberculin

SIR—May I support Dr W Camac Wilkinson's refutation of the statement that the subcutaneous tuberculin test is not now used for diagnosis (*Journal* April 23, p 921). At the thirteen tuberculosis dispensaries of Down County Council and in numerous cases in Co. Down where the test doses are given by private practitioners under my direction test doses in doubtful cases of tuberculosis are still being given "with eminent success and no semblance of danger." Our method is as follows.

Having made sure that the patient's temperature does not exceed normal at any time of the day we give a first test dose of old human tuberculin (T) of 0.0002 ccm. After an interval of at least three days if no reaction has followed we give double the dose and so on up to six doses so that the sixth dose is 0.0064 ccm. If no reaction has occurred after the last dose we can assure the patient that he is not suffering from tuberculosis. If a definite reaction occurs at any stage the test doses are stopped and much smaller treatment doses begun. At the same time we can assure the patient that since the disease is so slight that it has had to be detected in this way a course of tuberculin treatment for six or nine months will make it all right.

It is unfortunate that statements by prominent physicians such as that quoted by Dr Wilkinson from *The Principles and Practice of Medicine* by Sir William Osler and Dr Thomas McCrae should have led to neglect of tuberculin. There is no doubt that harm can be done by wrong use but that is no good reason for not acquiring and teaching its proper use. I have still some reprints of a paper giving further particulars of our method and will gladly send a copy to anyone who asks for it—I am, etc.,

JOHN R GILLESPIE

Chief Tuberculosis Medical Officer,  
Co. Down

Belfast April 25

SIR,—I should like to endorse the remarks of Dr Camac Wilkinson on the dosage of tuberculin. It is indeed remarkable that such dangerous doses should have been quoted in a standard textbook of the standing of Osler and McCrae in three successive editions without comment. The fact that tuberculin administered subcutaneously has been largely abandoned as a diagnostic agent is no excuse for repeating dangerous and misleading information. From 1926 to 1928 I worked with Dr Camac Wilkinson and helped to administer tuberculin according to his methods, both diagnostically and therapeutically, in many hundred cases. I can say definitely that I never saw a single case harmed thereby. I have found myself unable to accept Dr Wilkinson's general thesis that a positive tuberculin reaction is in itself an indication for treatment, and therefore have found tuberculin of only limited value for diagnostic purposes. I am convinced, however, that in suitable cases it is a valuable therapeutic agent if administered according to the methods taught by Dr Wilkinson, and when so given is not dangerous—I am, etc.,

London, W 1, April 26

T W PRESTON, MD

SIR,—Having had twelve years' experience in the use of tuberculin, diagnostic and therapeutic, under Dr Camac Wilkinson at his Tuberculin Clinic I can confirm the truth of his assertion (*Journal*, April 23, p 921) that the administration by subcutaneous injection of 0.025 ccm or of 0.015 ccm original tuberculin, as suggested in *The Principles and Practice of Medicine* (Osler and McCrae) might be expected to produce disastrous results. What Dr Camac Wilkinson states that one-fiftieth of 0.015 ccm is a sufficient first diagnostic dose he is not in any way straining the truth. May it not be the case that tuberculin has been unpopular in the past through the recommendation in this, one of the leading textbooks in medicine, of such an excessive diagnostic dose? In my opinion it would be well worth while revising the dosage of tuberculin in the next edition of *The Principles and Practice of Medicine*—I am, etc.,

J GORDON HUME, MRCS, LRCP

London, W 1, May 2

### Insulin for Schizophrenia

SIR,—The leading article in your issue of April 23 (p 900) entitled "Insulin for Schizophrenia" calls for some comment.

Your leader writer mentions "spontaneous remission" in this disease, inferring presumably that this is entirely independent of treatment. The primary lesion in schizophrenia is definitely nuclear exhaustion and degeneration due to prolonged stress or shock of varying nature affecting neurones which are temporarily or constitutionally subnormal from a physical point of view. The obvious treatment, therefore, is the repair of the nuclear lesions before the decay has proceeded too far, and there is no doubt that with proper rest and care, suitable diet and treatment a high recovery rate may be expected if these cases are dealt with at an early stage, the great difficulty, as with other diseases but even more so with this affliction, is to get the cases under suitable treatment early enough.

There has been of late a marked and professional most regrettable tendency towards propagandism in relation to the treatment of mental disorder from the importation of psycho analysis to this country to the latest exotic—the production of coma by the depletion of glucose from the body fluids. The presence of

crystalloid in a definite concentration is just as much a necessity to the maintenance of normal physiological processes as any of the other normal constituents of the tissues, such as globulin leucithin etc. It is probable indeed that a normal glucose concentration in view of its influence on the stability of the colloidal constitution of the body fluids is of even more importance than is the case with other constituents. It just happens however that injection of insulin through the resulting sudden depletion of glucose affords a ready method of bringing about a spectacular and dramatic shock to the entire system of an extremely dangerous nature and closely verging on dissolution. To subject an early recoverable case of schizophrenia to such an irrational and gross experiment before trying treatment based on relieving the pathological condition present is an unwarrantable and entirely unscientific proceeding—I am etc

Stafford April 24

B H SHAW M.D.

### "Gonococcus Antitoxin" for Gonorrhoea

SIR—In the *Journal* of February 13 1937 (p 321) there was published a paper by Dr T Anwyl Davies on a new specific antitoxin treatment for gonorrhoea. In this paper Dr Anwyl Davies made a fairly substantial claim for this new treatment and since he is the director of the St Thomas's Hospital venereal disease clinic probably the largest and best known venereal disease clinic in the country, his results no doubt created a considerable impression among venereologists. Although I made certain pointed criticisms of the clinical technique employed in the work (February 20 1937 p 415) Dr Anwyl Davies's results were not again challenged until the publication of the comprehensive work on the same subject by Dr E T Burke and his three collaborators (March 19 1938 p 605).

Dr Anwyl Davies noted the great discrepancy in the clinical results (March 26 p 701) and wrote "Contradictory results in an attempt to evaluate new forms of treatment are of course not unknown. It is to be hoped that the cause of the failures described will be discovered as obviously the situation cannot be left as it is at present. Assuredly it cannot be left in its present condition but it is Dr Anwyl Davies who seems at the moment to be chiefly responsible for so leaving it. Otherwise apart from dealing with my general criticism of his clinical technique why does he not reply to the queries of Dr Burke and others (April 2 p 755) when they wrote

It would be interesting to know the reasons which prompted Dr Davies to use a dosage so much smaller than that which he recommended originally. Dr N Seaton-Taylor (April 16 p 872) wrote "Finally, it would be interesting to know whether or not Dr Anwyl Davies used protosol or some allied substance in some or all of his cases by way of adjuvant. To know the answers to these queries is not only interesting but vital if the object of the clinical researches undertaken is to be elucidated. If Dr Anwyl Davies is sincere in his affirmation regarding this anomalous state of affairs then he must reply to these most relevant questions put to him—I am etc

Enfield Middlesex April 25

W LESTER

SIR—I have read with interest the article by E T Burke J Gabe A H Harkness and A J King (*Journal* March 19 p 605). I started using gonococcus antitoxin as soon as it was available in India. I treated eight cases with this serum and eight more with vaccines (four with gonoderm and four with Glaxo Laboratory's

intracutaneous vaccine). All the sixteen cases received intracutaneous prostatic massage dilatations etc. No special follow-up was made of cases for serum treatment. All the eight cases under serum treatment showed a more rapid alleviation of symptoms and earlier recovery. This result combined with my previous observation of nine other cases treated with vaccines has convinced me of the value of the gonococcus antitoxin. I must mention however that one of these eight serum-treated cases did develop a severe articular rash after the tenth injection. This happened in spite of the fact that adrenalin had been given him with every serum injection. This particular patient had an infection of long standing. He had been treated by various doctors with all available remedies. Relapses occurred fairly regularly and frequently. The longest period of freedom from symptoms was three months. After serum treatment he has remained free for over six months and has never felt ill since. I am etc

Lahore India April 24

C V RAICHANDANI

### Nasal Sinusitis in Childhood

SIR—Mr James Crooks in his article on nasal sinusitis in children (*Journal* April 10 p 955) says "Sinusitis has a bad reputation and one is told that it is never cured for life. On broad lines and except in the case of suppurative sinusitis I agree and I do not think that so-called catarrhal sinusitis is often cured. In my opinion this is because most cases of sinusitis begin as allergic allergic reaction which is localized in the nasal mucosa and the mucosa of the sinuses. This is why operations on the sinuses and repeated removal of the allergic polyps or polyps are unsuccessful. Treatment of the mechanical condition as by removal of the polyp does not cure the patient. I have treated numbers of cases of sinusitis for their allergic condition—and with merely local treatment—with excellent and permanent results. I make a very strong plea for the conservative treatment of sinusitis and would suggest that those trying it will not be disappointed—I am etc

Liverpool April 10

J BERNES

### Pasteurization of Milk

SIR—After some months complete absence from this country my attention has been drawn to the policies of the British Medical Association as revealed in the recent prominent advertisement on Safe Milk and on the special value of pasteurization as the essential remedy for the existing national milk problem. I have read carefully all the correspondence for and against that policy which has appeared in the columns of the *Journal* in the past few months. As one who has always taken an active and sustained interest in nutrition both in its scientific and practical aspects and who has also during the past few years as the owner of probably the largest dairy herd in this country utilized the opportunity of acquiring a first hand knowledge of the milk problem in its various aspects including the merits of pasteurization as carried out in accredited hands I venture with the greatest respect to the B.M.A. to offer a word of criticism to the profession. Medical men are rightly responsible for the profession. Nevertheless it behoves them to take precautions lest they lend themselves quite unwittingly to the support of legislative measures advocated in all good faith which are costly and adequate investigation and making the long run calculated to be much more useful to a political party than to the public and the medical profession.

It is beyond the scope of my present purpose to reply to the various points in favour of a general pasteurization policy raised in your correspondents' letters. I wish rather to correct the erroneous impression which was, justifiably in my opinion, drawn by many Scottish members of the Association from the official pronouncement of the parent body. In response to a recent inquiry directed to Dr Craig the Scottish Secretary of the Association as to whether the advertisement adequately and correctly represented the views and policy of the B.M.A. I am informed that the official view of the Association is 'perfectly correctly' expressed in the following statement:

The important point to keep in mind is that the B.M.A. and other bodies which advocate pasteurization are not asking that it should be made obligatory. They are urging that local authorities should be given the power to exclude from their community milk which is not either pasteurized or derived from tuberculin tested (or in Scotland, certified) herds.

This is, in my view, a sound pronouncement, and one which would probably make a fairly universal appeal to Scottish readers of the *Journal* and if adequately emphasized, it would correct the erroneous impression which was widely drawn from the original statement.

The present position of the milk problem recalls a former experience. Some years ago the question of compulsory pasteurization received a good deal of consideration in Parliamentary circles in relation to impending legislation on milk. A very short time before the subject came up in Parliament I was rung up one evening from London by a prominent Scotchman with a long and intimate knowledge of the subject and also with considerable knowledge of Parliamentary procedure. He informed me that he had that day authoritatively learned that in the opinion of one or more prominent medical men in Government circles a scheme for the compulsory pasteurization of milk would be included in the legislative measures proposed, and that it was likely to go through. He further made the suggestion that a copy of an article on the subject which had appeared in an accredited journal of agriculture some time previously should be sent immediately to every member of Parliament. This was done. When the subject came up for discussion in Parliament a week or two later the acting spokesman of the Government made a statement to the effect that whatever the merits of pasteurization were that subject did not come up for discussion. So far as I know no fresh data of a scientific or other kind are now available to justify any change.

In conclusion keeping in view the point raised by Dr Kirkland in his interesting letter which appears in this week's issue I hope that none of your readers will imagine that the fact of my being a "milk producer" in any way unduly influences my opinion and recommendations.—I am, etc.

DRUM A.B. MAY 1

CHALMERS WATSON M.D.

SIR—It almost seems as if no amount of evidence is going to persuade some people of the necessity for a pasteurized milk supply. I think we might sum up the B.M.A. arguments in this way. We admit the right of any individual farmer or town dweller, to drink any kind of milk (or water) that he likes. But we do not admit the right of any person publicly to sell or to distribute, either for profit or as propaganda, either milk (or water) which he cannot guarantee free from known agents of impurity, either chemical or bacterial. Would these same producers and distributors of unpasteurized milk, and their sup-

porters, be willing to answer in a court of law a charge of having supplied milk "to the danger of the public" "without due care and attention," and "while under the influence of"—pathogenic bacteria?—I am, etc.,

WIMBLEDON, S.W. 19, April 29

G. I. WATSON

SIR—Dr James Kirkland's last letter (April 30, p. 979) is an unconscious admission of weakness in the case for pasteurization. In place of reasoning we have assertion. All experimental evidence is brushed aside. "The buck and doe test cuts no ice, this can be said of most tests." Yet presumably Dr Kirkland has some belief in milk tests made by himself or else he would close his laboratory. "The fall in the birth rate is not, as we know well, dependent on diet but on those preaching a gospel of birth control—whether rightly or wrongly does not enter into this discussion." I like the parenthesis "as we know well," because personally, having studied the birth rate problem for the past sixteen years, I did not know it was so simple. Nor does anyone else who has given the matter more than a moment's consideration. Causation of vital changes is never simple, and there are at least a dozen factors influencing the birth rate, although not germane to this discussion.

"A healthy nation, even supposing it should be slightly less fertile, is far and away a sounder proposition than a large nation whose stamina is undermined by a contaminated milk supply." That is the kind of statement that passes for logic in these illogical days, but the point is whether, once national decline begins, there is going to be any nation at all. And why should there be no alternative between contaminated milk and the pasteurized product of the combines? "Of course, an ideal milk is a raw milk, provided such can be produced that is clean, pure, and uncontaminated. To this day such a milk has never been procurable." I can assure Dr Kirkland that the people of Finland, the most democratic country in Europe, have such a milk supply. If possible in Finland, why impossible in Britain? Even in London I obtain raw clean Jersey milk from the Express Dairy Company for 8d per quart, summer price. No cow that is negative to day to the tuberculin test will be positive in three months' time unless infected in the interval, and infection can be prevented. Only 0.02 per cent of all cows in Finland are tuberculous. Over 40 per cent of cows in Britain are tuberculous. These are truths that ought to be advertised.—I am, etc.,

LONDON, W.8 April 30

HALLIDAY SUTHERLAND

### Multiplicity of Special Diplomas

SIR—Dr F. G. Nicholas's letter in your issue of April 23 (p. 922) requires, I think, a brief reply. First as to personal inconsistency, I am a firm believer in a one-portal entry into medicine, and do not think there should be more than one higher diploma, obtainable perhaps in twenty different ways. I do not, however, propose to tilt at windmills.

Your correspondent says that I am in error when I state that a radiological diploma in this country may be taken within a year of graduation. The University of London states in its Regulations: "The course is open to registered medical practitioners. Students are required to attend a course of study extending over not less than one academic year." The Regulations for the Conjoint Board diploma are the same. Cambridge University demands three months' experience as a resident house officer before allowing candidates to enter upon a diploma course, but it is still possible to take the diploma within a calendar year, if not within an academic year.



He further states: "The present diploma is of little value. The blame must be laid at the door of those who are now awarding themselves foundation Fellowships. As a member of one of the preliminary committees I speak from personal recollection when I say that it was found impossible to get the various college and university authorities to establish a diploma which was no in conformity with their other established diplomas as regards conditions of entry and time of study required. This was in fact one of the arguments which weighed with the Association of Radiologists in the establishment of a Fellowship. It wished to be able to put into force its own conception of what should be demanded of a diagnostic or therapeutic radiologist who wishes to have a knowledge of his subject comparable *ceteris paribus* with that of a surgeon possessing the FRCS."

Dr Nicholas is peculiarly unfortunate in asking what one would think of the Royal College of Surgeons if it held two examinations of different standards. That is exactly what it does—the MRCS which implies a general knowledge of surgery, and the FRCS which implies an expert knowledge. It would no doubt have been simpler if the Association of Radiologists had itself been able to grant both the lower and higher grade diploma but existing rights must of course be respected.

To quote your correspondent further he says: "All that need be done is either to abolish the diploma and retain the Fellowship or to raise the standard of the diploma to that of the Fellowship and then drop the Fellowship. Can he conceive the authorities at present responsible for issuing the diplomas suddenly raising their requirements from one to five years postgraduate work and issuing a diploma in radiodiagnosis or radiotherapeutics only?"—I am etc.

London W 1 April 25

F. HERNIMAN JOHNSON

### Why "A Cold"?

SIR—I have read Mr James Crooks's article on nasal sinusitis in childhood (April 30 p 933). In it the expression "a cold" without any definition whatever is repeatedly used. I suggest that the terms "a cold,"

"catching cold" and "a chill" should be dropped from medical literature as dangerous and misleading. In my opinion the perpetuation of these expressions is the chief enemy of public health to-day. A consultant working in hospitals, nursing homes and among the well to do where conditions are satisfactory and ventilation adequate is unable to appreciate the danger. This however is obvious to those working among the industrial classes and the poor. In connexion with treatment Mr Crooks mentions that "it should be started by keeping the child in a warm well-ventilated room. The lay mind naturally associates the expression 'a cold' with cold and in practice among a majority of the population last mentioned we find that sick-rooms are hermetically sealed. The windows are shut fast for fear that the patient will catch cold and the room may be warm—it is altogether too close and warm—but it is certainly not well ventilated which is much more important."

What is "a cold"? I take it that "a cold" is the same as the common cold to-day considered to be due to an ultramicroscopic virus. The confusion of thought arises from the fact that a person passing through a rigor has first a profound sensation of cold. But in these patients when the rigor occurs at the onset of more serious troubles—for example pneumonia—the infection is already caught and it will not be prevented by closing the window. Is "a cold" a nasal catarrh or is

the latter merely a symptom of it? What is a "cold"? Is this a cold associated merely with a vascular discharge? Suppose the catarrh goes on to the formation of mucopus? Must we call it merely "nasal catarrh" then? What about the term "febricula"? When must this be used?

I think it important that an unscientific expression like "a cold" should be dropped altogether. It would be much better to call the condition "influenza" (endemic influenza in contrast with epidemic influenza). In anything would be better than the use of the term "a cold" which causes the bacterial content of the atmosphere in rooms and trains to be many times greater than it otherwise would be if the fallacy of the causation of what is now known as the common cold were perpetuated in its present name—I am etc.

Dagenham E. et May 1

M. MELORAVE

### Referred Pains arising from Muscle

SIR—In your issue of May 12 (p. 94) Mr J. G. Campbell of Dundee writes in appreciation of Mr J. H. Kellgren's injection treatment of muscular pain. I have found these injections valuable also and would I have always used is 1 per cent. and 2 per cent. solution. I have used this method since 1922 and later although I do not claim it as an original idea. I have a vague recollection that I got the idea from *La Presse Médicale* to which I subscribed at that time. As Professor Lerone was a frequent contributor to that journal I am sure that I learned the method but the exact date is 1928—I am etc.

Durham S. et April 2

C. L. D.

## Obituary

### THOMAS KAY DSO MB CM FRFSGS

It is with great regret that we have to record the death of Mr Thomas Kay which took place on April 20. Up to a fortnight before his death he had been in his usual health and had recently returned from a successful fishing holiday when he became suddenly ill with acute abdominal symptoms which developed into pelvic peritonitis, an abscess and paralytic obstruction to which in spite of operation he succumbed.

Thomas Kay graduated MB CM in Glasgow University in 1893 and after filling notice surgeon appointments with Sir William Macewen in the Western Infirmary studied for a time in Paris. He joined the staff of the Glasgow Royal Infirmary in 1902 filling the usual junior posts with distinction till in 1914 he was appointed visiting surgeon. With the outbreak of war he went to France in September 1914 and did not actually take up his duties as surgeon till demobilization in 1919. His term of service as a chef was relatively short as he retired from the Infirmary and on private practice in 1925 leaving Glasgow to live in Manchester where his home was a happy meeting place for his many friends and friends like himself enthusiastic golfers and fencers.

Kay had a distinguished military career in the South African War he served from 1899 to 1901 as a Surgeon and was awarded the Queen's Medal with five clasps and mentions in dispatches. He became a keen officer in the Territorial Army and when he was 60 he took out the Army



called up at once and served in France from 1914 till the end. In France he was first in command of a casualty clearing station, and later of a field ambulance, and was promoted A D M S 46th Division and 1st Division with the rank of colonel. He was awarded the D S O., was mentioned in dispatches three times and received the *Croix de Guerre*. The last military honour was that of Honorary Surgeon to the King—1927 to 1929. It is worth while quoting a note in the *Times* of April 25, contributed by the present A D M S 17th Division:

The death of Tom Kay will be deplored by all regular Territorial and temporary officers of the Royal Army Medical Corps either in the great war or after it. His high professional attainments are well known to all in the profession especially in Scotland but it was only those who served in intimate contact with him who knew how great was his unselfishness, his calm and courage in times of difficulty and danger and his whole hearted devotion to the interests of those who served under him. His casualty clearing hospital and later his field ambulance were extremely happy and efficient units and when he was promoted to be A D M S of a Division his departure was a loss recognized by all ranks of the 17th Division to which he had rendered such devoted service.

As a chief in the Royal Infirmary Kay will be remembered for his excellence as a good practical surgeon, an efficient teacher, and the head of a most happy unit. On his retirement he was appointed honorary consulting surgeon but he continued to give service to the Royal Infirmary as a manager from 1929 onwards. He had abundant leisure to devote to medical management and he gave to the hospital the best of his critical and constructive faculties. In addition to his Royal Infirmary work he was consulting surgeon to the Royal Hospital for Mental Diseases Glasgow, the Victoria Hospital, Helensburgh, chairman of directors of the Lock Hospital, and after he left Glasgow did a great deal of good surgical work gratuitously in a quiet way in Campbeltown and Kintyre. Kay possessed more than most men the gifts of happy good fellowship and steadfast helpful friendship. He was exceedingly modest about his surgical abilities and made no claim to scientific authorship but he was in all practical aspects a sound surgeon. Much sympathy is felt with his widow, daughter of one of Glasgow's well-known practising physicians, Dr John Fergus. The funeral service held in the University Memorial Chapel was attended by a large company representative of academic and professional interests.

J P

#### ARTHUR P LUFF, MD, FRCP

Consulting Physician St Mary's Hospital

We regret to announce that Dr Arthur Luff, CBE, consulting physician to St Mary's Hospital, died at his home in Limpsfield, Surrey on May 1. In 1932, at the time of the centenary he was elected a Vice-President of the British Medical Association in acknowledgment of his services as honorary director of collective research.

Arthur Pearson Luff was born in London on November 6 1856, the son of Richard Luff, and from the Western Grammar School entered the Royal College of Science, where he distinguished himself in chemistry and obtained the BSc Lond degree in 1883. He then studied medicine at St Mary's Hospital and graduated MB in 1887 with honours in medicine, forensic medicine, organic chemistry, physiology and materia medica, having already qualified as MRCS and LSA a few months earlier. He proceeded MD in 1889 and also took the DPH of the Royal Faculty of Physicians and Surgeons of Glasgow.

Dr Luff joined the teaching staff of St Mary's Hospital in 1887 as lecturer in forensic medicine, and held that post for twenty-one years, he was elected assistant physician in 1890, and on retirement from the active staff in 1913 was made a consulting physician. From 1892 to 1908 he was scientific analyst to the Home Office, and during those years his name became widely known in connexion with criminal investigations. He was elected a Fellow of the Royal College of Physicians of London in 1896, and in the following year gave the Goulstonian Lecture, taking as his subject the pathology and treatment of gout. An expanded version of this lecture appeared in book form and reached its third edition in 1907. He also wrote a *Textbook of Forensic Medicine and Toxicology* in two volumes, which was published in 1895, and was part author with Mr H C H Candy of a *Manual of Chemistry for Medical Students*, which reached a seventh edition. His *Harveian Lecture* on various forms of fibrositis and their treatment appeared in 1913. He had at various times been examiner for the University of London, the Royal Colleges of Physicians and Surgeons, and the Victoria University.

Dr Luff after retirement from the active staff at St Mary's, returned to work during the war, with the rank of Lieutenant-Colonel R A M C (T), as a *la suite* medical officer. For these services he was mentioned in dispatches and awarded the CBE in 1919. He was a member of the Departmental Commission on Preservatives and Colouring Matters in Food, which sat from 1923 to 1925. In recognition of his work in pharmacology and forensic chemistry he was awarded the Pereira medal by the Pharmaceutical Society and the gold medal of the Society of Apothecaries of London. He had joined the British Medical Association as far back as 1887, and when the idea of collective inquiries was revived some ten years ago he became a member of the Research Subcommittee and did valuable work as honorary director of collective investigations. The first of these was an inquiry into the treatment of varicose ulceration, it was followed by an inquiry into the after-history of gastro-enterostomy, and the third had as its subject the incidence of cancer of the breast and its history after treatment. His reports of these collective investigations appeared in the *British Medical Journal* in 1928, 1929, 1930, and 1932. While living in retirement at Limpsfield Dr Luff was made a Justice of the Peace, and for some years served as chairman of the Godstone Bench.

We regret to report the death on April 21 of Dr ALEXANDER THOMAS SCOTT MBE. Born in 1850 the son of the late Alexander Fairley Scott, he received his education at the Middlesex Hospital. He qualified MRCS, LSA in 1875, and held the posts of house surgeon and house-physician at that hospital. He was subsequently surgeon to the Holloway and North Islington Dispensary and to HM Prison, Holloway. Dr Scott devoted himself particularly to the work of the St John Ambulance Association, and was created an honorary associate of the Order of St John of Jerusalem and of the Order of Mercy. He was also distinguished for his work in connexion with the Special Constabulary, and received its medal with the 1914 bar. He joined the British Medical Association in 1891, and communicated various articles on surgical subjects to the *British Medical Journal* and other medical periodicals.

Dr ELLEN HEISE one of the first women to practise medicine in the United States died in California on April 13 at the age of 90. Her husband A William Heise had been a well known physician in the Civil War.

## Medical Notes in Parliament

Consideration of the Budget Resolutions of the Anglo-Italian Agreement and of the Eire (Confirmation of Agreements) Bill was the chief business before the House of Commons this week. In the House of Lords the Coal Bill and Housing (Agricultural Population) (Scotland) Bill were down for discussion.

In the House of Lords on May 2 the Inheritance (Family) Bill was brought from the Commons and read a first time. The Increase of Rent and Mortgage Interest (Restrictions) Bill which has passed the Commons was read a second time.

The Parliamentary Medical Committee met at the House of Commons on May 3. Sir Francis Fremantle presiding. Major S. H. S. Blackmore of the Air Raid Precautions Department addressed the meeting on air raid precautions. A discussion followed about the medical arrangements to be made at hospitals, first aid posts and clearing stations, and on the dangers from high explosives and from gases during an air raid. It is understood that a debate on the whole subject will take place shortly in the House of Commons.

The Nursing Homes Registration (Scotland) Bill was read a second time in the House of Commons on May 3.

The Local Authorities (Hours of Employment in connexion with Hospitals and Institutions) Bill introduced by Mr. Frederick Roberts has been dropped as also has been the Workmen's Compensation Bill introduced by Mr. John Jones.

The Prevention and Treatment of Blindness (Scotland) Bill introduced by Mr. Chapman which has passed through Standing Committee without amendment was set down for report stage in the House of Commons on May 6.

### The Budget

During a general discussion of the Budget Resolutions on April 28 Dr. EDITH SUMMERSKILL in a maiden speech said the County Council of Middlesex was unable to cope with its increased population. Hospitals were in a condition which made it necessary to take a patient out of bed at midnight in order to accommodate a more acute case. Builders were being asked such prices for new institutions that the county council was compelled to postpone new work.

Sir JOHN SIMON complimented Dr. Summerskill on her first effort but said he was a little surprised at what he said. The country was spending £50,000,000 more yearly on the social services than in 1931.

On the Report stage of the Budget Resolutions on May 3 an amendment to reduce the Customs duty on hydrocarbon oils from 9d to 7d a gallon was rejected. An amendment by Mr. H. G. WILLIAMS to reduce the Excise duty on spirits used for making power-methylated spirits was negatived. On the resolution raising the tea duty from 6d to 8d an amendment to reduce the duty to 4d was negatived.

### Cancer Death Rate

Sir KINGSLEY WOOD agreed with Mr. W. S. Liddall on April 28 that deaths from cancer in the city and county borough of Lincoln had risen from ninety-six in the year 1927 to 126 in the year 1936 and that cancer had now moved up to second place in the list of fatal diseases throughout the country. Mr. LIDDALL asserted that apart from occupational malignant disease this increase was due to the Minister's failure to recognize the urgent need for full provision for the adequate treatment of the many pre-cancerous general medical and surgical conditions. He asked what steps Sir Kingsley proposed to take. Sir Kingsley Wood did not take notice of the personal charge. He said that in any comparison of the numbers of deaths due weight must be given to the greater ages to which people now lived and the improved methods of diagnosis.

The work of the Radium Commission in recent years had resulted in the formation of a number of centres for the treatment of cancer, one of which was in Lincoln.

### Malaria in India

On May 2 Mr. DAVID ADAMS asked the Under-Secretary for India whether the financial loss suffered through malaria in India alone was between £23,000,000 and £20,000,000 per annum and what steps were proposed to check this loss. It was closely connected with inadequate access to chemical compounds or with unduly high prices due to inadequate supplies. Lord STANLEY said that the control of the production, distribution and sale of quinine and allied alkaloids was not a matter for the Provincial Governments. The Central Advisory Board of Health had the whole matter under consideration and passed resolutions on the subject in June.

**Hospitals and Air Raid Casualties**—Mr. W. THORNE asked on April 27 whether the Government intended to make a grant to hospitals treating cases of casualties from air raids. Mr. GEORGE LLOYD in reply said that in the case of hospitals designated as casualty clearing hospitals the local authorities would be able to make a grant under the Act.

**Incapacitating Sickness**—Mr. DAVID ADAMS asked on April 28 whether the Minister of Health was initiating a comprehensive investigation into the extent and causes of incapacitating sickness with a view to reducing the cost to the community of such items as the 31,000,000 weeks of working time now lost annually in this country from industrial sickness. Sir KINGSLEY WOOD replied that the matter was receiving no consideration.

## Medico-Legal

### SUCCESSFUL DEFENCE OF SCHIZOPHRENIA

In the case of Rex v. Phillips tried before Mr. Justice Atkin recently, the accused was a theological student of 21 who was found to have murdered and mutilated a boy of 16, a servant at his college, with no other motive than to act out a murder fantasy. He had attended early service on the morning after the crime, apparently without the slightest compunction. He was described as unusually reserved and unsociable and as having very strict and narrow religious views. Dr. Henry Yellowlees called for the case and said the accused was undoubtedly suffering from schizophrenia, a splitting of the personality. The disease was found to have been exactly the kind of emotional and ferocious that he had shown since the crime. He described the attitude of the young man as exactly comparable to that of a criminal who has been brought in from his solitary place to listen to the conversation of grown-ups in a drawing room. He was very interested and was slightly peevish. He had answered the doctor's questions without the slightest hesitation or evasion and said that until a week before the interview he had been thinking how the crime might be done again in a more satisfactory fashion. He had proposed to get a victim—it did not matter whom—and had talked about the necessity of looking for a suitable one. When he had obtained the victim he had played with the idea of taking off his arms and legs, which he had thought could be done without killing him. Dr. H. A. Grierson, medical officer of Brixton Prison, said that he did not consider Phillips insane, though he was certainly a person of abnormal mind. He was of the paranoid type but a schizophrenic was not necessarily unable to distinguish between right and wrong. The learned judge gestured in his summing up that the letters the accused had written from prison with their expression of a deliberate intention on the facts of his situation supported the evidence of Dr. Yellowlees and reminded the jury that although Dr. Grierson had wide experience of criminals, Dr. Yellowlees was a specialist in mental disorder. The jury found Phillips guilty but insane and he was sentenced to be detained during His Majesty's pleasure.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended April 23, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (i) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for (a) The 125 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	21	3 1	13 3	1	2	23	2 1	13 1	2	—		
Diphtheria Deaths	1,048 30	153 2	191 3	65 1	30 2	1,027 30	109 3	148 1	55 3	38 —	1,023	154
Dysentery Deaths	63	14	39 2	—	1 —	33	1	8 —	—	—		
Encephalitis lethargica, acute Deaths	2	— 1	—	—	—	4	— 1	1 1	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	21 —	2 —	14 —	4 —	1 —	32 —	5 —	4 —	3 —	3 —	26	—
Erysipelas Deaths		2	65 2	13	2		1	68 —	16	1		
Infective enteritis or diarrhoea under 2 years Deaths	47	11	8	2	2	39	12	7	5	7		
Measles Deaths	40	4	798 24	—	16* 1	12	—	253 4	4	1 —		
Ophthalmia neonatorum Deaths	88	9	53	—	—	111	6	41	—	—		
Pneumonia (influenzal) Deaths (from Influenza)	1,212 56	79 6	11 4	3 1	5 —	864 47	71 5	10 4	3 1	8 1	1,018	86
Pneumonia, primary Deaths		13	213	10 27	9		19	192	8 24	12		
Polio encephalitis, acute Deaths	3	—	—	—	—	2	—	—	—	—		
Poliomyelitis, acute Deaths	3	—	—	—	—	3	1 1	—	—	—		
Puerperal fever Deaths	3†	3 2†	23	5	—	41	3 —	23	—	1		
Puerperal pyrexia Deaths	196	24	36	—	—	114	11	33	—	2		
Relapsing fever Deaths	—	—	—	—	—	—	—	—	—	—		
Scarlet fever Deaths	1,864 3	175 1	364 2	106 2	71	1,647 5	176 2	327 3	80 1	45 —	1,733	240
Small pox Deaths	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping-cough Deaths	16	2	61 2	1	17 1	22	7	551 18	1	10 1		
Deaths (0-1 year) Infant mortality rate (per 1 000 live births)	383 64	67 55	71	28	17	384 63	69 57	84	38	20		
Deaths (excluding stillbirths) Annual death rate (per 1 000 persons living)	4,930 12.1	945 11.9	647 13.2	184 12.4	145 12.9	4,679 11.6	933 11.6	667 13.6	243 16.6	142 13.6		
Live births Annual rate per 1 000 persons living	6,672 16.4	1,303 16.4	1,111 22.7	331 22.4	259 23.0	6,861 17.0	1,358 16.9	1,011 20.7	434 29.6	284 27.2		
Stillbirths Rate per 1 000 total births (including stillborn)	268 39	46 34				291 41	53 38					

\* 16 cases in Belfast alone

† After October 1, 1937, puerperal fever was made notifiable only in the Administrative County of London

Deaths from puerperal sepsis  
‡ Includes primary form in figures for England and Wales, London (Administrative County) and Northern Ireland

## EPIDEMIOLOGICAL NOTES

## Enteric Fever

Notifications of enteric fever in England and Wales have dropped from 29 reported last week to 21 in the week under review of these 6 belong to the paratyphoid outbreak in Cardiff where notifications for the preceding two weeks have been 10 and 2 respectively. In Scotland there was an increase of notifications of enteric fever from 5 to 14 of which 4 cases were typhoid fever and 10 were paratyphoid fever (all 10 occurred in the county of Ross and Cromarty).

## Diphtheria and Scarlet Fever

Notifications of diphtheria remained near the level of the previous week except in London where they rose from 133 to 153, of these 17 occurred in Poplar 14 in Islington 9 each in Fulham Southwark Stepney and Woolwich. A slight increase in the incidence of scarlet fever was noted from all countries except Northern Ireland where there was a small decrease. The figures for England and Wales are somewhat in excess of the median value for the last nine years while those for London are considerably less.

## Measles and Whooping-cough

In the 125 Great Towns in England and Wales there were 40 deaths from measles compared with 54 in the previous week of these 4 (14) occurred in London 4 (2) in Kingston upon Hull 4 (1) in Liverpool 2 each in Newcastle upon Tyne Plymouth and Swindon. The figures in parentheses refer to the numbers in the previous week. The average daily admissions to the LCC fever hospitals dropped from 74 to 60 while the number of cases under treatment in these hospitals on April 22 was 2,123 compared with 2,220 on April 15 and 2,241 on April 8. On the same day there were under treatment in the LCC fever hospitals 1,140 (1,140) cases of diphtheria 802 (802) cases of scarlet fever and 279 (264) cases of whooping-cough. The figures in parentheses refer to the numbers recorded in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notified were for the week ended April 23 719 (734) distributed as follows: Battersea 87 (92) Bermondsey 55 (42) Finsbury 23 (39) Fulham 55 (68) Greenwich 103 (82) Hampstead 22 (24) Lambeth 158 (162) St Pancras 74 (94) Shoreditch 32 (26) Southwark 63 (60) Stepney 44 (45). The figures in parentheses denote the numbers in the previous week. In Scotland 798 cases of measles were notified compared with 724 in the previous week the figures for Glasgow were 175 (285) Dundee 295 (63) Aberdeen 190 (204) Edinburgh 74 (65) Falkirk 39 (18) Paisley 7 (25). The figures in parentheses refer to the numbers in the previous week. During the week under review there were 24 deaths from measles in the 16 principal towns of Scotland compared with 33 and 23 respectively in the previous two weeks of the 24 deaths 11 occurred in Dundee 7 in Glasgow 2 each in Edinburgh and Aberdeen. In Northern Ireland there were 16 cases of measles all in Belfast and 1 death (in Lurgan). Compared with last week there were six fewer notifications of whooping cough in Scotland and an increase of six in Northern Ireland. Deaths for the 125 Great Towns of England and Wales dropped from 21 to 16 while in Scotland there were 2 deaths (nil in the previous week).

## Vital Statistics

From the Quarterly Returns for the fourth quarter of the year 1937 which have just been published in the four

countries and which incorporate a preliminary statement for the whole of the year 1937, the following table has been compiled.

Provisional Vital Statistics for 1937

	England and Wales	Scotland	Eire	Northern Ireland
Marriage Rate per 1000 persons	1.4	7.7	8.1	6.6
Crude Birth Rate per 1000 persons	1.9	17.6	19.2	12.5
Death Rate per 1000 persons	1.4	1.7	1.3	1.1
Stillbirth Rate per 1000 births	39			
Infant Mortality Rate per 1000 live births		50	-	-

In England and Wales the natural increase in the population by excess of births over deaths was 101,200, the average annual increase in the preceding five years was 113,101. The birth rate showed an increase of 0.1 above that of 1936 being 0.5 above that for 1937 the lowest recorded. The death rate was the highest since 1920 and was 0.5 above that of 1936 and 1.0 above that of 1937 the lowest recorded. The infant mortality rate of 39 per thousand live births below that of 1936 and 1.0 above that for 1937 the lowest recorded. At 1.4 the marriage rate was the same as that for 1936.

In Scotland the birth rate at 17.6 was lower than in 1936 and the lowest recorded in Scotland with one exception. The death rate was 0.5 in excess of that of the preceding year with the exception of 1937 when the marriage rate was 7.8 and the post war year 1910-1921 when rates were abnormally high the 1937 rate of 1.7 per thousand was the highest recorded in Scotland. It is 0.6 higher than the average for the last five years. The infant mortality rate is 2.0 below that of the previous year and 0.5 below the five years average.

In Eire the marriage rate was 0.1 above that for 1936 and 0.4 above the average of 4.7 for the five years preceding. The birth rate at 19.2 showed a decrease compared with the 1936 rate of 19.6 the average for the last five years being 19.4. The death rate in 1936 was 1.4 and 1.4 for the years 1932-6.

In Northern Ireland a marriage rate of 6.64 was recorded in 1937 compared with 7.17 in the previous year the average for the preceding ten years being 6.19. The birth rate showed a fall compared with the 1936 rate of 20.3 which was slightly below the last ten years average of 20.4. The death rate was 1.1 and 1.4 in the previous year the average for the preceding ten years was 1.4. The infant mortality rate of 77 was the same as in the previous year and 1 lower than the average of the ten years.

## Typhus

During the week ended April 9 there were 20 cases of typhus in Algeria (compared with 82 in the previous week) of which 13 occurred at Algiers 33 at Constantine and 3 at Oran. In the week ended April 16 there were 10 cases of typhus in Egypt with 11 deaths compared with 107 cases and 12 deaths in the previous week. The incidence was 47 in Minufiya 23 in Aswan and 21 in Qena. In the same week in Morocco there were 23 cases and 19 deaths compared with 28 cases and 25 deaths in the previous week of the 23 cases 62 occurred in Marrakesh 35 in Casablanca 17 in Rabat 12 in Oud Zem 13 in San and 10 each in Fez and Taza. Since the epidemic of typhus began at the end of November 1937 there have been in the Marrakesh district 279 cases up to April 14 of this year of which 34 were fatal 140 of the cases have been among Europeans and of these 41 were fatal. Typhus is endemic in Morocco and tends to flare up when the resistance of the native population is reduced by malnutrition as has happened in the south following a series of harvest failures.

## Universities and Colleges

### UNIVERSITY OF OXFORD

Convocation on April 26 agreed to confer on July 16 the honorary degree of Doctor of Science upon Dr Harvey Cushing Emeritus Professor of Surgery at Harvard University, and formerly Professor of Neurology at Yale

At a Congregation held on April 28 the degree of B M was conferred on R. Roaf (*in absentia*)

### UNIVERSITY OF CAMBRIDGE

At a Congregation on April 30 a Grace was approved for conferment of the degree of Doctor of Science *honoris causa* upon Francis Peyton Rous of the Rockefeller Institute for Medical Research in New York

The following medical degrees were conferred

M CHIR—D N Matthews  
M B B Chir—\*S T Anning, A W Box, E W Dorrell, F E S Hatfield, I A C Wood  
M B—J W Parks, J G Chappel

\*By proxy

The following have been appointed University Demonstrators in Anatomy for three years: E W O Adkins, B A, and G D Channell, M B B S Lond, from April 1, 1938; F Wemyss Smith, M B Ch B Manch, from October 1, 1938

The Professor of Anatomy gives notice that applications for the Marmaduke Sheild Scholarship in Human Anatomy must be sent to the Registry on or before May 20. The award will be made towards the end of June. Those eligible are such undergraduates of not more than three years standing from matriculation and such Bachelors of Arts of not more than four years standing from matriculation who have passed Part II of the Second M B examination or done the equivalent of so passing and have also obtained honours in Part I of the Natural Sciences Tripos with Anatomy as one of their subjects. Women also are eligible. The scholarship is normally tenable for a year but a scholar may be re-elected for a second year. The emolument is £100 a year.

### UNIVERSITY OF LONDON

#### LONDON HOSPITAL MEDICAL COLLEGE

Dr Robert Hutchison, President of the Royal College of Physicians of London and consulting physician to the London Hospital, will present the prizes to the students of the hospital on Thursday, June 30.

#### LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN

The following postgraduate scholarships will be awarded for the session 1938-9:

- (a) A M Bird Scholarship £200 for one year to enable a medical graduate to obtain general experience in pathology
- (b) Mabel Webb and A M Bird Research Scholarship £200 a year for assistance in carrying on research

Further particulars and forms of application can be obtained from the Warden and Secretary of the Medical School. Applications must be received by May 22.

The following candidates have been approved at the examination indicated:

POSTGRADUATE DIPLOMA IN PSYCHOLOGICAL MEDICINE—(With Special Knowledge of Mental Diseases) G L Ashtord, Hilda M S Davidson, J Gibson, W S L Gilchrist, Augusta G Harrison, S H Lubner. Part 4: J E O N Gillespie, D Gilmour, W Telfer.

### ROYAL COLLEGE OF PHYSICIANS OF LONDON

At a meeting of the Royal College of Physicians of London held on April 28 with the President, Dr Robert Hutchison in the chair, Dr H L Tidy was elected Registrar of the College.

The following Members were elected Fellows:

Arthur Wellesley Falconer, M D Aberd (Cape Town), John Forbes Ward, M D Manch (Manchester), Stanley Graham Ross, M D McGill (Montreal), John Vernon Cannadine, Braithwaite, M D Lond (Leicester), John Edwin Mackenzie, Wigley, M B Med, Robert Cooper, M D Liverp (Liverpool), Frances Braid, M D St And (Birmingham), Cyril William Curtis, Bain, M D Oxf (Harroway), Henry Henderson Moll, M D Ronic (Leeds), Richard S J Moll, M D Belf (Belfast), William Alexander Lister, M D Calif (Albany), Cyril Lloyd Flood, M D Oxf, Henry

Brian Frost Dixon, M D Dubl, Lieutenant Colonel R A M C (Gibraltar), Julia Bell, James Gordon Danson, M D Aberd, Surgeon Captain R N (Gosport), Robert James Pulvercraft, M D Camb, Peter Henry Martin, M B Oxf, Douglas Hamilton Mackel, M B Lond, Sydney Watson Smith, M D Ed (Bournemouth), Aubrey Julian Lewis, M D Adelaide, Denis Hubert Branton, M B Oxf, Hugh Alexander Dunlop, M D Lond, Hugh Leslie Marriott, M D Lond, George White Pickering, M B Camb, Horace Evans, M D Lond, Harold Percival Himsforth, M D Lond, William George Barnard, John Clifford Hoyle, M D Lond, Archibald Gilpin, M D Lond, Ernest Thomas Conybeare, M D Lond, Soliman Azmi Pasha, M D Cairo (Egypt), John Fleming Brock, M D Oxf (Cape Town), William Drew Nicol, M B Lond (Epome), Russell John Reynolds, M B Lond, and Ram Nath Chopra, M D Camb, Brevet Colonel I M S (Calcutta).

The following were elected Fellows under B L A XXXVIII (b):

Sir Almoth Edward Wright, K B E, C B, M D, D Sc, F R S; Herbert Stanley Raper, C B E, D Sc, M B, F R S (Manchester); James Bertram Collip, D Sc, M D, F R S (Montreal); and George Richards Minot, M D (Cambridge, Mass.).

The following were appointed representatives of the College:

Viscount Dawson of Penn on the Governing Body of the British Postgraduate Medical School, Lord Horder at the Cremation Conference to be held at Oxford in July, Sir Reginald Bond on the Professional Classes Aid Council, Dr Dawtry Drenth on the Committee of Management of the Chelsea Physic Garden, Dr William Brown at the tenth international Medical Congress for Psychotherapy to be held at Oxford in July, Dr Eric Potlatch at the National Conference on Maternity and Child Welfare at Bristol in July, and Dr R R Trail at the annual conference of the National Association for the Prevention of Tuberculosis in London, June 30, July 1 and 2.

The following candidates satisfied the Censors' Board and were admitted Members of the College:

Simon Almond, M B Manch, Reginald Nevill Cudmore, Bickford, M B Adelaide, Ronald Victor Christie, M D Ed, Richard Frederick Clarke, M B Lond, Edward George Huxley Cowen, M D Lond, Christopher Sydney Darke, M B Lond, David Howard Davis, M B Camb, Antony Clifford Dornhorst, M B Lond, Bernard Freedman, L R C P, William Goldie, M B Aberd, Frederick William Gordon, M D Aberd, Ronald Douglas Green, M D Lond, John Charles Harland, M B Lond, Mohammed Ridwan Kenawy, M D Cairo, David Kendall, M B Oxf, Edwin Howard Kitching, M D Leeds, Kenneth Arthur Latter, M B Lond, Richard Edward Lecky, M B Camb, Valentine Darte Logue, L R C P, Frank Rees Magarey, M B Adelaide, Frederick John William Miller, M B Duth, Mangalore Narasimha Pai, M B Madras, Seymour Cochrane Shanks, M D Glasg, Andre Nasri Tigher, M B Cairo, Edward Wing, Twining, L R C P, Dorothy Caroline Ramia Vithayalan, M B Madras, Henry John Wade, M D Manch, Solomon Simon Yudin, M B Lond.

The Croonian Lectures on 'The Clinical Aspects of the Transmission of the Effects of Nervous Impulses by Acetylcholine' will be delivered by Professor F R Fraser at the College on May 24, 26, and 31 at 5 p m.

### BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

At the quarterly meeting of the Council, held in the College House on April 23 with the President Sir Ewen Maclean in the chair, the following were promoted to the Fellowship and formally admitted by the President:

K V Bailey, Manchester, \*W A G Gauld, Canada, W E Barrie Adshedd, Birmingham, \*J Black, South Africa, Margaret G Bolt, Nottingham, C P Brentnall, Manchester, R C Brown, London, \*R I Furber, Australia, \*J S Green, Australia, J W A Hunter, Manchester, R G Mahphand, Cardiff, \*G C Mellado, Canada, H J Malkin, Nottingham, \*S Mitra, India, \*C F Morkane, New Zealand, A L Walker, London, E Williams, London, A J Wrigley, London, \*H B Van Wyck, Canada.

The following were admitted to the Membership:

Y N Ajinkya, India, \*Mary C Albuquerque, India, J J Armistage, Salisbury, Elnor F E Black, Canada, Doris B Brown, Harrogate, W D Brown, London, H Canwarden, Guernsey, \*W D Cunningham, Australia, Mary Evans, Manchester, M B Hallam, Manchester, \*O S Heyns, South Africa, \*R A Leach, India, J C Loxton, Australia, \*B E Meek, Canada, J M P Greenock, \*E A Menon, India, \*E B Moore, Australia, P W Nichol, London, Susanne J Paterson, Edinburgh, C G Rowan, Aberdeen, P W S Riley, Australia, \*D F Standing, South Africa, L M Snaith, Manchester, Dorothy M Stewart, New Zealand, R K Tampan, India, R A Tennant, Cambuslang, \*G A Thompson, Australia, W H Tod, Leeds, \*C V Ward, Canada, Alice Woodhead, London, J C Whyte, Canada.

\*In absentia.

The following were elected to the Membership: F G MacGuinness, Canada, G J Strain, Canada, Thomas Norman Arthur Jeffcoate, M D, F R C S D, MCOG, and Richard Alan Brews, M D, M S, F R C S.

MRCP MCOG have been appointed the next Blair Bell Memorial Lecturers

At the annual general meeting of the College held on April 25 in the College House with the President, Sir Ewen Maclean in the chair the following were elected to the Council in place of those retiring by statutory rotation *Representatives of the Fellows* Mr A W Bourne Professor A Levlard Robinson Professor William Gough Professor James Hendry *Representatives of the Members* Mr E A Gerrard Mr W C Armstrong

#### SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

**SURGERY**—G E N Bird J C G George M W Hernan G E King-Turner F P S Malone Barrett F D P Palmer H A N Passmore

**MEDICINE**—A Beckman P Baker M Becker W D Branton N D Cousins A Dunkerley J Frankenthal C C B Guest J S Lancaster C L Summers P A Walsh

**FORENSIC MEDICINE**—P Baker M Becker W D Branton N D Cousins A Dunkerley J Frankenthal C C B Guest G E King-Turner J S Lancaster C L Summers P A Walsh

**MIDWIFERY**—S K Das H J D Smorr T C Hallinan F H Holder R P Parkinson J A N Shore

The diploma of the Society has been granted to G E N Bird W D Branton N D Cousins C C B Guest T C Hallinan M W Hernan J S Lancaster H A N Passmore and P A Walsh

## Medical News

Dr Herbert Birkett (Montreal) Dr Brown Kelly (Glasgow) Dr D R Paterson (Cardiff) and Dr StClair Thom on have been elected Honorary Members of the Gesellschaft Deutscher Hals-, Nasen- und Ohrenärzte

The annual meeting and luncheon of the Tavistock Clinic (Malet Place W.C.) will be held at the Cafe Royal Regent Street W. on Monday May 9 at 1 p.m. The speakers will be the Earl of Faversham Parliamentary Secretary to the Minister of Agriculture and Fisheries Mrs I M Sieff and Dr J R Rees, medical director of the Clinic

The following meetings of the Tuberculosis Association will be held at 26 Portland Place W. on Friday May 20 4 p.m. council meeting 5.15 p.m. general meeting papers on Trauma and Tuberculosis by Dr J Browning Alexander Dr G J Johnstone and Mr C A Collingwood 8.15 p.m. papers on Anaesthetics in Thoracic Surgery by Dr J T Hunter and Mr J B Hunter

The next clinical meeting of the Society of Radiotherapists will be held at 11 Chandos Street W. on Friday May 20 at 5 p.m. when the subject for discussion will be Radiotherapy of Brain Tumours. The opening speakers will be Prof. or Hugh Cairns Mrs E L M Hilton and Mr R McWhirter

The annual general meeting of the British Institute of Radiology (incorporated with the Röntgen Society) will be held in the Reid Knox Hall 32 Welbeck Street W. on Thursday May 19 at 6.30 p.m.

H.R.H. the Duchess of Kent will open the new maternity wing of the Livingstone Hospital Dartford on the afternoon of Wednesday May 18

The twenty fourth Annual Conference of the National Association for the Prevention of Tuberculosis will be held in the Great Hall of the British Medical Association House Tavistock Square W.C., on June 30 and July 1 and 2 and will be preceded by the annual meeting of the care committees in the morning of June 29. Invitations and further particulars will be issued in due course

The eleventh Congress of the Society of Oto-neuro-ophthalmology will be held at Bordeaux from June 7 to 9 under the presidency of Professor Portmann when the subject for discussion will be haemorrhages in oto-neuro-ophthalmology. Further information can be obtained from the general secretary M Auguste Tournay 38 Rue de Vaugirard Paris XVI

In our advertisement columns this week the British Empire Cancer Campaign invites applications from male British subjects for the post of Medical Secretary and Registrar to the Clinical Cancer Research Committee. The appointment is a whole time one and remuneration will be at the rate of £10 per annum. Applications should reach the general secretary of the Campaign at 11 Grosvenor Crescent London SW 1 by June 10

The first French Congress of Good Bread will be held in Nice on May 14 and 15. Further information can be obtained from the general secretary M Robert Septimier 16 Rue de l'Hotel des Postes Nice

The seveneenth International Neurological Retreat will be held in Paris on May 31 and June 1 at La Salpêtrière 47 Boulevard de l'Hôpital. The subject for discussion will be the pupil in neurology. During the conference a demonstration will be given of the work of Dejerine Barthez and Charcot. Inquiries should be addressed to Dr Croizier 70 bis Avenue d'Iena Paris XVI. The programme will be sent to those who notify their intention to attend

The sixteenth international postgraduate course of the Vienna Medical Faculty will be held from May 16 to 25 in subjects being diseases of the digestive system and diseases of the endocrine gland. The fee is RM 2. There will be radiographic demonstrations illustrating the lectures and clinical work. Further information may be obtained from the office of the International Postgraduate Course, The University of Vienna. The demonstrations and lectures will take place in various hospitals and clinics

In our advertisement columns this week the Middlesex County Council invites applications for the post of pathologist to the Central Middlesex County Hospital, Acton Lane Willeiden NW, at a salary of £1100 per annum with 10 annual increments of £20 to £1200 per annum

Dr William Brown who was recently chosen prospective Liberal candidate for Oxford City has now resigned this position. He has found that it is no possible to combine activity in party politics with his work as a medical psychologist in London and as Director of the Institute of Experimental Psychology in Oxford University

The March issue of the *Bulletin de l'Organisation d'Hygiène Publique* in addition to a sympathetic notice of Sir Thomas Stanton, who was the delegate of the British Colonies on the permanent committee of the League of Nations, contains papers on quarantine regulations in Italy in the United States sanitary conditions in the United States in the French Colonies disinsection of ships at Khartoum prevention of rabies in Italy vaccination of cattle in Poland anthrax in Czechoslovakia recent developments in the purification of water in the United States and vaccination in the prophylaxis of venereal diseases in the Argentine Republic

The March issue of the *Scottish Geographical Magazine* opens with an interesting article entitled Australian Impressions by Dr Douglas Guthrie of Edinburgh

A third edition has now been issued of *Air Raid Precautions Handbook No. 2* which deals with first aid and nursing for gas casualties. It is published for the Home Office by H.M. Stationery Office at 4d.

To commemorate the centenary of John Shaw Billings the New York Academy of Medicine and the New York Public Library recently held exhibitions of his work and his versatility in various reference was made in this journal on April 9 (p. 796)

The well known paediatric Gen. Rat P. C. A. Ad. C. Czerny of Berlin was awarded the medal of merit of the German Reich for the discovery of the causative agent of diphtheria

There has recently been a small outbreak of typhoid in Vienna chiefly affecting the lower classes

A Chinese Dermato-logical Society has recently been founded with Prof. C. F. K. Chen as president

*On re-reading the article to which Dr Basman refers one can only conclude that he has in mind harmful results which were encountered when the sodium lactate treatment was being evolved, and has overlooked Dr Hartmann's statement that when he took to using dilute solutions (1/6 molar) these harmful effects were eliminated*

Dr E E MAILLS (Jersey) writes With reference to your annotation in the *Journal* of March 19 (p 629), I would like to relate the following experience In 1907, when in Nigeria, I saw a patient who was suffering from the worst attack of gonorrhoea that I have ever seen With infection of six months' standing he had a blood stained purulent discharge, a perineal fistula consequent upon a perineal abscess, pain in his joints, and a wretched general condition I cabled home for a supply of anti gonococcal serum, on its arrival the contents of one phial were injected into the patient's axilla I cannot remember after this lapse of time whether it was 10 ccm or 25 ccm This was about 4 pm one afternoon I saw the patient next morning about 8 am when he declared that he was cured This statement was almost, but not quite, true The fistula had certainly healed during the night, the joint pain had disappeared and so had the discharge, except for what subsequently turned out to be a 'morning drop' It seems an incredible story but I can only assert that it is true A few months later, on my arrival in England, I mentioned the case to a physician who is now one of the leaders of the profession He said 'Very interesting' I am the man who injected the donkey with gonococci for Burroughs Wellcome and what I would like to know is if normal horse serum would have been equally effective'

## Maida Vale Hospital for Nervous Diseases

The Hospital for Epilepsy and Paralysis and Other Diseases of the Nervous System has changed its name to the Maida Vale Hospital for Nervous Diseases. It was founded in 1866 under the title of the London Infirmary for Epilepsy and Paralysis. Soon after its foundation so many inquiries were received from county districts as to whether the benefits of the hospital were confined to London patients that in 1868 the title was changed to the Infirmary for Epilepsy and Paralysis. The name was again changed in 1873 to the Hospital for Diseases of the Nervous System but in the days such a title apparently did not convey to both medical and lay minds the functions of the hospital and in 1875 the name was again changed to the Hospital for Epilepsy and Paralysis and Other Diseases of the Nervous System and the hospital was incorporated in 1900 under that name.

### Relief of Distress in Madrid

**Relief of Distress in Madrid**

Through the Bishop of Gibraltar the Save the Children Fund has received an urgent appeal from the Scottish Women's Ambulance Unit in Spain, from which it appears that the relief work carried out by the Unit is in desperate need and that stores are practically exhausted. There are also hundreds of new applications each case more tragic than the last. We implore your help. Gifts towards providing the necessary aid will be welcomed by the Save the Children Fund at 20 Gordon Square London WC1. They should be earmarked Madrid.

## Medical Golf

**Medical Golf**  
The Medical Golfing Society held its Spring Meeting at Princes, Sandwich on Saturday April 30, and Sunday May 1. The result of the Captain's Prize was T H P Kolesar (3 down) Douglas Craig (4 down) the Green was won by H Chapple and W Dale the President's Prize was won by A Galletly (75) after a tie with Michael Smith and Douglas Craig T H P Kolesar also won the 9 holes concealed

## Disclaimer

**Disclaimer**

Dr G W Morry (Shrewsbury) writes On April 26 a short paragraph appeared in a London daily paper giving details of an intended motor tour shortly to be undertaken by me, my wife and myself. This paragraph gave a very false impression of a self inserted advertisement in bad taste. We should like to make it known that this paragraph was printed without our knowledge or consent.

## QUERIES AND ANSWERS

### Acute Sleeplessness

M H writes Can any of your readers suggest a remedy for acute sleeplessness in an otherwise healthy man of 74? The cause in the first place was acute business worry. Barbiturates excite and milder sedatives appear useless. Omnopon, by injection, works well, but orally the effect lasts only for two to three hours. Paraldehyde excites to an extreme degree.

## An Internal Sanitary Pad

X Y X writes in reply to "Woman Doctor" (April 23, p. 932) My experience has differed from hers in that I and a number of my colleagues and patients have found an internal sanitary pad to be far more comfortable and convenient than any other kind. The feeling of fullness and stimulation in the vagina does not arise if the pad be pushed well inside so that it does not come in contact with the hymen. I have found that the most convenient form of pad is a firm cylindrical roll of cotton-wool which can be removed and dropped into the lavatory pan before defaecation thus obviating any inhibition of complete defaecation such as 'GP' mentions. I have also found that intelligent virgins—for example, medical students—can quite well use these pads.

**LETTERS, NOTES, ETC**

### Sodium Lactate for Diabetic Coma Corrigendum

**Sodium Lactate for Diabetic Coma**

In the *Journal* of March 26 there appeared an annotation on the treatment of diabetic coma by the use of racemic sodium lactate and certain criticisms of this annotation were made by Dr J Basman in the *Journal* of April 9 (p 814). In case readers may be confused we should perhaps make some reply to Dr Basman's criticisms. It is quite true that Dr Hartmann now omits the dextrose and gives only sodium lactate solution and insulin to cases of diabetic coma but this was not clear in the article commented on in the annotation—in his footnote to the article which forms the subject of the annotation it is plain that dextrose was recommended. According to the footnote he gives sodium lactate as well as dextrose according to the tables and charts dextrose was omitted. Hartmann's subsequent work makes it clear that dextrose is omitted. The second criticism implied by Dr Basman is in the sentence "In view of the suggestion as to the meagre possibility of harmful effects in the administration of sodium lactate I should like to refer to the thirty cases published in the above journal." This sentence implied that the possibility of harmful effects is not meagre.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 370 Pleural Effusion after Pleurolysis

O M MISTAL (*Tubercle* January 1928 p 145) states that pleural effusion is the commonest complication following pleurolysis. The exudates are large in 10 per cent of cases only. Their importance is that they produce toxæmia, anorexia, fever and loss of weight; they may also reactivate latent lesions in the opposite lung. They are usually due to thermic irritation and the liberation of bacilli. The most frequent effusions are seroh fibrinous; they may occur from a few days to a few months after operation. Prognosis depends on the strength of the patient on his reaction on the type of infection and on its virulence. Aspiration of the exudate and replacement by air is indicated when the effusion is not increasing; pleural wash outs with saline or distilled water are helpful. Thoracoscopy is indicated when the effusion persists in spite of treatment. Haemorrhagic effusions are nearly always caused by bad technique; they have little tendency to coagulate. They should be evacuated as soon as possible to avoid their transformation into empyemas. Empyemas are becoming rare; the prognosis is worse the more rapidly they come on and wash outs are specially indicated. Oleothorax sometimes gives good results. The author advocates direct irradiation of the pleural cavity with ultra violet rays. Weak doses are used so as not to irritate tissues already affected; this therapy must only be used however in cavities already opened. Pulmonary fistulæ which keep up an empyema must be searched for. Empyemas may be prevented by avoiding refills at a high pressure which breaks the fibrinous basal membranes. In severe cases permanent drainage is the only efficacious procedure. Attention to general hygiene and to the diet is essential in all cases. Examination of the effusion reveals its nature and indicates the kind of treatment required. At the beginning of a pleurisy the polymorpho-nuclear leucocytes are replaced by lymphocytes; eosinophilia is a defensive reaction and is only found in non-infected exudates; lymphocytes and macrophages indicate the tuberculous character of the effusion.

### 371 Pemphigus

A E H BINGER (*Wien klin Wschr* February 25 1938 p 237) discusses a fatal case of pemphigus in a young Jewess of 27. She had a severe attack of furunculosis involving both axillæ and was treated with injections of a staphylococcal vaccine (fourteen doses). Shortly afterwards she developed a symmetrical eruption of vesicles the size of hemp seeds and filled with a clear fluid on both thighs. Then bullæ the size of walnuts appeared on the back and abdomen and were also roughly symmetrical. There was no irritation, pain or pruritus and the bullæ disappeared spontaneously after a short time but new ones continued to make their appearance. They were unilocular, not very distended and showed a tendency to collapse; they contained a viscid clear amber fluid. The patient was treated by injections of the fluid contained in these bullæ but this did not arrest the process. The bullæ increased in size and the fluid in them became more and more viscous. The walls of the bullæ were also tougher so that whereas at the start they could be pricked with a pin they now had to be cut open with scissors. Numerous vesicles next made their appearance simultaneously on both eyelids; they only persisted for fifteen to thirty minutes after which they turned into reddish crusts. Similar crusts appeared in the nares almost stopping up the nose and obliging the patient to breathe through her mouth. A rabbit which had received a subdural injection of the content of one of the earlier vesicles died of cachexia accompanied by paresis and convulsions.

The patient was given a course of injections with an emulsion prepared from the brain of this rabbit. No further bullæ appeared after the second injection. The spine of this patient grew steadily worse; extensive serpigulous undermining of the epidermis began and was accompanied by fever, the ulcerated surfaces were extensive and altogether the patient's condition became one of extreme misery. She died seventeen days after the onset of the undermining process; the temperature reached 106° F just before death. The author does not commit himself with regard to the ætiology of this case but suggests that it may have been due to the vaccine reaction of the original tuberculosis. Pemphigus has been known to follow vaccination and also the administration of antitetanus serum.

### 372 Lumbago

J NICOLAYSEN (*Nord med Tidsskr* February 26 1938 p 321) points out that in Norway rheumatic lumbago is dealt with under sickness insurance whereas traumatic lumbago under accident insurance. Between 1928 and 1934 696 cases coming under sickness insurance had led to the average duration of incapacity was fifteen days whereas it was between thirty three and thirty four days for 102 cases of traumatic lumbago; for cases of pure traumatic lumbago the average was seventeen days. He has investigated the 944 cases of lumbago in connection with which applications were made for accident insurance benefit in 1934. Only 502 of the 944 claims were accepted; rejection of the remaining 442 cases depended on the examiner's opinion that the incapacity for work was not due to any accident but had arisen under ordinary conditions of employment. It was held that the lumbago was rheumatic in several of these cases. Discussing the differential diagnosis of traumatic and rheumatic lumbago the author points out that the condition cannot be regarded as traumatic simply because the person concerned has suddenly had to discontinue work for this is often the case with rheumatic lumbago whereas traumatic lumbago may give rise to violent pain only after several hours. This was so with as many as seventy six of the patients whose lumbago was finally diagnosed as traumatic and twenty of these patients could still work on the day after the accident. Of importance in differential diagnosis is the history of previous attacks for while such a history is characteristic of rheumatic lumbago it is very rare in traumatic lumbago.

## Surgery

### 373 Peripheral Vascular Disease

W S COLLENS and N D WILENSKY (*J Amer med Ass* December 23 1937 p 2125) describe the results obtained in the treatment of 124 cases of peripheral vascular disease by intermittent venous occlusion. It was found that the temporary interruption of the venous return results in increasing arterial amplitude and that the cause of the obstruction is followed by a pronounced reaction in the hæmia. These principles were applied in the treatment of peripheral vascular disease by means of an apparatus which automatically produced intermittent pressure on the venous compression. The apparatus was connected to a pneumatic cuff which embraced the proximal part of the extremity and was inflated to the pressure necessary to constrict the veins and was then released. It was found that compression up to 80 mm Hg for 15 to 20 minutes with release for 10 minutes was applied continuously for as much as 15 days and had a definite therapeutic effect in cases of disease associated with pathological arterial changes. In the cases reviewed the average twenty seven cases of thromboangiitis obliterans. The



# EPITOME OF CURRENT MEDICAL LITERATURE

## Therapeutics

was complete relief of pain in 85 per cent of cases within forty eight hours, and of seventeen cases presenting ulcers twelve healed completely. There were thirty-three cases of arteriosclerosis obliterans, complete relief of pain was obtained in the same period of time in 82 per cent of cases. Four chronic indolent ulcers healed completely. Arteriosclerosis obliterans associated with diabetes was treated in forty eight cases, 60 per cent of these were free from pain after forty eight hours and 33 per cent were partially relieved. There was complete healing of open lesions in 76 per cent of cases, the remainder needed amputation. Seven cases of embolus and acute arterial thrombosis showed relief from pain within eight hours, and in a further seven cases chronic varicose ulcers of long standing were healed.

## Tuberculosis of the Breast

374 V CONTINI (*Arch Ital Chir* December, 1937, p 601) gives an account of his experimental work in connexion with tuberculosis of the breast. This disease would not appear to be so rare as was once thought, it is more common in the female but may also occur in the male. There is little agreement as to pathogenesis. The mode of spread to the breast may be direct, haematogenous, of lymphatic or by the milk ducts. Contini inoculated twenty eight guinea-pigs in various stages of sexual activity (rest pregnancy, lactation) with an emulsion of human tubercle bacilli. This was injected into the groin, or into the internal jugular vein. The animals were killed at different intervals of time and the breasts, lungs, liver, spleen and kidneys examined. As a result of his investigations the author comes to the following conclusions. Only direct injection or injection into the milk ducts gave positive results. Intravenous injection only gave positive results when the injection was in a state of functional activity. Injection into the lymphatics was invariably negative, thus rendering the possibility of a retrograde infection of the breast by the lymphatics very doubtful. Pregnancy, lactation, and trauma all favour the development of the infection. Tuberculosis of the breast does not remain localized, but is constantly followed by a general infection of the other organs. Primary tuberculosis of the breast arises only when the infection took place directly or by the milk ducts, in all other cases mammary tuberculosis is a secondary phenomenon. The giant cells seen in this condition would seem to be usually of parenchymal origin from the acini of the glands, and only rarely of epithelial origin.

## Giant cell Tumours of the Spine

375 G E RICHARDS and A C SINGLETON (*Radiology* January, 1938, p 43) report three cases of giant cell tumours of the spine and discuss the diagnosis pathology and treatment of these tumours. The condition is sometimes referred to as myeloma or myeloid sarcoma but according to the Bone Registry Committee of the American College of Surgeons these neoplasms are of a benign nature. The majority of cases occur in the latter half of the second and in the third and fourth decades. The spine is the seat of the lesion in about 8 per cent of all cases of benign giant cell tumours. Radiographically the tumour may appear as a well delimited or less frequently as a diffuse lesion. The tumour may originate in any part of the vertebra and extend by direct spread to the adjacent vertebrae and tendons for pedicles and transverse processes to be involved. The intervertebral disk is usually left intact even though a whole vertebra may be involved. The response of these tumours to x-ray treatment is slow, and is often preceded by a stage of lysis and apparent extension of the disease which is followed by bone regeneration and repair but in the author's opinion irradiation is still the treatment of choice.

10.9.38

## Cryptorchidism and Hypogonitalism

376 W O THOMPSON, N J HECKEL P K THOMPSON and L F N DICKIE (*Endocrin*, January, 1938, p 59) state that further investigations have confirmed the value of the anterior-pituitary-like principle in the treatment of undescended testis and hypogonitalism. In patients who had not undergone surgical treatment descent was produced in eight of thirty-six undescended testes (22 per cent) in twenty-eight patients, varying in age from 1 to 37 years. In cases in which surgical procedures had failed descent was effected in three out of six patients with undescended testes, and in one-third the growth was marked. In three boys of 4, 7, and 9 years of age premature puberty was produced. In the case of a boy aged 7 the penis grew to adult size, the prostate enlarged, a luxuriant growth of pubic hair developed, a small amount of hair appeared on the face, and the pitch of the voice changed. Marked growth of the genitals may occur without descent of the testes. Premature puberty may be avoided if administration of the principle is not prolonged. In successful cases descent occurred within nine weeks, and harmful results were rarely noted in this length of time. Growth of the genitals was produced in nine out of twelve cases of hypogonitalism, the patients were mainly of the Frohlich type.

## Fever Therapy in Gonococcal Infections

377 T G SCHNABEL and F FETTER (*Amer J Syph*, January 1938, p 39) claim that the value of fever therapy has been definitely established in the treatment of gonococcal infections, particularly arthritis. They report their results in the treatment of 136 patients. The Kettering hyperthermia was used, it is an air-conditioned cabinet. The usual session is one of six hours (five for the first treatment) during which the body temperature is kept at between 106° F and 107° F (rectal). Of fifteen girls with gonorrhoeal vaginitis thirteen were cured and two improved. Two women with acute pelvic inflammatory disease and gonococcal origin were cured. Of four men with genital complications of gonorrhoea two were cured and two improved. Of seventy patients with acute gonococcal arthritis forty eight were cured and twenty two were proved. Of twenty-three patients with chronic arthritis six were cured and seventeen were improved. As compared with other types of treatment, fever therapy shortens the period of hospitalization and improves the prognosis. So far, the authors have found no case of gonococcal infection which has not responded in appreciable degree to adequate fever therapy.

## Succinic Acid in Diabetic Acidosis

378 According to A BROCKMULLER (*Munch med Woch* February 18, 1938, p 252) succinic acid was found by Baer and Blum in 1911 to diminish the excretion of acetone bodies in the urine in diabetes. Recent observations show that it is of importance in carbohydrate metabolism, in the fixation of hepatic glycogen, and in anaerobic cell metabolism. Three cases are described of diabetic acidosis resistant to sodium acetone, bicarbonate, hydrate, and insulin treatment in which acetone bodies disappeared from the urine after the administration of 0.5 to 2 grammes daily of succinic acid. There is a small coincident rise in the blood sugar concentration and succinic acid does not diminish the necessity for insulin. If the metabolic dysfunction responsible for the acidosis has been sufficiently protracted to do irreparable toxic injury to tissue cells succinic acid is without effect, hence it is suggested the negative results of English and Austrian investigators.

## Neurology

## 379 Rare Forms of Neurosyphilis

D. PAULIAN (*Wien klin Wschr* February 11 and 18, 1938 pp 161 and 197) draws attention to a number of rare forms of syphilis of the central nervous system. Syphilis may be the cause of nearly all nervous affection. In the mid and hind brain it may cause but more frequently simulates epidemic encephalitis. Undoubted proof of syphilis as an aetiological factor in the production of Parkinson's syndrome exists. Syphilitic pseudo bulbar paralysis has also been observed. The pituitary may be affected producing symptoms which include narcolepsy, polyuria, thirst, obesity and amenorrhoea. In contrast to these obese patients those affected by the dysphagic type of cerebral syphilis are very thin. The cerebellum is rarely affected by syphilis; syphilis may however, produce cerebellar atrophy. Friedrich's ataxia, and very seldom cerebellar gummata. Epilepsy has long been known to occur in subjects with hereditary syphilis. In recent times the existence of syphilitic psychoses has been stressed. The spinal cord and its coverings may be attacked by syphilis giving rise to spastic spinal paralysis, amyotrophies and meningo-myelitis. Syringomyelia and multiple sclerosis may be simulated but the author states that a true syphilitic multiple sclerosis does not exist. Syphilis of the nerve roots gives rise to motor and sensory disturbances, pain resembling sciatica and loss of sphincter control. It may also produce well marked syndromes—for example, Dejerine Klumpke, Korsakoff and Guillain Barré syndromes. Attention is drawn to latent syphilis of the central nervous system which occurs in two forms—one which may disappear spontaneously and one which is but a precursor of later and more clearly defined manifestations; the differential diagnosis is often difficult.

## 380 Spinal Arachnoiditis

W. F. SUERMONDT (*Zbl Chir* March 12, 1938 p 581) reviews the surgical treatment of spinal arachnoiditis. The underlying lesion is the formation of scar tissue in the subarachnoid space which may directly compress the cord and nerve roots or lead to the formation of arachnoid cysts. The trouble always begins and is more marked in the dorsal part of the space, the anterior portion is affected later. Stookey assumes that in addition to the obvious mechanical effects such adhesions interfere with the normal horizontal pendular movements of the cord which are supposed to occur as a result of the respiratory waves in the cerebrospinal fluid. Minute recurrent traumata are produced in this manner and also the fixed cord is exposed to injuries during excessive movements of the spinal column. The diagnosis is based on clinical evidence supported by the demonstration of a block to the passage of lipiodol. The descent of the lipiodol should be watched on the fluorescent screen while the patient is gradually tilted on the table. Partial blocks can then be seen and immediately photographed. The discrepancy between severe pains which the patients complain of and the relative scarcity of objective neurological signs is characteristic. Treatment is surgical in all but the very early cases in which conservative measures may be tried. Operation must not be deterred for too long for permanent structural changes may take place in the cord and widespread adhesions will greatly increase the difficulties of the operation. After suitable exposure the cord and nerve roots are carefully and completely freed so that at the conclusion of the operation compression of the jugular veins will produce a free flow of cerebrospinal fluid. The author advises against closure of the dura to prevent the reformation of adhesions. In sixteen cases treated by the author a history of trauma was obtained in six, and severe infections had preceded the

onset of arachnoiditis in another six patients. No case could be found in the remaining four. The results of operation was completely satisfactory in six cases, five were improved and three showed no improvement. In the last group the disease had progressed to such structural changes in the cord. Two of the sixteen patients died.

## 381 Disseminated Sclerosis

G. TANFANI (*Mitt. d. med. March 3, 1938 p 223*) records forty cases of disseminated sclerosis in patients aged 10 to 22 to 52 treated by the production of an aseptic meningitis. The aseptic meningitis was brought about by giving three or four intrathecal injections of 0.5 c.c. of distilled water at intervals of two or three days between each injection. The aseptic meningitis is believed to stimulate the nervous system generally. Of the 40 cases 30 were treated, most of which were cases of long standing, eighteen proved refractory while all the others showed a varying degree of improvement.

## 382 Insulin Shock Treatment of Schizophrenia

B. VAN DINTHOP and E. JANSSEN (*Nederl. Tijdschr. Geneesk.* March 12, 1938 p 1264) record the observations on forty-two cases of schizophrenia in patients aged from 19 to 90 treated by Sakel's method of intravenous injection of insulin. Their results accord with those of previous writers. The treatment gave encouraging results in recent cases although a reliable conclusion as to the nature of the remissions cannot yet be drawn. Of the forty-two cases thirteen were cured or showed considerable improvement and five some improvement. In twenty-three patients there was no change.

383 G. RYLANDER (*Hygien. Stockh. Febr. 28, 1938 p 97*) calculates that about 70 per cent of all the beds in Swedish asylums are occupied by schizophrenics but that only 20 to 25 per cent of the admissions represent early cases. Much would therefore be gained if in some 50 per cent of these early cases treatment could be so effective that it prevented the development of chronic schizophrenia. The author has compared the proportion of spontaneous recoveries recorded in the literature with that effected by insulin shock treatment. At least temporary recovery occurs spontaneously in about 1 per cent of cases. The proportion of recoveries following insulin shock treatment is much higher and according to the authors nearly 60 per cent. The comparison is all the more favourable to insulin shock treatment because successes are achieved in a much shorter time. According to the literature the mortality from this treatment is between 1 and 2 per cent. At the author's hospital treatment has been completed in seventeen cases, eleven of which represented good remissions. In the two others some improvement could be noted. Of the nine patients still undergoing treatment seven appeared to benefit from it.

## 384 Rate of Blood Flow in Schizophrenia

L. E. FINESINGER, M. E. COHEN and A. J. TAYLOR (*Arch. Neurol. Psychiat.* Chicago, January, 1938 p 24) record a study of the blood flow in fifteen cases of schizophrenia. They were not able to confirm Fineman's conclusions. They found no abnormal slowing of circulation. In a series of determinations of circulation by the cyanide method the average arm circulation circulation time was 14.9 seconds with a range of 11 to 26 seconds, these being within the normal limits. The average pulmonary circulation time was 10.5 seconds, the range being from 9 to 16 seconds. In a series of thirty-one patients with schizophrenia the average arm circulation time was 8.4 seconds, the range being from 7 to 11 seconds, all these figures lie within the normal limits. The authors state that the only marked abnormality

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## EPITOME OF CURRENT MEDICAL LITERATURE

during basal conditions and that their data consequently give no information about the comparative circulation times during basal and non-basal conditions. They are unable to explain the discrepancy between their results and those in Freeman's experiments, in which the mean pulse rate reported was 58 beats a minute, their own findings during fasting periods averaging 82 beats a minute—a difference they remark, which might contribute towards explaining the divergence, since there is a negative correlation between the pulse rate and the circulation time. The results recorded by the present authors do agree with those obtained by Freeman, however, in indicating a lack of correlation between the circulation time, the subject's age and the systolic and diastolic blood pressure readings.

## Obstetrics and Gynaecology

## 385 Antefixation of the Uterus

J. NOVAK (*Zbl Chir* February 26, 1938, p. 467) states that subjective symptoms attributed to mobile uterine retroflexion are only rarely caused by it, operation is unjustified unless temporary correction of the malposition by means of a pessary causes pain to disappear or very considerably improve. Of operative treatments the safest, provided antefixation as the most effective and the safest, provided attention is paid to certain technical points. (These eliminate the possibility of post-operative ileus and prevent the occurrence of pain near the point of fixation of the round ligaments in the anterior aponeurosis of the rectus). They consist in (1) formation of a new, not unduly deepened vesico-uterine excavation, by choosing for fixation of the round ligament a point not too near its uterine end, and by drawing out the ligament abdominal ring, (2) careful closure, by suture, of the loop made by the lateral abdominal part of the ligament, and (3) fixation of the round ligament loop to the posterior wall only of the anterior sheath of the rectus.

## 386 Haemorrhage in Extra-uterine Gestation

F. DRAZANCIC (*Zbl Gynak* February 12, 1938, p. 344) points out that ectopic gestation may give rise to few or no symptoms and be very difficult to diagnose. He agrees with other authors however, that a differential diagnosis between uterine haemorrhage due to extra-uterine pregnancy and that due to ovarian or inflammatory causes can be made even in cases in which vaginal examination appears to reveal nothing abnormal. Injections of hypophysis once or twice daily on successive days, or the intravenous injection of the patient's own blood, practically always brings about a cessation of uterine bleeding due to ovarian or inflammatory causes. Such injections never have any effect on haemorrhage due to extra-uterine pregnancy.

## Glandulo-cystic Hyperplasia

E. DAHL-IVERSEN and HJOERDIS-JOERGENSEN (*Lyon chir* November-December 1937, p. 659) point out that patients suffering from glandular hyperplasia of the endometrium have persistent follicular cysts in one or both ovaries, and that the disease is due to the action of the folliculine on the endometrium causing menorrhagia. It has been found that the condition responds to treatment by standardized gonadotropic hormone and gives the best results. Treatment of cystic glandular hyperplasia must be made to find the preparation which is necessary for both therapeutic and therapeutic purposes. Curettage is therapeutically more successful in older women than in the younger or middle-aged. In cases where recurrence takes

place after curettage hormone therapy is indicated. Good results have been obtained in young women treated with luteinizing hormones. It has also been found that by the administration of gonadotropic hormone, especially with prolactin, it is possible to bring about ovarian modifications such as maturation of the follicles, haemorrhage into the follicles, and luteinization. Details are given of the various preparations which may be used, four cases are described in which hormone therapy was successfully carried out.

## Pathology

## 388 Nicotinic Acid in Dietary Deficiency

H. CHICK, T. F. MACRAE, A. J. P. MARTIN and C. J. MARTIN (*Biochem J* January, 1938, p. 10) report the effects of administering nicotinic acid to two pigs fed on a maize-peameal-casein diet deficient in vitamin B. Both animals were losing weight rapidly, had diarrhoea and dermatitis were refusing food, and were so ill as to be expected to die within two to three days, one had a paresis of the hind limbs. Various fractions of yeast extract had no effect. Nicotinic acid was given first intramuscularly in doses of 100 mg, and then by mouth in doses of 60 mg a day. Within twenty-four hours of the first injection appetite returned and there followed a steady reversal of the former condition, so that after six weeks treatment the pigs appeared quite healthy. Experiments are being conducted to ascertain the daily requirement of nicotinic acid on the basal diet used.

## 389 Sero-vaccination against Typhus

R. WEIGL (*Arch Inst Pasteur, Tunis* December 1937, p. 665) points out that both in guinea-pigs and in man in attack of typhus may be prevented, or modified, after infection by louse-bites if passive immunity is induced by the administration of convalescent serum. Such immunity is temporary, and should be reinforced by active immunization by the phenolized rickettsia-vaccine. Serum from convalescents is not always readily obtained, especially at the beginning of an epidemic. Weigl has found that it may be replaced by the serum of persons recently vaccinated with his protective rickettsia vaccine; this serum, he finds, is equal if not superior to that of convalescents in protective power and antibody concentration.

## Milk Bottles

## 390

J. MARTIN SANSBY (*Arch Pediat*, January, 1938, p. 22), in a study of milk bottles with metal caps, points out that the sealing of the bottle to prevent leakage is not in itself sufficient to prevent contamination of the milk. To ensure completely against this the cap should cover the entire pouring surface. The bottle itself should be so constructed that in the act of pouring it will prevent the milk from coming in contact with any uncovered part around the opening of the bottle which may be contaminated during the pouring. This fact was proved by swabbing the surface of bottles allow the milk to be contaminated during pouring. From this bacteriological study it is shown that many types of bottles below the cap with *B. coli* and caps of different designs were tried and are illustrated in this paper. The best bottle and cap are described, and the author thinks that this type should become universal. It is important that the bottle be so designed that the milk when poured will come in contact with, and only with, that portion of the glass which has been covered by the cap. It is also important that if the cap is loosened or removed during the course of delivery it should not be capable of manual replacement.

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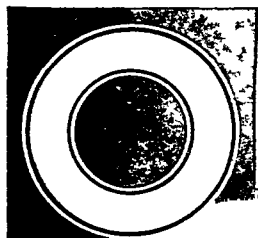
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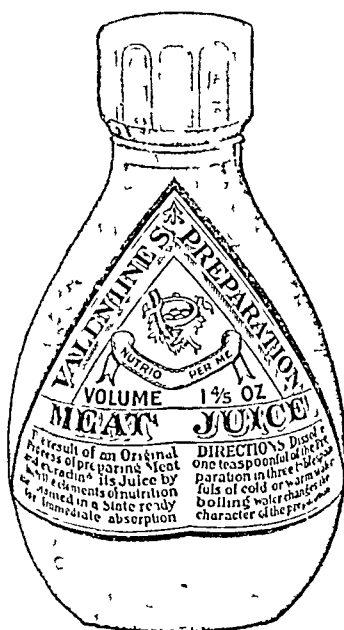
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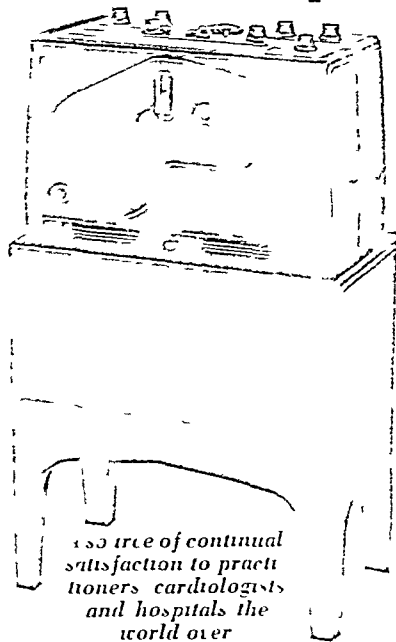


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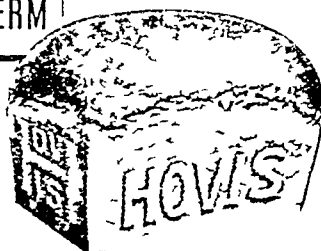
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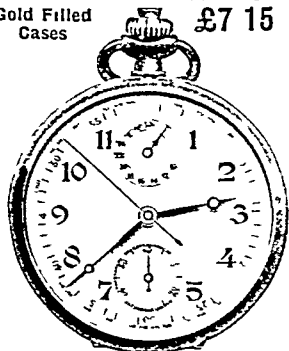
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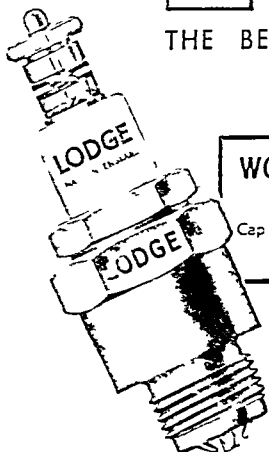
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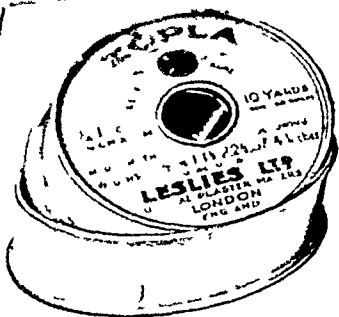
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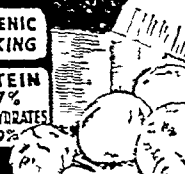
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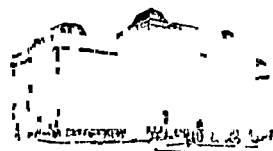
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A CLINIC instituted by the London County Council for treatment of Nervous and Curable Mental Disorders for day patients only. See ad.

New Outpatients—Men (Mondays and Thursdays 2 pm) Women (Tuesdays and Fridays 2 pm) Children (Mondays and Fridays 10 am to 12 pm). (a) 4 beds (both sexes) in ward of separate room including bath in a ward of King's College Hospital which is used as a temporary annex of the Maudsley Hospital. (b) a private ward (the private room) for those patients of each sex who are paying the full cost and are a heretofore suitable. TERMS—A week but in case of patients with a local settlement in the County of London a longer stay may be charged a nursing to meet.

Terms in day (with rare exception) all forms of treatment for which there are excellent facilities as there is a staff of Consultants, Senior and Junior Medical Officers, and a staff of Nurses. Medical Officers: Dr. E. M. R. C. P. Medical Superintendent.

## WESTON LODGE, BATH NURSING HOME

A country residence with extensive gardens on the outskirts of the City of Bath established by the Mental Treatment Act Committee of the Corporation for the care and treatment of a limited number of women (Voluntary and Temporary patients only) suffering from Functional Nervous Disorders.

The Nursing Home is fully staffed with qualified nurses and is equipped for Hydrotherapy and Plombic Treatment. A few vacant beds available. Terms moderate.

Apply to Miss M. E. Goodson Matron SRN RMN SCM  
Telephone Weston (Bath) 7498

## EPILEPSY

Attendance at school is a necessary part of the satisfactory treatment of Epilepsy in Children.

### COLTHURST HOUSE SCHOOL

meets all the requirements of children of middle-class parentage. Extensions made necessary by the success of the school have created several vacancies.

Only bright and intelligent boys and girls are eligible for admission.

Apply to the Director Colthurst House School Warford, Alderly Edge.

## TYKEFORD ABBEY, NEWPORT PAGNELL, BEDS.

FUNCTIONAL NERVOUS DISORDERS MEDICAL AND CONVALESCENT CASES

The Home is a mansion of historical interest standing in 15 acres of garden and grounds and is situated 1 1/2 miles from Northampton and 1 1/2 miles from Bedford on the main London to Northampton Road. Fifty miles from London. Both sexes are accommodated. Psycho-physical treatment is used extensively in suitable cases. Radiant Heat, X-ray and Ultra Violet Light, Dathermy and Foam Baths, Billiards, Tennis, etc.

Apply Dr. D. E. M. DOLGLAS-MORRIS  
Telephone Newport Pagnell 1.1

## SPRINGFIELD HOUSE,

Near BEDFORD (Phone 341)

For Mental Disorders with or without Convulsions. Recent Provision CEDRIC W. BOWER

Ordinary Ten Five Guinea per week (including Separate Bedrooms where suitable).

Interviews in London by Appointment.

## HERMOSA, TEIGNMOUTH, DEVON PAVING GUESTS

highly recommended. Rest at home. Good garden. H. A. and cold in bedrooms. South aspect. Terms from a guinea weekly. Phone 44

Full range of Hydrotherapy treatments. Smedley's Great British Great Hydro Matlocks. Terms 13/- to 18/- per day inclusive of board. Illustrated Brochure V.L.J. on request.

Re-Adaptation Courses. G. C. R. HARRISON, M.B. B.S., B.A.O. (RUL). R. MACLELLAND, M.D., F.R.C.P. Phone No. 7. G. Matlocks.

## KENWORTHY'S HYDRO HOTEL, SOUTHPORT

SEPARATE SUITES OF LADIES AND GENTLEMEN'S HYDROPATHIC BATHS RECENTLY MODERNISED AND PEDICATED

All Hydrate Treatment. S. F. R. V. At 15/- per day. All equipped. D. R. C. L. D. P. C. Terms from 10/- to 15/- per day. Apply The Manager.

## ASHWOOD HOUSE, KINGSWINFORD STAFFORDSHIRE

Any condition of PRIVATE HOME for care and treatment of Ladies and Gentlemen. All modern. Probationary cases and permanent cases are received and all as the results certified. The home is beautiful situated in a park of 40 acres. Full particulars as to reception terms can be obtained from the Resident Medical Officer.

## THE GRANGE, near ROTHERHAM

A HOUSE licensed for the carrying on a limited number of Ladies and Gentlemen of Nervous and Mental Disorders. Both entered and voluntary patients received. Approved for temporary patients. This is a large country house with beautiful grounds and paths. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## PRIVATE NERVOUS AND MENTAL PATIENTS

LONDON COUNTY COUNCIL. A house for the treatment of Nervous and Mental Disorders. Both entered and voluntary patients received. Approved for temporary patients. This is a large country house with beautiful grounds and paths. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## ECCLESFIELD Staplehurst Kent

(Removed from Ashford Madocet). PRIVATE HOME for the CARE and CURE of ALCOHOLIC PATIENTS (Ladies). Large manor house beautifully situated in 100 acres of park land. Extensive views. Home farm R. C. Church. The manager is Mr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## CITY OF LONDON MENTAL HOSPITAL, DARTFORD KENT

Ladies and Gentlemen received for treatment under certificates and subject to the provisions of the VOLUNTARY and TEMPORARY PATIENTS Act of 1907. TWO GUINEAS.

Tel. and Telegrams. HAYES B. 10. 10. 10. LITTLETON HALL, BRENTWOOD, ESSEX. Large grounds. 400 ft. above sea level. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## HOTEL GREAT CENTRAL

Marblestone Road N.W.1. The Hotel Great Central is within a few minutes walk of the London Central Station. Harle Street. Special terms for residents. Home in the heart of the city. Apply Manager. Telephone 100.

## HALLFORD HOUSE, UPPER HALLFORD SHEPPERTON

This house is situated in a beautiful park of 40 acres. It is a large country house with beautiful grounds and paths. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## NORMANSFIELD

For Mental Defectives of either sex. Under private management. Apply to Dr. Lurgdon Down.

## RUSSELLS HEMEL HEMPSTEAD RD. WATFORD

Tel. phone WATFORD 301. This is a large country house with beautiful grounds and paths. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## WYE HOUSE, BLUNTON

This is a large country house with beautiful grounds and paths. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.

## THE GROVE OF LITTLETON, STATION, SHROTON HILL

This is a large country house with beautiful grounds and paths. Home of Dr. S. H. R. Tel. No. 400.0. Ext. 10. Res. Phys. G. L. R. E. M. D. L. R. C. P. M. R. C. S. D. Grange Lane L. & N. E. Ry.



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The Spas and Health Resorts of Czechoslovakia with their centuries old tradition of healing reinforced by the experience and researches of local specialists in the your serious consideration

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with their medicinal springs and mud baths there are numerous smaller spas and health resorts admirably equipped for the treatment of many diseases including those in the following groups

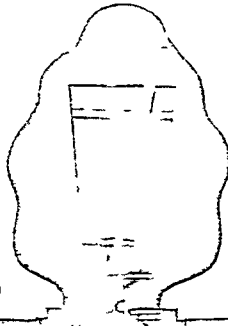
Anaemia and Chlorosis Basedow's Disease Bronchial Catarrh Constitutional Diseases  
Scrofula, Rickets Digestive Diseases Diseases of the Bladder and Urinary Organs  
Diseases of the Kidneys Diseases of the Nose and Throat Diseases of Women  
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The arrangements in the bath establishments are up to date in every way the cleanliness and neatness proverbial the service attentive and courteous

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There are also numerous fully equipped for the cure of adolescence and other cures

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Mud from Píšťany in packs ready for home use. Simple, safe and most economical treatment may be entrusted to any patient. Cost 20s. for 20 treatments. Literature on request.

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**VOLCANIC-SULPHURIC MUD SPRINGS** in delightful surroundings

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(Special Offer for 1938)

**£10-10-0**

Second Class Fare and Return £1-15-0 Return

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## WOODHALL SPA

is Unique among British Spas

in having a Bromo-Iodine Water for all forms of Rheumatism etc. an INHALARIUM with FOG ROOM for the treatment of Catarrhs of the Respiratory Tract and an entirely RURAL and therefore, RESTFUL Quality Sheltered dry and sunny with a gravel sub-soil

Information and Literature on application to the Spa Director Woodhall Spa, Lincs

## VICTORIA CLINIC

The only Private Clinic in London dealing solely with the treatment of Hay Fever by Intra-Nasal Ionization. Patients accepted on doctor's recommendation only and all treatments given under medical supervision

70 VICTORIA STREET SW 1  
Tel. Victoria 04 412

## CITY OF LONDON MATERNITY HOSPITAL

(The Royal London Hospital)  
CITY ROAD E.C.1

The Hospital offers facilities for POSTGRADUATE STUDENTS in Obstetrics and Gynaecology and for MEDICAL STUDENTS in Obstetrics and Gynaecology. A Refresher Course is also available for Midwives (R.N.M.S.) patients annually.

RALPH B. CANNINGS Secretary

## QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD NW1

Medical Students and Qualified Practitioners are accepted for Obstetrics and Gynaecology. The Hospital also offers facilities for MEDICAL STUDENTS in Obstetrics and Gynaecology. A Refresher Course is also available for Midwives (R.N.M.S.) patients annually.

## DIPLOMA IN PSYCHOLOGICAL MEDICINE

Short Intensive Oral and Postal Revision Courses in preparation for the DPM. Courses at London University etc. Apply Secretary Medical Correspondence Co. 19, Webster Street, London W.1. Free Booklet. How to Pass the DPM on application.



The University of London, the Council Board, and other Bodies granting degrees and diplomas in OPHTHALMOLOGY  
 The Hospital is open to qualified Medical Practitioner and registered Students of Medicine  
 The following are the subjects taught: OPERATIVE SURGERY, THE PATHOLOGY AND BACTERIOLOGY OF THE EYE  
 THE ANATOMY OF THE EYE, THE FUNDS OCULI, METHODS OF EXAMINATION, MEDICAL OPHTHALMOLOGY, CLINICAL LECTURES  
 ON THE TREATMENT OF DISEASES OF THE EYE, FOR MEDICAL PRACTITIONERS desirous of taking a practical course in Ocular Medicine, Students at a  
 Hospital, and for the DEAN or SECRETARY of the Hospital, High Holborn, W.C.1

JUNIOR ASSISTANT MEDICAL OFFICER  
(Mans)  
General  
A  
C  
=

## BRITISH EMPIRE CANCER CAMPAIGN CLINICAL CANCER RESEARCH COMMITTEE

### APPOINTMENT OF MEDICAL SECRETARY AND REGISTRAR

Applications are invited from male British subjects with qualifications registered or registrable in the British Medical Register for the post of **MEDICAL SECRETARY AND REGISTRAR** to the Clinical Cancer Research Committee of the British Empire Cancer Campaign.

The appointment will be a whole time one and in the first instance for one year eligible for re-election and thereafter subject to six months notice on either side. Preference will be given to candidates over the age of forty. Previous statistical and administrative experience a recommendation. Daily attendance at the Head Office of the Campaign will be essential. Duties will include charge of the Records Department and responsibility for all Clinical Cancer Case Sheets.

At the beginning of the appointment the successful Candidate will be required to visit certain Clinics in the United States of America the expenses of which will be paid.

Remuneration will be at the rate of £500 per annum.

Applications accompanied by copies of three recent testimonials should reach the General Secretary of the Campaign at 11 Grosvenor Crescent London S W 1 not later than June 30th 1938 from whom further particulars may be obtained.

## SOUTHERN RHODESIA MEDICAL SERVICE GOVERNMENT MEDICAL OFFICER

Applications are invited from fully qualified male Medical Practitioners for appointment as a **GOVERNMENT MEDICAL OFFICER** in the Southern Rhodesia Medical Service.

Salary will be on the scale £600-£750 per annum. There is also a senior grade (£750-£900) to which promotions are made as vacancies occur. Salary will commence from the date of assumption of duty in Southern Rhodesia. In addition private practice is allowed.

The successful applicant will be required to sign an agreement for three years service in the first instance and thereafter may make application to be placed on the pensionable establishment.

A free second-class steamship passage to Cape Town and first class railway ticket thence to Southern Rhodesia will be provided.

Canvassing either directly or indirectly will disqualify applicants.

The applicants should state the date on which they would be prepared to leave England if appointed.

Applications stating age qualifications and experience together with copies of testimonials should reach the Official Secretary Office of the High Commissioner for Southern Rhodesia Rhodesia House 429 Strand London W C 2 (from whom further particulars and application form may be obtained) not later than May 20th.

## WAIKAWA HOSPITAL BOARD (NEW ZEALAND)

Applications addressed to the undersigned and closing on May 31st 1938 are invited for the position of **MEDICAL SUPERINTENDENT** to Pukeora Tuberculosis Sanatorium Waipukurau New Zealand.

Commencing salary £800 per annum rising in two annual increments to £900 per annum (Free house provided).

Copies only of testimonials to be submitted  
P R SMYRK  
Managing Secretary

Waipukurau N Z

## DERBYSHIRE COUNTY COUNCIL WALTON SANATORIUM Near Chesterfield

### JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER (Male)

for the post of **JUNIOR ASSISTANT MEDICAL OFFICER** at the **WALTON SANATORIUM**. Previous institutional experience of tuberculosis will be preferred and practical experience of artificial pneumothorax work will be considered an additional qualification. Candidates must be single.

Salary at the rate of £350 per annum rising by annual increments of £25 to £450 per annum together with board lodging etc.

The successful candidate will devote the whole of his time to the duties of the office.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the person appointed will be required to pass a medical examination.

Application forms may be obtained from the undersigned to whom they must be returned together with copies of not more than three recent testimonials on or before May 19th 1938.

W M ASH

New County Offices Derby  
April 27th 1938

## COUNTY COUNCIL OF MIDDLESEX OBSTETRIC SURGEON Redhill County Hospital Edgware Middlesex

Applications are invited from registered Medical Practitioners for the above appointment on the pensionable staff. Applicants are expected to be medical men or women of high qualifications and professional attainments who have devoted their time wholly or chiefly to the practice of obstetrics and gynaecology. The successful candidate will work under the direction of the Medical Superintendent of the hospital and the whole of his time must be given to his official duties. He must be prepared to undertake the teaching of students if required and to carry out such other duties as the County Council may from time to time direct.

Salary £500 per annum rising by annual increments of £50 to £750 per annum together with a non-resident cash allowance of £150 per annum in lieu of emoluments. After eight years service in this grade two additional annual increments of £50 each will be paid. The salary is inclusive and any fees received by the surgeon appointed must be paid over to the County Council.

The appointment which will be subject to medical examination will be held during the pleasure of the Council and is terminable by three months notice on either side.

Redhill County Hospital is responsible for 100 maternity beds of which 60 are in a new block at the hospital and 40 are in a separate institution about four miles distant. There is a senior obstetric surgeon already on the staff.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 21st 1938. Relationship to any member or officer of the Council must be disclosed in the application.

Application forms are not provided. Envelopes must be endorsed: **Obstetric Surgeon Redhill County Hospital**.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z

Clark of the County Council  
Middlesex Guildhall  
Westminster S W 1  
April 28th 1938

## COUNTY COUNCIL OF MIDDLESEX THE COUNTY (TUBERCULOSIS) SANATORIUM HAREFIELD MIDDLESEX

### JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Candidates must be registered Medical Practitioners who have held resident appointments in a general hospital. Experience in the diagnosis and treatment of tuberculosis will be an additional qualification. Salary £250 per annum with board lodging and laundry.

The officer appointed will work under the direction of the Medical Superintendent and will devote his whole time to official duties.

The appointment (which does not at present carry any superannuation rights) will be subject to medical examination and is terminable by one month's notice on either side) is for a period of six months in the first instance and may be extended for an additional six months.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 21st 1938. Relationship to any member or officer of the Council must be disclosed in the application.

Application forms are not provided. Envelopes must be endorsed: **Junior Assistant Medical Officer Harefield Sanatorium**. Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z

Clark of the County Council  
Middlesex Guildhall  
Westminster S W 1  
April 27th 1938

## BOROUGH OF TWICKENHAM MEDICAL OFFICER OF HEALTH

Applications are invited for the above mentioned appointment from duly registered medical practitioners holding a diploma in Public Health State Medicine or Sanitary Science who are under 45 years of age.

The duties will include those connected with general Public Health administration and the Maternity and Child Welfare and School Medical Services.

The salary attached to the office is £1,000 per annum rising by annual increments of £50 to a maximum of £1,400 per annum plus a motor car allowance of £75 per annum.

The appointment is a designated post under the Local Government and Other Officers Superannuation Act 1922 and the selected candidate will be required to pass a medical examination.

Forms of application and conditions of appointment may be obtained from the undersigned to whom they should be returned not later than May 21st 1938.

Municipal Offices  
Twickenham  
May 1938

EDWIN G STRAY  
Town Clerk

## COUNTY COUNCIL OF MIDDLESEX RESIDENT ASSISTANT MEDICAL OFFICER Central Middlesex County Hospital Acton Lane Willesden N W 10

Applications are invited for the above appointment. Candidates must be registered Medical Practitioners who have held resident appointments both as house physician and house surgeon at a general hospital and have had considerable all round experience. Preference will be given to candidates with experience in obstetrics and gynaecology.

The officer appointed will be engaged in general hospital work but chiefly in obstetrics and gynaecology. He will work under the direction of the Medical Superintendent and will devote his whole time to official duties.

Salary £400 per annum rising by annual increments of £25 to £475 per annum with board lodging and laundry.

The appointment which does not at present carry any superannuation rights will not exceed four years at the end of which period the officer will leave the Council's service. In a special case the Council may decide to retain an officer on the established staff in which case the salary will be increased to a maximum of £500 per annum. The appointment which is subject to medical examination will be held during the pleasure of the Council and is terminable by one month's notice on either side.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 7th 1938. Relationship to any member or officer of the Council must be disclosed in the application.

Application forms are not provided. Envelopes must be endorsed: **Assistant Medical Officer Central Middlesex County Hospital**.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z

Clark of the County Council  
Middlesex Guildhall  
Westminster S W 1  
April 29th 1938

## COUNTY COUNCIL OF MIDDLESEX PATHOLOGIST Central Middlesex County Hospital Acton Lane Willesden N W 10

Applications are invited from registered Medical Practitioners for the above non-resident appointment on the pensionable staff. Candidates must have had extensive post graduate experience in all types of pathological work especially in morbid anatomy histology and bacteriology and also in the directing of a laboratory service such as a general hospital demands.

The successful applicant will be in charge of the pathological services of the hospital under the direction of the Medical Superintendent and will be required to devote his whole time to official duties. He must also be prepared to undertake the teaching of students if required and to carry out such other duties as the Council may from time to time direct.

Salary £1,100 per annum rising by annual increments of £50 to £1,300 per annum. The salary is inclusive and any fees received must be paid over to the County Council.

The appointment which is subject to medical examination will be held during the pleasure of the County Council and is terminable by three months notice on either side.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 21st 1938. Relationship to any member or officer of the County Council must be disclosed in the application. No application forms are provided. Envelopes must be endorsed: **Pathologist Central Middlesex County Hospital**.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z

Clark of the County Council  
Middlesex Guildhall  
Westminster S W 1  
April 29th 1938

N.B.—The hospital contains approximately 1,000 beds, 600 of which are occupied by acute cases. The laboratories are now nearing completion.

## HARROW URBAN DISTRICT COUNCIL TEMPORARY MATERNITY AND CHILD WELFARE MEDICAL OFFICER

Applications are invited from qualified medical practitioners to take ante-natal and infant welfare clinic sessions for a period of approximately two months commencing on June 5th 1938. Remuneration will be at the rate of £10 10s per week or pro rata.

Applications should be sent to the Medical Officer of Health Public Health Department Council Offices High Street Harrow-on-the-Hill not later than Wednesday May 11th 1938.

Council Offices  
Stnmore Middlesex  
May 2nd 1938

VERNON YOUNGER  
Clark of the Council

# HIS MAJESTY'S COLONIAL SERVICE

## COLONIAL MEDICAL SERVICE.

During 1938 the Secretary of State for the Colonies proposes to select a number of Medical Officers to fill vacancies, the majority of which will occur in Tropical Africa and Malaya

**QUALIFICATIONS**—Candidates must be British subjects of European parentage under 35 years of age and must possess a medical qualification registrable in the United Kingdom. Preference will be given to candidates who have held Hospital or Public Health appointments or who have special knowledge of anaesthetics radiology surgery medicine, ophthalmology gynaecology and midwifery diseases of the ear nose and throat venereal diseases etc

**SALARY**—Initial salaries vary from £600 to £700 and rise by increments to a maximum of between £1 000 and £1 200

**PRIVATE PRACTICE**—Private practice is not allowed as of right, but in the case of some appointments it is permitted on certain conditions

**QUARTERS**—In Tropical Africa free quarters or an allowance in lieu are provided. In Malaya quarters are provided at an annual rental not exceeding 6% of the officer's salary

**PASSAGES**—Free first class passages are provided on first appointment and when proceeding on and returning from leave. Assistance is also given towards family passages

**TERMS OF APPOINTMENT**—The appointments are pensionable subject to a probationary period which varies from two to three years

**COURSES OF INSTRUCTION IN TROPICAL MEDICINE AND HYGIENE**—Selected candidates will normally be required to attend a course of instruction leading to the Diploma in Tropical Medicine and Hygiene before proceeding overseas

**DUTIES**—Although Medical Officers are appointed in the first instance for general service there are opportunities for work in special branches of medicine and surgery in public health and in medical research

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service), 8, Buckingham Gate, London, S W 1

# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Full opportunities exist for transfer to the permanent list and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances

Opportunities are available for officers on the permanent list for postgraduate study, to specialise, to take higher examinations and to obtain further qualifications

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers

Copies of the regulations for entry and conditions of Service, including rates of pay, allowances and retired pay may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than 31st May, 1938

**BOROUGH OF HESTON AND ISLEWORTH****APPOINTMENT OF WOMAN ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER**

Applications are invited from duly qualified medical women with at least three years experience and also holding a Public Health qualification for the above mentioned post. The successful candidate will work under the supervision of the Medical Officer of Health.

The work will include medical inspection of school children, bacteriological work, Maternity (Antenatal) and Child Welfare work and such other duties as may be allotted. The candidate appointed may also be required to act as Medical Supervisor of Midwives and it is desirable that applicants shall hold qualifications in accordance with the Midwives (Qualifications of Supervisors) Regulation, 1917 particulars of which will be furnished with the application form.

The person appointed will be required to devote her whole time to the duties and will not be allowed to engage in private practice. The salary will be at the rate of £500 per annum rising by annual increments of £25 to £600 per annum.

The post will be a designated post for the purposes of the Local Government and Other Officers Superannuation Act 1922 and the appointment will be subject to the passing of a medical examination in connection with the post.

The appointment will be terminable by one month's notice on either side. The person appointed must live within the Borough of Heston and Isleworth.

Form of application and terms of appointment can be obtained from the Medical Officer of Health, 941 Bush Road Hounslow.

Applications accompanied by copies of not more than three recent testimonials must reach the undersigned not later than noon on Wednesday May 15th 1938.

Council House Hounslow HAI OLD SWANN  
April 1938 Town Clerk

**MEDICAL INSPECTORS OF FACTORIES**

The Home Secretary announces vacancies for three MEDICAL INSPECTORS OF FACTORIES. Salary £750 rising to £1100.

Candidates should be between 30 and 40 years of age and in the case of women candidate unmarried or widows.

Appointment is subject to the usual Civil Service conditions as to retirement pension etc. Medical Inspectors are required to reside in such places in Great Britain as the Home Secretary may from time to time direct.

Further information and forms of application may be obtained on request preferably by post card from the Industrial Division, Home Office, London S.W.1. The last date for receipt of completed applications is May 26th 1938.

Home Office  
Whitchall  
London S.W.1  
May 1938

**LANCASHIRE MENTAL DEFICIENCY ACTS COMMITTEE**

An ADDITIONAL ASSISTANT MEDICAL OFFICER (not to exceed 35 years) is REQUIRED by the above Committee for the purpose of visiting and certifying Mental Defectives throughout the County of Lancashire the supervision of Occupation Centres and the carrying out of such other duties as the Committee may from time to time require.

Salary £550 per annum (with an additional £50 for a Diploma in Psychological Medicine or a Degree in Psychological Medicine of the London University) rising by annual increments of £25 to £750 per annum.

The appointment will be subject to three months notice on either side.

Form of application and further particulars of duties etc. may be obtained from the undersigned and applications accompanied by copies of not more than three testimonials must be delivered not later than May 30th 1938.

GEORGE EIHERTON  
Clerk of the Committee  
County Offices Preston

**THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION**

Applications are invited from duly registered medical practitioners (male single) for the post of ASSISTANT RESIDENT MEDICAL OFFICER (twelve months appointment) at the North Wales Sanatorium (247 beds for female pulmonary and male female and children non pulmonary cases) Denbigh North Wales.

Salary £200 per annum plus maintenance. Applications stating age qualifications experience etc. together with copies of three recent testimonials should reach the undersigned not later than Wednesday May 15th 1938.

Memorial Offices D. A. POWELL  
Westgate Street Principal Medical Officer  
Cardiff

**COUNTY BOROUGH OF STOCKPORT****PUBLIC HEALTH AND ASSISTANCE COMMITTEE****LADY ASSISTANT MEDICAL OFFICER**

Applications are invited from duly qualified Medical Women for the position of Assistant Medical Officer for Maternity and Child Welfare.

The Officer appointed will be required to assist the Medical Officer of Health in carrying out the Council's Maternity and Child Welfare Scheme and such other duties from time to time as directed by the Council. She will be required to devote her whole time to the service of the Council.

Applicants must be registered Medical Practitioners and possess the Diploma of Public Health or similar qualification. Preference will be given to candidates who have had experience in Discharge of Women and Children and in Maternity and Child Welfare work.

The salary will be at the rate of £600 per annum inclusive rising by annual increments of £25 to a maximum of £700 per annum inclusive.

The candidate appointed will be required to pass a medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Forms of application and particulars as to the terms and conditions of the appointment may be obtained from the Medical Officer of Health, Town Hall, Stockport.

Canvassing directly or indirectly will be a disqualification.

Applications accompanied by copies of three recent testimonials and endorsed Assistant Medical Officer should reach the undersigned not later than the first post on Monday May 16th 1938.

Town Hall Stockport F. KNOWLES  
April 1938 Town Clerk

**COUNTY BOROUGH OF BLACKBURN****LADY ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER**

Applications are invited from duly registered women practitioners for the appointment of Assistant Medical Officer of Health and Assistant School Medical Officer to act under the direction and supervision of the Medical Officer of Health who is also School Medical Officer.

The maximum salary will be £700 per annum. The commencing salary will not be less than £600 per annum and will be fixed according to the qualifications and experience of the successful applicant and will rise by annual increments of £25 to the maximum of £700.

The person appointed must have had at least three years postgraduate experience in the practice of her profession and special experience of midwifery and antenatal work. Special post graduate experience in the treatment of venereal diseases and of diseases of children and the possession of a registrable degree or diploma in Public Health will be deemed additional qualifications.

Applications to be made on forms to be obtained from the Medical Officer of Health, Victoria Street, Blackburn and returned to him not later than Saturday May 21st 1938 endorsed Assistant Medical Officer of Health.

Canvassing directly or indirectly will be a disqualification.

Town Hall CHAS S ROBINSON  
Blackburn Town Clerk  
March 7th 1938

**COUNTY BOROUGH OF BLACKBURN****PUBLIC ASSISTANCE DEPARTMENT****RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER**

Applications are invited from Medical Practitioners (male) for the appointment of a Resident Junior Assistant Medical Officer at Queen's Park Hospital and Institution.

The Staff consists of a Resident Medical Officer, a Resident Assistant Medical Officer, a Consulting Surgeon, a Laboratory Assistant and an X-ray Attendant.

There is a separate Infirmary, a separate Mental Block and a separate Hospital for children and there is opportunity for experience in all departments including Medical, Surgical and Midwifery cases. An X-ray apparatus is installed.

The person appointed will be required to devote his whole time to the duties and also to act as may be directed by the Resident Medical Officer. The appointment will be limited to a term not exceeding one year.

Salary at the rate of £200 per annum together with board apartments and attendance.

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials must be sent to the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn.

Town Hall CHAS S ROBINSON  
Blackburn Town Clerk  
April 30th 1938

**GLOUCESTERSHIRE COUNTY COUNCIL****TWO ASSISTANT COUNTY MEDICAL OFFICERS OF HEALTH**

Gloucestershire County Council invite applications for the appointments of two Assistant County Medical Officers of Health (male).

The salary in each case will be on the scale £500 p.a. plus £25 to £700 p.a. and past local government service will be counted in assessing the commencing salary. Travelling and subsistence allowances will be paid in accordance with the Council's scale.

The posts are designated for the purposes of the Local Government and Other Officers Superannuation Act 1922 and the successful candidates will be required to pass a medical examination by the Council's medical adviser. Applicants must be registered medical practitioners and should hold a Diploma in Public Health. Previous experience in various branches of public health and school medical work is desirable.

Forms of application with particulars of the duties and conditions of appointment may be obtained from the County Medical Officer of Health, Shire Hall, Gloucester, to whom completed applications with copies of three recent testimonials should be sent not later than May 20th 1938.

Canvassing directly or indirectly will be disqualifying. RICHARD L MOON  
Shire Hall Gloucester Clerk of the County Council

**LONDON COUNTY COUNCIL**

Applications invited from Medical Practitioners of at least one year's standing to undermentioned positions. Candidates must have held recent appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade II) — Salary £350 £25 £425 with board lodging and washing.

ST GILES HOSPITAL St Giles Road Canberwell S.E.5 (Two positions)

(a) Midwifery and gynaecological experience essential

(b) General duties some surgical experience desirable

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Staff Division 2A, County Hall S.E.1 returnable by May 16th.

Canvassing disqualifies.

**LONDON COUNTY COUNCIL****ASSISTANT DISTRICT MEDICAL OFFICERS REQUIRED FOR THE FOLLOWING DISTRICTS**

(1) Area IV District 3 (South East St Pancras) Provisional salary £125 (inclusive of payment for use of doctor's surgery for Council's patients)

(2) Area V District 1 (part North Woolwich) Provisional salary £250

Persons appointed required to reside in or near district.

Application form with further particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Staff Division 2 (B) County Hall S.E.1 returnable by May 21st.

Canvassing disqualifies.

**LONDON COUNTY COUNCIL****CONSULTANT AND SPECIALIST SERVICES**

Applications invited for appointment as PART TIME EAR NOSE AND THROAT SPECIALIST for a total of two sessions a week for duty at St James' Hospital, Ouseley Road, Balham S.W.1.

Salary £300 a year (£150 a year if already employed as a part-time consultant or specialist in the Hospitals Service) and additional remuneration at the rate of £2 12s 6d a visit for emergency visits made in excess of the number of routine sessions.

Application forms containing full particulars obtainable (stamped addressed foolscap envelope necessary) from the Medical Officer of Health (Staff Division 6) County Hall Westminster Bridge S.E.1 returnable by May 21st. Women club. Canvassing disqualifies.

**LONDON COUNTY COUNCIL**

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing to undermentioned position. Experience in a relevant appointment in a general hospital for at least six months desirable. Married quarters not available.

ASSISTANT MEDICAL OFFICER (GRADE II) Salary £350-£25 £425 with board lodging and washing.

Grove Park Hospital Lee S.E.12. Experience in pulmonary tuberculosis essential and in non-pulmonary desirable.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Staff Division 2A, County Hall S.E.1 returnable by May 23rd.

Canvassing disqualifies.

# CITY OF BIRMINGHAM

## MENTAL HOSPITAL DEPARTMENT

### RUBERY HILL AND HOLLYMOOR DIVISION

The Committee of Visitors invite applications from duly qualified medical men for the position of Junior Male Assistant Medical Officer. The successful candidate will be required to reside in the Hospital.

The commencing salary will be £350 per annum plus the usual residential emoluments of board, lodging, laundry and attendance. An increase of £50 will be granted on completion of twelve months satisfactory service and thereafter in years of £25 per annum up to a maximum salary of £450 per annum. An additional £50 per annum will be paid to a holder of the D.P.M. qualification or to a person obtaining the D.P.M. after appointment. All fees received in connection with the Fund will be required to be paid into the Rubery Hill Fund but to make arrangements for reports on compensation cases and Coroner's inquiries the fees can be retained.

A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification. Previous mental hospital experience is not essential but experience in the administration of anaesthetics is desired.

The candidate appointed will be required to pass a medical examination and will be placed on the permanent staff after one year's satisfactory service, when he will be required to contribute under the A.S.M. Officers' Superannuation Act 1909. He will be required to reside in such institution belonging to the Mental Hospitals Committee as they may from time to time direct. The appointment is subject to one month's notice on either side.

Applications, stating full particulars of qualifications, experience and age, must be accompanied by copies of the recent test certificates and be addressed to the undersigned as to be received not later than May 11th 1938.

F. H. C. WILTSHIRE

Clerk to the Committee of Visitors  
Town Clerk's Office  
Council House Birmingham 1

# BOROUGH OF TOTTENHAM

## APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited for the appointment under the provision of Section 11 of the Local Government Act 1933 of a whole time Deputy Medical Officer of Health for the Borough at a salary of £500 per annum rising to £600 per annum on completion of five years' service.

The appointment will be subject to the consent of the Minister of Health and the person to be appointed must be a duly qualified medical practitioner and registered in the Medical Register as the holder of a diploma in sanitary science public health or State medicine.

The appointment will be subject to the provisions of the Local Government Superannuation Acts and to the passing of a medical examination.

The person appointed shall agree to give three calendar months' notice in writing to the Council before resigning his office or to forfeit to the Council an amount equal to three months' salary as liquidated damages.

Traveling facilities while on Council business will be allowed.

Four weeks' annual holiday and public holidays will be allowed.

Form of application and conditions of appointment, setting out the duties to be performed, may be obtained from the undersigned to whom they must be delivered not later than 12 o'clock on May 16th 1938 in an envelope marked "Appointment of Deputy Medical Officer of Health."

Applications in any form will be a disqualification.  
Town Hall E. TOWNSEND  
Tottenham 15  
April 27th 1938

# CITY OF PLYMOUTH

## CITY GENERAL HOSPITAL (570 Beds)

Applications are invited from duly qualified and Registered Medical Practitioners for the following post:

**JUNIOR ASSISTANT MEDICAL OFFICER.**  
Salary at the rate of £200 per annum with full residential emoluments.

All fees received by the officer must be forwarded to the Council.

The appointment will be for a period of six months in the first instance and may be renewed for a further period of six months and will be terminated by one month's notice on either side.

Forms of application may be obtained from the undersigned and should be forwarded to her with one or more references than three recent certificates not later than May 10th 1938.

Town Hall T. PIERSON  
Six House  
Plymouth. Medical Officer of Health

# CARNARVONSHIRE COUNTY COUNCIL

## ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited for the above post from Registered Medical Practitioners of not less than 3 years' standing at a salary of £200 per annum rising by annual increments of £25 to £275 per annum plus a residential allowance of £100 per annum with the usual and other benefits of the Council.

Candidates must be qualified to qualify for the post of Assistant Medical Officer of Health and School Medical Officer. The successful candidate will be required to have practical experience in the management of infectious diseases and in the treatment of venereal diseases. The post of Assistant Medical Officer of Health is a desirable one and a Diploma in Public Health or an equivalent qualification is essential.

The appointment will be subject to the provisions of the Local Government and Officers' Superannuation Act 1909 and the successful applicant will be required to pass a medical examination.

Candidates who are married will be a disqualification.

A knowledge of the Welsh language is essential for the post of Assistant Medical Officer of Health.

Forms of application may be obtained from the undersigned to whom they should be sent accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 16th 1938.

DAVID G. JONES  
of the County of Carnarvon  
Clerk of the Council

# CITY OF PORTSMOUTH

## ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER (M.L.)

Applications are invited from Registered Medical Practitioners for the above appointment at a salary of £200 per annum rising by annual increments of £25 to £275 per annum plus a residential allowance of £100 per annum with the usual and other benefits of the Council.

The duties of the post include the medical inspection and treatment of school children and the supervision of the health of the community. The successful candidate will be required to have practical experience in the management of infectious diseases and in the treatment of venereal diseases.

The appointment will be subject to the provisions of the Local Government and Officers' Superannuation Act 1909 and the successful applicant will be required to pass a medical examination.

Forms of application may be obtained from the undersigned to whom they should be sent accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 16th 1938.

F. J. SPARAS  
Portsmouth  
April and 1938

# CITY OF SHEFFIELD

## NETHER EDGE HOSPITAL

Applications are invited from duly qualified medical men for the appointment of ASSISTANT MEDICAL OFFICER at the above hospital.

The Medical Officer appointed will be required to reside in the hospital and assist in the medical and maternity work. He will also be part of the Maternity and Child Welfare Committee of the Corporation and will be required to attend the Maternity and Child Welfare Clinics daily at the Maternity and Child Welfare Centre.

Candidates should have previous hospital experience and a public health experience in Maternity and Child Welfare work is essential.

The salary offered is £200 per annum rising to £275 per annum on completion of five years' service. The successful applicant will be required to pass a medical examination.

Applications should be sent to the undersigned accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 11th 1938.

# NEW ZEALAND

## RESIDENT SURGEON

A position is offered for a Resident Surgeon at the New Zealand Hospital for the Blind, Auckland.

The successful candidate will be required to have a qualification in surgery and to be a member of the New Zealand Medical Association.

Applications should be sent to the undersigned accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 11th 1938.

Whether they are married or single.

# SURREY COUNTY COUNCIL

## ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of Assistant Medical Officer of Health for the County of Surrey. The successful candidate will be required to have a qualification in public health and to be a member of the Royal Sanitary Institution.

The salary offered is £200 per annum rising to £275 per annum on completion of five years' service. The successful applicant will be required to pass a medical examination.

Forms of application may be obtained from the undersigned to whom they should be sent accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 16th 1938.

LUDLEY HALL

Clerk of the Council

April 1938

# MIDDLESBROUGH EDUCATION COMMITTEE

## APPOINTMENT OF ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the appointment of Assistant School Medical Officer at the Middlesbrough Education Committee.

The successful candidate will be required to have a qualification in public health and to be a member of the Royal Sanitary Institution.

The salary offered is £200 per annum rising to £275 per annum on completion of five years' service. The successful applicant will be required to pass a medical examination.

Forms of application may be obtained from the undersigned to whom they should be sent accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 16th 1938.

PRESTON ATTCHES

April 1938

# STAFFORDSHIRE COUNTY COUNCIL

## BACTERIOLOGICAL AND PATHOLOGICAL LABORATORY

Applications are invited from Registered Medical Practitioners for the appointment of Assistant Bacteriological and Pathological Laboratory Officer at the Staffordshire County Council.

The successful candidate will be required to have a qualification in bacteriology and to be a member of the Royal Sanitary Institution.

The salary offered is £200 per annum rising to £275 per annum on completion of five years' service. The successful applicant will be required to pass a medical examination.

Forms of application may be obtained from the undersigned to whom they should be sent accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 16th 1938.

APRIL 1938

# STAFFORDSHIRE COUNTY COUNCIL

## SECOND ASSISTANT BACTERIOLOGIST AND PATHOLOGIST

Applications are invited from Registered Medical Practitioners for the appointment of Second Assistant Bacteriologist and Pathologist at the Staffordshire County Council.

The successful candidate will be required to have a qualification in bacteriology and to be a member of the Royal Sanitary Institution.

The salary offered is £200 per annum rising to £275 per annum on completion of five years' service. The successful applicant will be required to pass a medical examination.

Forms of application may be obtained from the undersigned to whom they should be sent accompanied by copies of the recent test certificates and testimonials and two recent medical certificates not later than May 16th 1938.

APRIL 1938

# STAFFORDSHIRE COUNTY COUNCIL

## HILL DUCK

April 1938

## MEMORIAL OPHTHALMIC LABORATORY

Giza Cairo Egypt

Applications are invited for the post of **WHOLE TIME PATHOLOGIST AND BACTERIOLOGIST** at the Memorial Ophthalmic Laboratory Cairo at a salary of L.E. 1200 per annum.

The post offers unique opportunities for experience and research in Ophthalmic Pathology and Bacteriology. A knowledge of virus methods of research and diseases would be an advantage.

The appointment is tenable in the first instance for a period of four years and is renewable. Two months leave is granted annually.

Applications stating age, qualifications and experience, together with copies of testimonials and copies of any original scientific communications, should be sent to Mr Horace H. Rew, The Examination Hall, Queen Square, London W.C.1 not later than May 28th 1938.

## UNIVERSITY OF LONDON KING'S COLLEGE

The Delegacy will require in October next the services of a **DEMONSTRATOR IN PHYSIOLOGY**. Salary 100 per term. Candidates should send in their applications accompanied by copies of the three recent testimonials not later than May 24th 1938 to the Secretary, King's College, Strand W.C.2 from whom particulars and forms of application may be obtained.

## CITY OF CARDIFF

**MEDICAL OFFICER (Temporary) CATHAYS AND PENYLAN MEDICAL RELIEF DISTRICT**

The Council invites applications for the above appointment (part time) from Registered Medical Practitioners who if not resident in the District which comprises the Cathays Ward and part of the Penylan Ward (south of Highfield Road and Cefncoed Road) of the City of Cardiff must undertake to take up residence therein by July 1st 1938.

The salary will be £200 per annum and the Medical Officer will commence duty on Friday July 1st 1938.

There are no fees except small sums for reports as to Lunacy, Boarded out cases etc.

The qualifications for and the duties and conditions of the appointment which will be for twelve months in the first instance are prescribed by the Public Assistance Order 1930.

Applications on forms to be supplied by the Public Assistance Officer, City Hall, Cardiff from whom further information may be obtained must reach me by May 1st 1938 accompanied by three recent testimonials.

Direct and indirect canvassing is prohibited.  
D. KENVYN REES  
City Hall, Cardiff  
May 2nd 1938

## COUNTY BOROUGH OF WEST BROMWICH

**HALLAM HOSPITAL (472 Beds)**

**HOUSE PHYSICIAN**

Applications are invited from duly qualified Male Registered Practitioners for the above mentioned post on the medical staff.

The appointment is for six months with eligibility for a further six months. Either party may give six weeks notice terminating the appointment. There is a visiting staff of eight physicians and surgeons, one resident surgical officer and three resident medical officers.

Salary £200 per annum and board residence. All fees received by the person appointed will be payable into the funds of the Council.

Applications stating age, experience and qualifications, together with copies of three recent testimonials must be forwarded to the Medical Officer of Health, 2 Lodge Road, West Bromwich, so as to arrive not later than by first post on Wednesday May 18th 1938.

G. F. DARLOW  
Town Hall, West Bromwich  
May 2nd 1938

## DEVON COUNTY COUNCIL

(Medical Department)

**HAWKMOOR SANATORIUM**  
Near Bovey Tracey

**RESIDENT ASSISTANT MEDICAL OFFICER**

Applications are invited from registered medical practitioners (male or female) for the above appointment. Candidates must be unmarried and have held resident hospital appointments. Salary will be at the rate of £250 per annum with board residence and laundry.

The appointment will be made for a period of six months. Forms of application may be obtained from the undersigned and must be returned accompanied with copies of not more than three recent testimonials not later than the first post on Monday May 16th 1938.

L. MEREDITH DAVIES  
County Medical Officer  
4 Barnfield Crescent, Exeter

## COUNTY BOROUGH OF SUNDERLAND

**ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE**

Applications are invited from fully qualified women for the position of **ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE**.

Applicants must be registered medical practitioners who have had at least three years' experience in Public Health Work since qualification and be able to show special experience in Ultra-violet Irradiation treatment in Diseases of Children and in ante-natal work.

The possession of the D.P.H. will be in addition to qualification.

Salary £300 per annum, advancing by annual increments of £25 to £700 per annum.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to a medical test as required by the Council for the purpose of that Act.

Applications stating age, qualifications and experience in Maternity and Child Welfare work, together with not more than three recent testimonials, should be delivered to the undersigned not later than Saturday May 21st 1938, endorsed Medical Officer.

Canvassing directly or indirectly until after the first selection of candidates will be disqualifying.

G. S. MCINTIRE  
Town Hall, Sunderland  
May 2nd 1938

## BOROUGH OF ASHTON UNDER LYNE

**MEDICAL OFFICER OF HEALTH  
SCHOOL MEDICAL OFFICER  
MEDICAL OFFICER FOR MATERNITY  
AND CHILD WELFARE**

The Town Council of the Borough of Ashton under Lyne invite applications for the post of who-time Medical Officer of Health, School Medical Officer and Medical Officer for Maternity and Child Welfare.

The salary will be at the rate of £550 per annum. An allowance of £75 per annum will be made for travelling expenses.

Candidates (who should not be over 45 years of age) must be qualified Medical Practitioners holding a Diploma in Public Health and possess experience of Administration work.

The appointment is a designated post under the Local Government and Other Officers Superannuation Act 1922 and the candidate appointed must pass a medical examination and must execute the Deed of Service in the form prescribed by the Ministry of Health.

Applications in the prescribed form which can be obtained from the Medical Officer of Health, Town Hall Chambers, Ashton under Lyne, must be submitted not later than the first post on Wednesday May 18th 1938.

Canvassing in any form, oral or written, direct or indirect will be considered a disqualification.  
Town Hall, DONALD W. BROMLEY  
Ashton under Lyne  
May 1938

## HULL CORPORATION HEALTH DEPARTMENT

**HULL CITY HOSPITAL**

**RESIDENT MEDICAL OFFICER**

Applications are invited from registered medical practitioners of either sex for the appointment of **RESIDENT MEDICAL OFFICER** at the Hull City Hospital for Infectious Diseases, Cottingham. Candidates must be single, not more than 40 years of age and have had experience in a general hospital.

The appointment is in the first instance for a period of one year and the salary is £350 per annum, together with usual residential emoluments. The appointment may be extended for more than one year in which case the salary subject to satisfactory service will be increased by annual increments of £25 to a maximum of £450 per annum.

Applications on forms to be obtained from the undersigned are returnable not later than 10 a.m. on Saturday May 21st 1938.

NICOLAS GEBBIE, M.D.  
Medical Officer of Health  
Health Department  
Guildhall, Hull  
May 1938

## BOROUGH OF BARKING

**ASSISTANT MEDICAL OFFICER (MALE)**

Applications are invited before May 23rd 1938 from qualified medical practitioners with experience in public health work and a registrable qualification in public health for the designated appointment of Assistant Medical Officer of Health and Assistant School Medical Officer.

Salary scale £600 £225 £700 plus £50 p.a. car allowance. Particulars of duties and application form may be obtained from the undersigned.

S. A. JEWERS  
Town Hall, Barking  
Town Clerk

## NORFOLK COUNTY COUNCIL

**ASSISTANT COUNTY MEDICAL OFFICER**

Applications are invited from Medical Practitioners holding a Diploma in Public Health or similar qualification.

The salary will be £700 per annum with travelling expenses in accordance with the Council's scale. The post will be designated under the Local Government and Other Officers Superannuation Act 1922 and the salary will be subject to the statutory deduction for this purpose. The successful applicant will be required to pass a medical examination.

The officer appointed will act under the County Medical Officer as Medical Officer to the County Isolation Hospital (non resident) as Assistant School Medical Officer, Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him. He will be required to reside at East Dereham.

The appointment will be subject to three months notice by either side.

Applications must be made on the prescribed form which can be obtained from the County Medical Officer, Public Health Department, 9 Thorpe Road, Norwich, to whom they should be returned accompanied by copies of three recent testimonials not later than May 14th 1938.

H. C. DAVIES  
Clerk of the County Council  
County Offices, Thorpe Road, Norwich

## BIRMINGHAM AND MIDLAND EYE HOSPITAL (114 Beds)

Applications are invited from duly qualified Medical Practitioners for the post of **HOUSE SURGEON** at the above Hospital.

Salary £130 per annum (rising to £150 at the end of six months satisfactory service) and £10 laundry allowance.

The Resident Staff consists of a Resident Surgical Officer and three House Surgeons.

Applications with testimonials and evidence of registration should be forwarded immediately to the undersigned.

J. W. PEARCE  
General Superintendent  
Church Street, Birmingham 3

## BECKETT HOSPITAL AND DISPENSARY BARNLEY (153 Beds)

**CASUALTY OFFICER** (male) required May 16th to deal with the injuries and fractures. Capability to perform emergency operations a recommendation.

Salary £250 per annum together with board residence and laundry.

Applications stating age, qualifications and experience (Ophthalmology desirable) accompanied by testimonials should be sent to the undersigned immediately.

ARTHUR L. BOURNE,  
April 27th 1938  
Secretary-Superintendent.

## GRAVESEND AND NORTH KENT HOSPITAL Gravesend Kent (110 Beds)

Applications are invited from fully qualified men for the post of **JUNIOR HOUSE SURGEON**. Duties commence June 1st 1938.

Salary at the rate of £110 p.a. with full board, washing, etc. and certain fees as perquisites.

Applications should be sent in at once and should be addressed to the undersigned.

C. E. CHAPMAN  
Secretary-Superintendent

## LEICESTER ROYAL INFIRMARY (500 Beds)

**RESIDENT RADIOLOGIST**

Applications are invited for the above position vacant early in July.

The successful candidate will be expected to act as House Physician to the Radiologist and assist in the diagnostic and therapeutic sides of the X-ray Department.

The appointment is for six months in the first instance and the salary is at the rate of £60 per annum together with board residence and laundry.

Candidates holding the Diploma of Radiology preferred but not essential.

Applications giving full particulars as to age, qualifications, experience, and accompanied by not more than three testimonials should be sent not later than May 31st to the Secretary.

May 3rd 1938

## ROYAL INFIRMARY BLACKBURN (244 Beds—Five Residents)

**RESIDENT HOUSE PHYSICIAN** (male) required at a salary of £175 per annum with board residence and laundry, etc.

In addition to Medical Wards to be attached to the Eye, Ear, Nose and Throat Department.

Applications with copies of testimonials stating age, nationality, experience, etc. to be sent to the undersigned as early as possible.

T. DEWHURST  
Royal Infirmary, Blackburn  
General Supt. and Secretary



# WEST LONDON HOSPITAL, Hammersmith Road W 6 (239 Beds)

Applications are invited for the post of CHIEF ASSISTANT TO THE DEPARTMENT FOR CHRONIC RHEUMATIC DISEASES for a period of one year eligible for re-election. An honorarium at the rate of £100 a year is attached to the post. The duties will include attendance in the Out Patient Department on two half-days a week.

Candidates must be registered under the Medical Act and preference will be given to those possessing an MRCP or FRCS qualification. Previous experience in the treatment of rheumatism is an advantage.

Applications, with copies only of testimonial should reach me not later than first post on Thursday May 12th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a meeting of the Medical Council at 4.30 p.m. on Friday May 13th, and the House Committee Meeting at 5 p.m. the same day when the appointment will be made.

H A MADGE, Secretary

# WEST LONDON HOSPITAL HAMMER SMITH W 6 (239 Beds)

An additional HONORARY REGISTRAR is required for the Throat, Nose and Ear Department. The appointment is for one year and subject to annual re-election may be extended for a period of not longer than 2 years.

Applicants must be fully qualified registered Medical Practitioners with previous experience in otolaryngology. Applications accompanied by copies of testimonials must reach me not later than Thursday May 12th. Candidates must attend a Meeting of the Medical Council at 4.30 p.m. on Friday May 13th, and prior to that date to call upon and send copies of their applications and testimonials to each member thereof. They must not converse with members of the Board but nevertheless must send copies of their application and testimonial to each member thereof and if so notified be in attendance at a Meeting of the Board at 5 p.m. on Tuesday May 13th, when the appointment will be made.

H A MADGE, Secretary

# WEST LONDON HOSPITAL HAMMER SMITH W 6 (239 Beds)

Applications are invited from duly qualified registered Medical Practitioners for the post of HONORARY CLINICAL ASSISTANT in the X-ray (Diagnostic) Department. The successful candidate will be required to attend for two sessions each week.

Applications with copy of a recent testimonial should reach me not later than Wednesday May 12th.

H A MADGE, Secretary

# THE LONDON CHEST HOSPITAL Victoria Park E (Bus Tram and Rly Cambridge Heath L and N E Rly)

A HOUSE SURGEON is required duties to commence as soon as possible after May 1st. Six months appointment. Salary at the rate of £100 per annum.

Board residence and laundry provided. Applications with copies of three testimonials should be sent to the undersigned on or before Tuesday May 10th 1938.

THOMAS BROWN, Secretary

# THE LONDON CHEST HOSPITAL Victoria Park E (Bu Tram and Rly Cambridge Heath L and N E Rly)

SURGICAL REGISTRAR (Male) (Part time).

Applications are invited for the above post. Four sessions a week, Tuesday and Friday morning essential. Appointment is for one year and an honorarium is attached to the post.

Applications with copies of three testimonials should be sent to the undersigned on or before Friday May 13th 1938.

THOMAS BROWN, Secretary

# LONDON JEWISH HOSPITAL Stepney Green E (General Hospital) (109 Beds)

Candidates (male) for the following. Resignation appointments which are for a period of six months commencing June 1st next may obtain for a period of application from the Secretary to whom applications with copies of three recent testimonials must be sent on or before May 10th 1938.

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN. Salary at the rate of £100 per annum.

HOUSE SURGEON. Salary at the rate of £100 per annum.

CASUALTY OFFICER. Salary at the rate of £100 per annum.

# THE ROYAL CANCER HOSPITAL (FREE) (Incorporated under Royal Charter) Fulham Road L W 3

Appointments are invited for the post of HOUSE SURGEON (Resident) to be a full-time post in the RADICAL DEPARTMENT. Candidates must be Registered Medical Practitioners.

Familiarity with the "Royal Cancer Hospital" The appointment is for a period of six months commencing July 1st 1938. Salary £100 per annum.

Applicants to be sent to the Secretary with copies of not more than three testimonials, to be sent to the Secretary by 1st post on Friday May 13th 1938.

CLEMENT COBBOLD, Secretary

# THE ROYAL CANCER HOSPITAL (FREE) (Incorporated under Royal Charter) Fulham Road L W 3

Application is invited for the two posts of HOUSE SURGEON to commence duties on July 1st 1938.

Salary at the rate of £100 per annum. The appointments are for six months and subject to annual re-election. A copy of which may be obtained from the Secretary.

Applicants to be sent to the Secretary with copies of not more than three testimonials to be sent to the Secretary by 1st post on Friday May 13th 1938.

CLEMENT COBBOLD, Secretary

# ROYAL NORTHERN HOSPITAL Holloway N

Applications are invited for the post of OBSTETRIC REGISTRAR. The appointment is for one year with eligibility for reappointment. Duties will include Clinical Lectures to post-graduate students. Honorarium £100 per annum and a bed in the post provided.

Applications with copies of testimonials should be sent by May 12th to the undersigned from whom the necessary forms of application and rules can be obtained.

GILBERT G PANTER, Secretary

# ROYAL NORTHERN HOSPITAL Holloway N

Applications are invited for the following appointment: HOUSE SURGEON vacant June 1st. The appointment is for six months (six months as House Surgeon and three months as Casualty Officer). Salary at the rate of £70 per annum with board residence and laundry.

Applications with copies of testimonials should be sent by May 12th to the undersigned from whom the necessary forms of application and rules can be obtained.

GILBERT G PANTER, Secretary

# MILLER GENERAL HOSPITAL Greenwich Road S E 10

Applications are invited for the following posts: HOUSE SURGEON. Male. Full-time. Salary £100 per annum. Board residence and laundry are provided.

CASUALTY OFFICER. Male. Part-time. Full or part-time. Salary £10 per session. The appointments are for six months from July 1st 1938. There are six months from the Secretary's forms should be returned on last week May 1st 1938.

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# METROPOLITAN HOSPITAL OF PADDINGTON

## ANTE-NATAL CLINIC

The General Practitioner in charge of the Ante-natal Clinic is the SENIOR VISITING MEDICAL OFFICER for the ante-natal clinic at the Metropolitan Hospital of Paddington.

For two months for a season of ante-natal clinic. The ante-natal clinic is held on Wednesday afternoon at 2.15 p.m. in the ante-natal clinic at the Metropolitan Hospital of Paddington.

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**NORTH STAFFORDSHIRE ROYAL INFIRMARY**

Stoke on Trent (390 Beds)

**HOUSE SURGEON (ORTHOPAEDIC)**

The Committee invite applications for the above post.

Salary at the rate of £150 per annum with board residence and laundry. The appointment will be made for six months renewable.

Previous hospital surgical experience essential and Orthopaedic experience desirable.

Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately.

By Order

W STEVENSON

Secretary and House Governor

May 2nd 1938

**HUDDERSFIELD ROYAL INFIRMARY**

(121 Beds)

MALE HOUSE SURGEON required to be attached to Eye Ear Nose and Throat Departments. Duties which include the administration of anaesthetics to commence on May 1st 1938. Salary will be at the rate of £150 per annum with board residence and laundry.

Appointment for six months subject to renewal for a similar period.

Applications with copies of three recent testimonials to be addressed to the undersigned immediately.

H J JOHNSON

Gen Supt and Secretary

**HULL AND SCULCOATES DISPENSARY**

Applications are invited for the appointment of a RESIDENT MEDICAL OFFICER to devote the whole of his time to the work of the above Institution at a salary of £550 per annum (finding own house) to commence at an early date.

Applications with copies of testimonials (which will not be returned) stating age and qualifications to be sent to the undersigned.

By Order

I D MELLWRAITH

Hon Secretary

1 Parliament Street Hull

May 2nd 1938

**KETTERING AND DISTRICT GENERAL HOSPITAL**

(108 Beds)

Applications are invited for the post of HOUSE PHYSICIAN.

Salary £150 per annum with board residence and laundry. Candidates must be fully qualified and registered.

Applications stating age nationality and qualifications together with copies of three testimonials to be sent to the undersigned as soon as possible.

G W JACKSON

Secretary Superintendent

**LEIGH INFIRMARY LANCASHIRE**

Wanted SENIOR RESIDENT SURGICAL OFFICER MALE single for Hospital of 85 Beds. Should have good Surgical Experience. Salary £250 p.a. with rooms fire attendance and board. Good quarters. The position is vacant on May 16th 1938.

The appointment is for six months with eligibility for re-election. Must be good Anaesthetist. The appointment offers exceptional opportunities for Surgery.

Applications to be addressed to Mr J A Smith Secretary 5 Silk Street Leigh Lancashire.

**LINCOLN COUNTY HOSPITAL**

Wanted JUNIOR HOUSE SURGEON (male) unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service. Board residence and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Acts.

Applications stating age and other particulars with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

Lincoln ARTHUR MOORE

April 29th 1938 Secretary Superintendent

**NORFOLK AND NORWICH HOSPITAL**

Norwich (420 Beds)

Applications are invited for the post of HOUSE PHYSICIAN. Salary £120 per annum with board residence and laundry. Candidates (male) must be unmarried and must possess registered qualifications.

Applications stating age nationality etc together with copies of testimonials should be forwarded to the undersigned not later than Tuesday May 17th.

FRANK INCH

House Governor and Secretary

May 6th 1938

**ROYAL HALIFAX INFIRMARY**

(250 Beds)

Hospital recognized by the Royal College of Surgeons (England)

Wanted a SECOND HOUSE SURGEON for Eye Ear Nose and Throat and Medical Departments (male unmarried). Candidates must be fully qualified and registered. The appointment will be for a period ending October 31st 1938 followed by probable promotion if satisfactory. Salary including all services required in connexion with Paying Patients Ward £175 per annum with residence board and laundry. The Resident Staff consists of Resident Surgical Officer and three House Surgeons. The Hospital contains Maternity Paying Patients Blocks also a Pathological Department a large Eye Ear Nose and Throat Department Radiological Department and Radium Clinic.

Particulars of the duties may be obtained from the undersigned to whom applications stating age and nationality together with copy testimonials should be sent by Tuesday 10th instant.

A MIDDLEY

May 2nd 1938

Secretary

**BOLINGBROKE HOSPITAL**

Wandsworth Common SW11 (135 Beds)

Applications are invited from duly registered Medical Practitioners for the posts of —

1 HOUSE SURGEON (male)

2 CASUALTY OFFICER (male)

Candidates must be unmarried.

The appointments are for six months commencing on June 1st next.

Salary will be at the rate of £120 a year with board residence and laundry.

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before May 11th.

W S RANDOLPH BISS

Secretary Superintendent

**PRESTON AND COUNTY OF LANCASTER QUEEN VICTORIA ROYAL INFIRMARY**

The Board of Management invite applications for the post of HONORARY ASSISTANT PHYSICIAN which carries an Honorarium.

Candidates must be in private practice in the Borough of Preston and possess the degree of Doctor of Medicine of a British University or membership of one of the Royal Colleges of Physicians. In case any candidate does not possess such degree or Diploma he must undertake to obtain the same within two years of appointment.

Any further particulars as to duties etc may be obtained from the undersigned to whom applications stating date of birth qualifications and experience should be sent on or before May 21st 1938.

JOHN GIBSON

Superintendent and Secretary

**PETERBOROUGH AND DISTRICT MEMORIAL HOSPITAL**

(154 Beds)

**APPOINTMENT OF SENIOR RESIDENT HOUSE SURGEON**

(3 Residents on Staff)

Applications are invited from fully qualified medical practitioners for the above post which becomes vacant on June 1st next.

Applicants must have held a hospital appointment previously for at least six months and have had experience in Fracture work.

Salary at the rate of £175 per annum for the first six months and £200 per annum afterwards.

Applications stating age qualifications and experience with copies of recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

FRANK A C TAYLOR

Secretary-Superintendent

**ROYAL BERKSHIRE HOSPITAL READING**

(338 Beds)

Applications are invited immediately for the post of HOUSE SURGEON TO THE SPECIAL DEPARTMENTS (Eye Ear Nose and Throat) (male).

Appointments are for six months and candidates must be fully qualified and registered.

Remuneration at the rate of £150 per annum with board residence and laundry.

Applications stating age and experience with copies of testimonials to be sent to the undersigned immediately.

H E RYAN

Secretary and House Governor

**FREE EYE HOSPITAL SOUTHAMPTON**

The Committee require the services of a fully qualified HOUSE SURGEON for a period of six months from June 1st 1938. Salary £150 per annum with board residence and laundry. Post-graduate experience in Ophthalmology is desirable.

Applications with three recent testimonials to reach the Secretary by May 21st 1938.

**THE HOSPITAL OF ST CROSS RUGBY**

(120 Beds)

Applications are invited for the post of ONE SMALL RESIDENT MEDICAL OFFICER (three R.M.O.s).

Salary to commence at the rate of £100 p.a. annum for the first three months £125 per annum for the second three months and at the rate of £150 per annum for subsequent months. Full board washing etc provided.

Six months appointment and eligible on completion of service for further extension of six months.

Candidates must be prepared to commence duties immediately.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.s.

Applications stating age nationality and full details with copies of three recent testimonials, to be sent to the undersigned.

(Signed) W COCABURN

Superintendent and Secretary

**THE PRINCE OF WALES'S HOSPITAL**

Greenbank Road Plymouth (Formerly South Devon and East Cornwall Hospital) (254 Beds)

Applications are invited for the post of RESIDENT SURGICAL OFFICER (Male). Salary £225 per annum with board residence and laundry.

Appointment is tenable for six months and subject to renewal. Duties to commence June 8th.

Candidates must be registered under the Medical Acts and it is desirable they should possess the F.R.C.S. England or Edinburgh.

Applications stating age and qualifications together with copies of three recent testimonials to reach the undersigned by May 14th.

ARTHUR R CASH

Gen Supt and Secretary

**THE ROYAL INFIRMARY SHEFFIELD**

(500 Beds)

Applications are invited for the post of CLINICAL ASSISTANT to the Ophthalmic Department (male or female). The Ophthalmic Department contains 68 Beds and an Out Patient Department which is open daily.

Salary £300 per annum.

The appointment will be for one year subject to two months notice and the officer elected will be eligible for reappointment. Letters stating age and giving full qualifications previous hospital experience etc to be forwarded to the General Superintendent and Secretary not later than May 30th 1938.

May 2nd 1938

**THE CORBETT HOSPITAL STOUBRIDGE**

95 Beds and Special Departments

Applications are invited for the following posts which will become vacant shortly.

HOUSE PHYSICIAN at a salary at the rate of £125 per annum with board laundry etc.

HOUSE SURGEON at a salary at the rate of £100 per annum with board laundry etc.

The appointments will be for a period of six months terminable by six weeks notice.

The Hospital has a Specialist Visiting Staff and Resident Surgical Officer.

Applications giving full details of qualifications age and experience accompanied by three copies of testimonials should be addressed to the undersigned forthwith.

W G H WESTON

The Corbett Hospital  
Stourbridge**THE GENERAL INFIRMARY AT LEEDS**

Applications are invited for the following posts.

1 SENIOR RESIDENT ANAESTHETIC OFFICER to take up duties on May 24th 1938.

Salary £149 per annum.

2 JUNIOR RESIDENT ANAESTHETIC OFFICER required immediately. Salary £100 per annum with the usual residential allowances in each case.

The appointments are for twelve months and six months respectively and subject to renewal.

Candidates must be fully qualified and registered.

Applications with copies of testimonials to be sent in at once to the undersigned.

S CLAYTON FRYERS

House Governor and Secretary

**THE QUEEN'S HOSPITAL BIRMINGHAM**

(The Birmingham United Hospital) (Medical School)

RESIDENT SURGICAL REGISTRAR required at once. Candidates must be F.R.C.S. Eng and

Edinburgh or Ireland or have passed the Prim. F.R.C.S. England and must have held a resident

appointment in a Teaching Hospital. Salary £125 p.a. annum with usual emoluments.

Applications with recent testimonials to be sent to the undersigned (from whom all further particulars may be obtained).

P CROCKER

House Governor

## APPOINTMENTS—Important Notice

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Secretary, 7, Drumheugh Gardens, Edinburgh)

### (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(continued)</b>	<b>PUBLIC HEALTH</b>
ABERTYSWYG MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE (Assistant Medical Officer of Health and Sanitary Medical Officer)
BLAENAVON MEDICAL SOCIETY (Chief Medical Officer)	NEATH AND DISTRICT (Medical Assistant)	SALOMONIAL HOSPITAL SHEPHERDSWELL (Assistant Medical Officer of Health)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Workmen's Medical Scheme)	<b>DISPENSARY APPOINTMENTS</b>
LLWYNNPIA CLYDACH VALE PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OAKDALE MON. (Medical Officer for Medical Aid Association)	LIMERICK CITY (Medical Dispensary Officer)

### (b) Overseas

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division of Branch named in the second column or with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Friendly Society Appointments)	The Medical Secretary New South Wales Branch 10 Macquarie Street Sydney N.S.W.	<b>VICTORIA</b> (All Institute or Medical Dispensary)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hill Albert St. East Melbourne Victoria	<b>WESTERN AUSTRALIA</b> (Contract and Locum Tenens)	The Hon. Sec. Western Australian Branch British Medical Association 10 St. George's Street Perth Western Australia
<b>QUEENSLAND</b> (Brisbane Associate Friendly Societies Institute)	The Hon. Sec. Queensland Branch Medical Association B.M.A. House Wickham Terrace Brisbane B.I.				

May 4, 1938

By Order of the Council

G. C. ANDERSON Secretary

### HULL ROYAL INFIRMARY

Applications are invited for the post of **SECOND CASUALTY OFFICER (male)** vacant now. Salary £150 per annum plus board residence and laundry.

In addition to carrying out duties in the Casualty Department the officer appointed will act as House Surgeon to one of the Honorary Assistant Surgeons and will thus obtain Ward and Theatre experience. He will be eligible for promotion to a more senior post when a vacancy occurs.

The appointment will be for a period of six months but will be determinable at any time by one month notice on either side.

Applications, giving particulars of age, experience and nationality to either with copies of testimonials should be addressed to the undersigned.

R. J. CARLESS  
April 20th 1938 House Governor

### ANCHASTER HOSPITAL, MANCHESTER

#### ORTHOPAEDIC REGISTRAR

Applications are invited from duly qualified Medical Practitioners. Duties to assist the Hon. Orthopaedic Surgeon in the Out Patient Clinic on Tuesday afternoons at 2 and on Thursday mornings at 9. Honorarium £200 per annum. Appointment for 12 months terminable on January 1st of each year.

Applicants stating age, qualifications, experience and full particulars to be forwarded on or before May 11th, to either with copies of three recent testimonials.

By Order of the Board  
HERBERT J. DAFFORNE,  
Gen. Supt. and Secy.

### STIRLING DISTRICT MENTAL HOSPITAL

#### Larbert

**JUNIOR ASSISTANT MEDICAL OFFICER** required. Commence salary £200 per annum rising by annual increments of £25 to £300 with board and laundry. Appointment subject to provisions of Asylum Officers' Superannuation Act.

Apply stating age and experience with testimonials to the Medical Superintendent.

### SOUTH MIDDLESEX AND RICHMOND JOINT HOSPITAL BOARD

#### SOUTH MIDDLESEX FEVER HOSPITAL ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified Medical Practitioners for the above position. Duties to commence as soon as possible. The appointment is for a period of one year at a salary of £200 per annum with board and lodging. Preference will be given to candidates who have held a recent appointment in a General Hospital. Experience in anaesthetics desirable.

Forms of application with full particulars of duties may be obtained from the Medical Superintendent, South Middlesex Fever Hospital, Mortimer Lane, North Middlesbrough. Applications on pre-printed forms should be returned to him on or before Monday, May 16th 1938.

S. C. T. LITTLEWOOD  
14 Church Street Clerk to the Board  
Kings-on-on-Thames  
April 20th 1938

### STAFFORDSHIRE, WOLVERHAMPTON and DUDLEY JOINT BOARD FOR TUBERCULOSIS

#### PRESTWOOD SANATORIUM (10 Beds)

Applications are invited for the post of Junior Assistant Medical Officer (male) at the above named sanatorium which approximates 100 miles from Wolverhampton. The successful candidate may also have opportunities for service in the work of a laboratory. The appointment will be for a minimum of 12 months but will be renewable for a further maximum period of six months.

Salary at the rate of £100 per annum with board and laundry.

Forms of application may be obtained from the undersigned and should be returned by return of post on or before Monday, May 16th 1938. Not more than three recent testimonials.

H. L. UNDERWOOD  
Clerk to the Board  
5, St. Barnabas Street, London E.C.4

### ROYAL BUCKINGHAMSHIRE HOSPITAL

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F. G. DWES Secretary

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Applications should be sent to the undersigned on or before Monday, May 16th 1938.

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Casualty and Out patient Officer No 2	£150 p a	6 mths
Obstetric House Surgeon		6 mths

The Hospital contains 219 beds including 50 for maternity patients  
The appointments will date from July 1st 1938 and will be for six months. In the case of the Obstetric House Surgeon the appointment will be for three months as Junior at £110 per annum and three months as Senior at £130 per annum six months in all.

Candidates who must be single and who should previously have held hospital appointments should send applications accompanied by testimonials to the undersigned not later than Friday May 20th 1938

RAPHAEL JACKSON Major  
Secretary

## CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road W C 1

### ASSISTANTS IN THE OUT PATIENT DEPARTMENT

- There are the following vacancies  
SECOND ASSISTANT to attend on Monday at 2 p.m.  
THIRD ASSISTANT to attend on Tuesday at 5 p.m.  
THIRD ASSISTANT to attend on Friday at 2 p.m.  
THIRD ASSISTANT to attend on Saturday (first session) at 9.30 a.m.

The duties are to assist the Surgeons in seeing the patients and the posts are honorary.

Applications which may be for periods of three six or twelve months should be sent to the undersigned immediately

JOHN H YOUNG  
Secretary Superintendent

## GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL London W 1

A CLINICAL ASSISTANT required to commence duties at once. Applications stating age qualifications and experience together with copies of three recent testimonials should be received on or before May 13th by the undersigned from whom further particulars may be obtained.

F P CARROLL  
Secretary Superintendent

## GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL London W 1

HOUSE SURGEONS (male) required to commence duties July 1st and August 1st respectively. Salary £100 per annum with board residence and laundry.

Applications stating age qualifications and experience together with copies of three recent testimonials to be sent to the undersigned on or before May 13th.

F P CARROLL  
Secretary Superintendent

## HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL

### APPOINTMENT OF CASUALTY SURGICAL OFFICER

Applications are invited from Registered Medical Women for the resident appointment of Casualty Surgical Officer for six months vacant June 1st next at the Out patient Department Baysham Street Camden Town. Salary £100 per annum.

Applications to be made on the prescribed form together with copies of not more than three testimonials should be returned to the Secretary by May 21st next.

## THE INFANTS HOSPITAL Vincent Square Westminster

The Committee of Management invite applications for the post of HONORARY SURGEON.

Candidates must be Fellows of the Royal College of Surgeons England. Particulars of the appointment and information as to the submission of testimonials etc may be obtained from the undersigned to whom applications must be delivered not later than May 31st.

ALFRED J SMALL  
Secretary

## THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN S E 1

### HONORARY ASSISTANT SURGEON

There is a vacancy for an HONORARY ASSISTANT SURGEON at the above hospital. Candidates should be graduates of a university recognized by the General Medical Council and be Fellows of the Royal College of Surgeons.

Applications with testimonials should be sent to the undersigned not later than May 26th from whom further particulars can be obtained.

J H TEASDALE  
Secretary

## METROPOLITAN HOSPITAL, Kingsland Road London E 8

Applications are invited for the post of CASUALTY OFFICER AND RESIDENT ANAESTHETIST (male). Salary at the rate of £100 p a with board residence and laundry. Duties to commence June 1st. Candidates must possess a registered medical and surgical qualification of the United Kingdom.

Form of application may be obtained from the undersigned. Applications must be returned by May 20th.

FRANK JENNINGS  
House Governor and Secretary

## JEWISH MATERNITY HOSPITAL Underwood Street London E 1

RESIDENT MEDICAL OFFICER required to take up duties on June 1st. Board residence and laundry provided with salary at the rate of £50 per annum. The appointment is for four months with option of extension to six months. Applicants may be male or female.

Applications together with copies of three recent testimonials should be forwarded to the Secretary immediately.

## KING EDWARD MEMORIAL HOSPITAL Ealing W 13 (145 Beds)

Applications which must be submitted not later than Tuesday May 10th 1938 are invited for the following appointments:

OPHTHALMIC SURGEON  
HONORARY ANAESTHETIST  
(Two vacancies)

Particulars may be obtained from the undersigned.

R A MICKELWRIGHT  
House Governor

## THE HOSPITAL FOR TROPICAL DISEASES 25 Gordon Street W C 1

Has two vacancies for JUNIOR HONORARY ANAESTHETISTS. The elected candidates will be appointed for twelve months but will be eligible for re-election.

Applications with copies of three recent testimonials should be sent in on or before May 14th to the undersigned from whom further particulars may be obtained.

April 25th 1938 D A C PRICE Secretary

## THE MARIE CURIE HOSPITAL (Centre for Treatment of Cancer in Women by Radium and X Rays)

Applications are invited from qualified medical women for the post of RESIDENT MEDICAL OFFICER. Previous hospital experience desirable. Salary £100 per annum.

Applications to be sent with copies of not more than three recent testimonials to the Secretary 2 Fitzjohn's Avenue N W 3 by May 20th.

## THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S E 1

There will be a vacancy on June 1st 1938 for a HOUSE SURGEON (male) at the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum with board and residence.

Applications with copies of testimonials should be forwarded not later than Tuesday morning May 17th to the Secretary at the above address from whom further particulars can be obtained.

## HOUSLOW HOSPITAL ANAESTHETIST

Applications are invited for the post of ANAESTHETIST one guinea per session. The appointment to commence at once.

Applications with copies of three recent testimonials should be sent to the Secretary Houslow Hospital Staines Road Middlesex from whom further particulars can be obtained.

## ROYAL LONDON OPHTHALMIC HOSPITAL (Moorfields Eye Hospital) City Road E C 1

Applications are invited for the posts of TWO OUTPATIENT OFFICERS one to attend on Tuesdays and Fridays and one to attend on Wednesdays and Saturdays (mornings) each week. Candidates must be registered Medical Practitioners.

Salary at the rate of £100 per annum. The Outpatient Officers will be appointed for a period of one year and will be eligible for reappointment.

Copies of regulations can be obtained on application.

Applications with testimonials stating age and qualifications together with photograph must be received by the undersigned not later than May 16th 1938.

A J M TARRANT  
Secretary

## WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill London S E 18

### GENERAL HOSPITAL (112 Beds)

The Board of Management invites applications from suitably qualified male candidates for the post of HOUSE PHYSICIAN for six months from June 1st 1938. Remuneration will be at the rate of £100 per annum plus board residence and laundry.

The closing date for the receipt of application (which should be submitted on the prescribed form obtainable from the undersigned) is Monday May 23rd and short listed candidates will be invited to meet the Appointments Committee (at the Hospital) at 4.45 p.m. on Thursday May 6th.

R S G HUTCHINGS  
Secretary

## THOMAS LYE CONVALESCENT HOME BRIGHTON 63 Marine Parade (10 Beds)

The Management Committee invite applications for the post of HONORARY MEDICAL OFFICER to the above Convalescent Home which is run in connexion with the Bute Hospital Luton.

Candidates must be registered Medical Practitioners and should reside in or near Brighton.

Applications should be sent to the undersigned not later than Monday May 16th 1938.

R E LINGARD  
Bute Hospital Luton Beds  
Secretary

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1 **SOMERSET COAST—PRACTICE** in delightful part. Good house. Panel 15. Average 15.0 p.a. Premium £2.00. House rent. Fully insured.

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(FOUNDED 1880)

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### Practices and Partnerships for Disposal

### Full Particulars sent free

1 S COAST—Non dispensing PRACTICE, £1,250 p a, in health resort No panel but imple scope Com modious well built residence with garage and garden for sale Premium £2,500

2 NEAR MARBLE ARCH — Old-established PRACTICE about £1,900 p a Panel about 1,300 offering imple scope in near future also midwifery Visits 5/- to £1 1s and £2 2s Well built detached double fronted house with garage and garden for sale Premium two and a quarter years purchase

3 CORNISH COAST—PARTNERSHIP in non-dispensing Practice newly £3,000 in favourite resort Panel 1,200 House obtainable One third share at two years purchase Good anesthetist required Short Assistantship

4 LONDON, SW—PARTNERSHIP in sound Practice in suburban district Small panel Flat available at £75 p a Share about £1,600 p a at two years purchase Young energetic man, with speciality preferred

5 S MIDLANDS—PARTNERSHIP in country Practice, £2,660 p a Panel about 1,550 Choice of two houses to rent Small well equipped hospital Premium two fifths share £1,800 Partner should be aged 30/35, with leaning towards medicine

6 MIDDLESEX —Steadily increasing Branch PRACTICE about £700 in growing district Panel about 1,000 Small compact house Rent £80 Good scope Premium two years purchase

7 LONDON, N 12 —PRACTICE doing about £400 in growing district Panel 153 Attractive modern double fronted, labour saving house (4 bedrooms, etc.), for sale Premium £750

8 DEATH VACANCY—LONDON, N 16 —Receipts last year £1,730, including appointment worth over £400 and panel £375 Semi detached non basement house to rent

9 ESSEX —Good middle class non-panel PRACTICE, about £2,000 p a in outlying suburban district Detached corner house (6 bedrooms etc) garden and garage Price £1,000 Excellent scope for panel Premium—best offer

10 S COAST—PARTNERSHIP in Practice, £4,770 p a in residential town and health resort Panel 6,000 Semi detached house (5 bedrooms) garage and garden to rent Premium one fourth share £2,800

11 W OF ENGLAND—PARTNERSHIP in Practice about £2,800 in first rate residential town. Panel about 3,000 House obtainable Good scope One third share at first at two years purchase

12 LONDON—RESIDENTIAL SUBURB S of the THAMES—Well established middle class PRACTICE averaging £1,595 p a with small select panel Minimum visiting fee 5/- Modern detached non basement residence (6 bedrooms and 3 professional rooms with separate entrance) large garden and garden for sale Scope Premium one and three quarter years purchase

13 MIDLANDS—PARTNERSHIP in old-established Practice £3,270 p a, in manufacturing town Panel 3,820 Modernized house (4 bedrooms and professional accommodation) good garage and garden for sale or rent Premium one half share £3,270

14 PRIVATE MENTAL HOME (both Sexes) —Prchts average over £800 p a Georgian residence rented on lease Premium licence goodwill etc £2,600 offer considered

15 LONDON, SW —Good class PRACTICE, about £1,000, in residential part near West End Fees £1 1s upwards Rent of consulting rooms £200 p a on lease Premium two years purchase

16 NE SEAPORT—Old-established PRACTICE, £1,657 p a Panel 1,275 Price of house £1,500 freehold Premium two years' purchase

17 LONDON, EC—Old-established City PRACTICE averaging about £1,700 p a Panel 316 Premises rented on lease Good scope Prem one and a half years purchase

18 HOME COUNTIES—PARTNERSHIP in increasing middle class Practice about £1,600 Panel about 500 Modernized house for sale or rent Scope Cottage hospital Premium one half share £1,600

19 S OF ENGLAND—PARTNERSHIP in Practice, over £3,600 p a in growing seaport town Panel 3,225 One fifth share at two years' purchase Prelim Assistantship

20 SUSSEX—Country PRACTICE near coast Receipts last year, £270 Panel about 200 Attractive modern house garage and garden Price £1,500 Premium £450

21 FRENCH RIVIERA—Old established PRACTICE MD or MRCP necessary

22 S MIDLANDS—PARTNERSHIP in good class Practice, nearly £5,000 p a in first rate town Panel over 1,500 Applicant should be about 28/30 years of age and well qualified One fourth share at two years' purchase after Assistantship Favourably known and strongly recommended by the Bureau

23 LONDON, SE—PARTNERSHIP in Practice, nearly £4,300 p a in rapidly growing district Panel about 3,000 Modern labour saving house (4 bedrooms), to rent Hospital Premium one fourth share £2,250

24 MIDLANDS—PARTNERSHIP in Practice, averaging £2,880 p a, in manufacturing town Panel 2,150 Suitable house Premium two fifths or one half share two years purchase Succession in about two years

25 INLAND HEALTH RESORT—Old established SPA PRACTICE about £1,450 p a Fees £2 2s and £1 1s Good house in excellent position for sale All kinds of sport Premium one and a half years' purchase

26 ESSEX—THIRD PARTNER required in good middle class Practice in outlying district Panel 700 House (6 bedrooms), garage and garden Price £1,000 Excellent opportunity for one desiring surgery Share worth £1,500 p a (guaranteed for two years) at two years' purchase

27 SURREY—PRACTICE, about £600 p a, on out skirts of market town Panel 776 House (7 bedroom) Price £2,000 Premium two years purchase

28 EASTERN COUNTIES—PARTNERSHIP in lucrative Practice, £5,200 p a in market town Panel over 4,000 Suitable house obtainable Premium one fifth share two years purchase

29 S COAST—PRACTICE in health resort Receipts 1937 about £1,600 Panel 900 House (5 bed and dressing rooms) large garage and garden Price £2,250 Good scope Premium £3,750

30 DEATH VACANCY—ANGLESEY COAST—PRACTICE about £900 p a (appointments and panel £450) House (6 bedrooms) with nice garden Rent £60 p a

# British Medical Bureau

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## Practices and Partnerships for Disposal (continued)

31 W OF ENGLAND—PRACTICE nearly £1,200 p.a. in small favourite watering place. Panel 71. Detached house (5½ bedrooms) garage and good garden. Rent £30 p.a. Scope. Premium two years purchase or nearest offer.

32 LONDON, E 5—Middle class PRACTICE about £2,700 p.a. Panel 1,000. Price of urgent premises £1,000. Private residences available if needed. Good scope for panel. Premium two years purchase.

33 UNIVERSITY TOWN—PRACTICE about £1,800. Panel over 2,500. House (about 7 bedrooms) for sale also surgery premises for sale. Scope. Premium one and three quarter years purchase.

34 COUNTY TOWN, about 50 miles from London—PARTNER required (under 30 years of age, with F.R.C.S. Eng or Edin.) to do Ear, Nose and Throat work in addition to general practice and some general surgery. Share worth £1,600 p.a. at two years purchase. Possibility of hospital appointment at later.

35 KENT—SEASIDE TOWN—PARTNERSHIP in naved Practice £600 p.a. Panel over 2,000. Excellent modern house for sale or rent. One third or one half share at two years purchase. Must be young, experienced and well qualified.

36 LONDON, SE 20—PRACTICE about £1,700 p.a. in suburban district (appointments returning about £50 p.a.). Panel 966. Modernized house (13 rooms) garage and garden. Price £1,200. Premium £500.

37 NEW ZEALAND—S. ISLAND—PRACTICE in prosperous coast town. Receipts average £1,400 p.a. (appointments about £450). Choice of house. Surgery rent 6s per week. Premium £1,200.

38 MIDDLESEX—PARTNERSHIP in steadily increasing middle-class Practice about £2,000 p.a. in residential district. Panel 1,000/1,600. House available. Premium two-ninths share (about £1,600 p.a.) two years purchase.

39 MIDLANDS—PRACTICE in growing residential district near good town. Receipts last year £770. Panel about 100. Active modern easily run house (4 bedrooms). Price £3,000. Scope. Premium one and a half years purchase.

40 SW OF ENGLAND—FOURTH PARTNER required in mixed country to viv. Practice nearly £6,800 p.a. Panel 4,600. Share worth about £1,100 p.a. at two years purchase. Partner must be young and have made special study of medicine. Preliminary Assistant hip.

41 LONDON W 9—PRACTICE doing between £900/£950 p.a. in residential part. Panel 0'60. Rent of maisonette (4 bedrooms etc.) £200 p.a. Scope. Premium £1,200.

42 W CROYDON—Cash and Panel PRACTICE. Receipts last year £650. Panel 400 and club. Rent of house £104 p.a. Premium £350 or very near offer.

43 LONDON W—Middle-class PRACTICE £630 p.a. in nice suburb. Panel 267. House (5 bedrooms). Price £1,700. Good scope. Premium one and a half years purchase.

44 SURREY—PRACTICE in developing district doing nearly £700 p.a. (appointment worth £50 panel 165).

Well's situated house (3 bedrooms). Price about £1,650. An p. scope. Premium £400.

## 45 NEW ZEALAND—AUCKLAND PROVINCE

—PRACTICE of 70 p.a. in dairy farming district. Six roomed house with grounds of two acres. Premium two years purchase £1,100.

46 SURREY—Middle and working class PRACTICE about £1,600 in thickly populated area. Panel about 400. Small house with garage. Premium £200 to include furniture.

47 WORCESTERSHIRE—Country PRACTICE £850 p.a. in very beautiful district. Excellent house (6 bedrooms) in about 1000 p.a. Premium £1,000.

48 SCOTLAND—FIFESHIRE—PRACTICE nearly £500 p.a. in small town. Panel about 100. House (6 bedrooms) garage and good garden. Scope. Furniture etc. available. Premium house and furniture.

49 SOUTH AFRICA—Old established PRACTICE averaging £600 p.a. near Cape Town. House to Cottage hospital. Scope for surgery. Premium £1,000 to include not up-to-date X-ray apparatus etc.

50 MIDLANDS—PARTNERSHIP in Practice about £2,600 p.a. in small town. Three years purchase after four years' service.

51 W OF ENGLAND—Middle class PRACTICE in good town. Receipts 1937 £1,400. Panel 0. D. and frontage house (7 bedrooms) to rent. Premium one and a half years purchase or near offer.

52 S MIDLANDS—PARTNERSHIP in Practice nearly £2,000 p.a. in country to viv. Panel about 2,000. House could be obtained. Premium 10/15ths share or three quarter years purchase or near offer. (Share £3,000). Hip.

53 SURREY—PRACTICE about £900 in growing neighbourhood. Panel 650. Detached house (3 bedrooms). Rent weekly. Premium one and a half years purchase.

54 LONDON SE—Suburban PRACTICE Receipts 1937 £780. Panel 0. Detached house (7 bedrooms) small garden no garage. Price £700. Premium one and a half years purchase.

55 LONDON SE—PRACTICE doing at rate of £770 p.a. in thickly populated district. Panel 670. Small house (3 bedrooms). Rent £50 p.a. Premium £1,100 to include drug etc.

56 NE COAST—Easily worked middle and better working-class PRACTICE over £1,100 p.a. in suburban area. No panel. Private residence for sale. Good scope. Premium to include furnishings and fittings of new car etc.

57 LONDON W 9—PRACTICE doing about £1,600. Panel 1,700. Semi-detached house (4 bedrooms) no garage or garden to rent. Premium £500.

58 SURREY—PARTNERSHIP in rapidly growing Practice about £700 in residential neighbourhood. Panel 70. House (3 bedrooms) garage and garden. Price £1,100. One fourth share at first at two years purchase.

Purchasers can raise additional capital for the purchase of approved practices or partnerships. Particulars will be forwarded on application.

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B EDINBURGH—Old established PRACTICE. Receipts averaging £1,022. Panel 300. Suitable house. Price £1,500 or might be let or lease. Premium 2 years purchase.

C N OF SCOTLAND—Old-established country PRACTICE in beautiful district. Receipts average over

£1,000. Excellent house to live in. Price £1,500. Reasonable offer considered.

D EASY DISTANCE OF GLASGOW and EDINBURGH—PRACTICE nearly £1,000 p.a. in suburban area. House (6 bedrooms) garage and garden. Price £1,500. One and a half years purchase.

E EDINBURGH—Small PRACTICE. Receipts approximately £400. Suitable house. Price £1,000. One year purchase.

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Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed.

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**STAFFORDSHIRE—URGENT SALE**—Very old established mixed Panel and Private PRACTICE in pleasant Country town Cash receipts last year £1 668 Panel 1 380 and Dispensary (Club) appointment £220 p.a. Scope Excellent house 3 reception 4 bedrooms 2 maids rooms 3 Professional rooms garage for 2 cars and small garden To rent on long lease Premium—1½ years purchase (to include drugs and surgery fittings etc.) Vendor specialising—No 1109

**NEAR MANCHESTER**—Sound old established middle class PRACTICE in pleasant suburb Vendor prepared to sell whole Practice or a one half share with succession in about two years Cash receipts last year £5 727 Panel 2 110 Plenty of scope Good house available with garden and garage Premium—1½ years purchase—No 1107

**YORKSHIRE (WR)**—Very old established Mixed Panel and Private PRACTICE Cash receipts £1 200 p.a. Panel 900 Scope Good detached house 2 reception 4 bedrooms Professional rooms garage and garden Premium—1½ years purchase or near offer—No 1060

**EAST COAST—PARTNERSHIP** (after preliminary Assistantship) in middle and better working class Practice in large seaport town Cash receipts £3 800 p.a. Panel 2 600 Choice of suitable house Premium—1/4 or 1/3rd share—2 years purchase—No 1076

**MANCHESTER—URGENT SALE OWING TO ILLNESS**—Old established working-class PRACTICE Average cash receipts £1 515 p.a. Panel 1 631 Scope Good surgery premises to rent at £52 p.a. with resident caretaker Purchaser can choose own residence Premium (for quick sale)—1½ years purchase payable £1 000 down and remainder over a period of years with interest—No 1079

**NEAR BUNTON**—Old established PRACTICE capable of great increase Cash receipts last year £740 (increasing) Panel 862 Excellent house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and good garden Premium—Practice and house £1 700—No 989

**LANCS TOWN**—Very old established mixed class PRACTICE in present hands 30 years Capable of great increase Cash receipts last year over £600 Panel 620 Practice produced £1 200 some years ago Good house 9 rooms garage and garden Rent £65 p.a. Premium—Practice—best offer—No 1019

**NORTH WEST COAST**—Old established middle class PRACTICE in Seaside and residential town Cash receipts last year £1 100 Panel 350 Well built detached house 2 reception 4 bedrooms garage and garden To rent Premium—1½ years purchase—No 961

**WORCESTERSHIRE**—Very old established Country PRACTICE in beautiful district Cash receipts £800 p.a. Panel 400 and appointments £60 p.a. Nearest opponent 5 miles Attractive house 3 reception 5 6 bedrooms electric light garage and large garden Good sport Premium—Practice—£1 500—No 1097

**SOUTH COAST**—Old established middle class PRACTICE in first rate seaside resort Average cash receipts £1 200 p.a. Panel 640 Good house 2 reception 4 bedrooms maid's room 3 Professional rooms garage and garden To rent—Premium—2 years purchase—No 1058

**CENTRAL WALES**—Very old established unopposed Country PRACTICE in present hands 13 years Average cash receipts over £2,000 p.a. Panel returns about £620 p.a. and appointment £285 p.a. Excellent house 2 reception 6 bedrooms 3 Professional rooms electric light garage for 2 cars and beautiful garden Price £1 500 Premium—Practice—£3 200—No 1068

**NORTH EAST COAST**—Middle class (non Panel) PRACTICE Cash receipts £1 100 p.a. Rent of surgery premises £26 p.a. Prem—£800—No 1028

**NORTH WALES**—Seaside Resort—Good class PRACTICE Cash receipts over £1 200 Panel 425 Welsh not essential Nice house with garage and garden to rent or purchase Good winter climate Premium—£1 700 or near offer—No 929

**SHROPSHIRE**—Old established unopposed Country PRACTICE Cash receipts last year £685 Panel 450 Modern house 2 reception 5 bedrooms 3 Professional rooms garage and large garden Electric light Rent £80 p.a. Premium—best offer—No 1056

**YORKSHIRE (WR)**—Old established mixed Panel and Private PRACTICE Cash receipts £860 p.a. Panel 700 Good house with excellent garden Rent £30 p.a. Premium—1½ years purchase—No 1037

**DERBYSHIRE**—Old established mixed-class PRACTICE near beautiful

country and within easy reach of large town Average cash receipts £1 100 p.a. Panel 970 and transferrable appointments £20 p.a. Scope Nice detached house 2 reception 6/7 bedrooms garage and large garden Freehold Premium—1½ years purchase—No 991

**NEAR MANCHESTER—PARTNERSHIP** in old established middle and better working class PRACTICE with succession in three years Cash receipts £2 600 p.a. Panel 1 450 Scope Suitable accommodation available Preliminary Assistantship if desired Premium—1/3rd share—2 years purchase—No 1103

**AUSTRALIA**—Unopposed Country PRACTICE in North West Victoria Income £1 450 p.a. Suitable house to rent Premium—25% of gross cash takings for two years Furniture (household) £125 cash—No 1091

**YORKSHIRE**—Old established PRACTICE in pleasant country town Cash receipts last year £1 080 Panel 500 (producing £330 p.a.) Scope Excellent house 3 reception 6 bedrooms 3 Professional rooms garage and large garden Good sport and educational facilities Premium—Practice—£1 700—No 1102

**MANCHESTER**—Sound old established mixed Panel and Private PRACTICE in industrial district Cash receipts last year £2 200 Panel 2 230 Good house—reception room 4 bedrooms 2 Professional rooms small garden Rent £40 p.a. Premium—best offer—No 1084

**NORTH WEST LANCS**—Old established mixed Panel and Private PRACTICE in large town Cash receipts last year £1 040 Panel over 1 000 Good house pleasantly situated 2 reception 5 bedrooms garage and small garden Premium—Practice—1½ years purchase—No 1105

**SCOTLAND—FIFESHIRE**—Old established PRACTICE in small town Cash receipts £800 p.a. Panel 800 Good house 2 reception 4 bedrooms Professional rooms (separate entrance) electric light garage and good garden Freehold All kinds of sport Premium—Practice and house—£2 500—No 1095

**MANCHESTER—MEDICAL WOMAN'S PRACTICE** in present hands 9 years Cash receipts last year £1 021 Panel 370 Good detached house 2 reception 3 bedrooms garage and garden Price £1 050 Premium—1½ years purchase—No 1077

**MIDLANDS—MEDICAL WOMAN'S PRACTICE** in large city Average cash receipts £645 p.a. Panel 350 Scope for increase Good house with garage and garden to rent Premium—best offer—No 1104

**DERBYSHIRE**—Increasing Private and Panel PRACTICE in well known Spa Cash receipts approximately £700 Panel 200 Good ground floor flat Rent £50 p.a. Premium—best offer—No 1057

**LIVERPOOL**—Steadily increasing mixed class PRACTICE in suburbs Cash receipts last year £758 Panel 650 Excellent detached house 2 reception 6 bedrooms garage and garden Premium—Practice—best offer—No 1066

**YORKSHIRE (WR)**—Well established mixed-class PRACTICE in large town Average cash receipts £1 175 p.a. Panel 1 121 Good house 2 reception 4 bedrooms 3 Professional rooms garage and large garden Rent £65 p.a. Premium—1½ years purchase or near offer—No 1085

**CHESHIRE**—Old established Country PRACTICE in delightful district offering scope Income last year £853 Panel 470 Good detached house 2 reception 4 bedrooms garage and nice garden with orchard To be resold Premium (for quick sale)—1 year's purchase—Vendor secured an appointment—No 1106

**SOUTH YORKSHIRE**—Old established PRACTICE capable of great increase Cash receipts last year £640 Panel 437 Good house 2 reception 4 bedrooms garage and large garden Rent £60 p.a. Premium—best offer—No 1080

**NORTH EAST COAST**—Old established mixed Panel and Private PRACTICE Cash receipts approximately £2 100 p.a. Panel 2 140 Approximate Income £400 p.a. Good house 2 reception 3 bedrooms 3 Professional rooms garage and small garden Price £800 Premium—2 years purchase—No 1094

**LANCS TOWN—OPHTHALMIC PRACTICE—NUCLEUS** of £1 160 p.a. Premium—best offer—No 01

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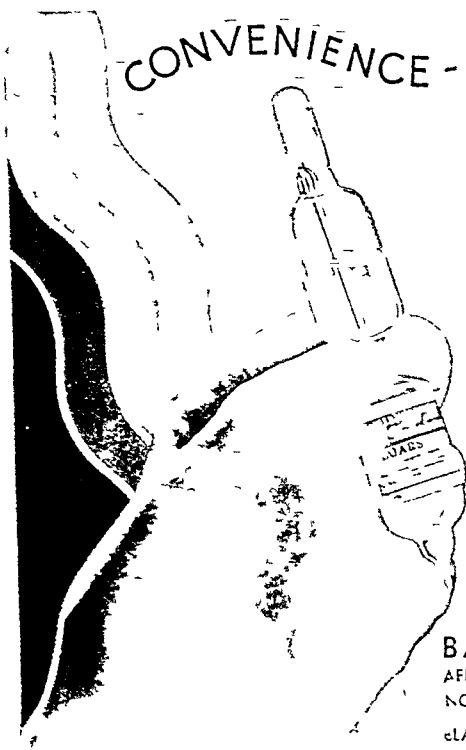
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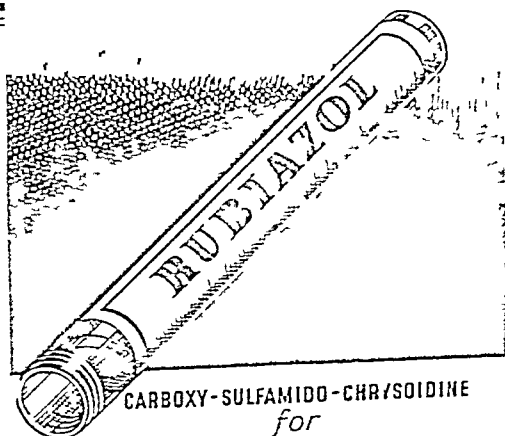
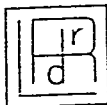
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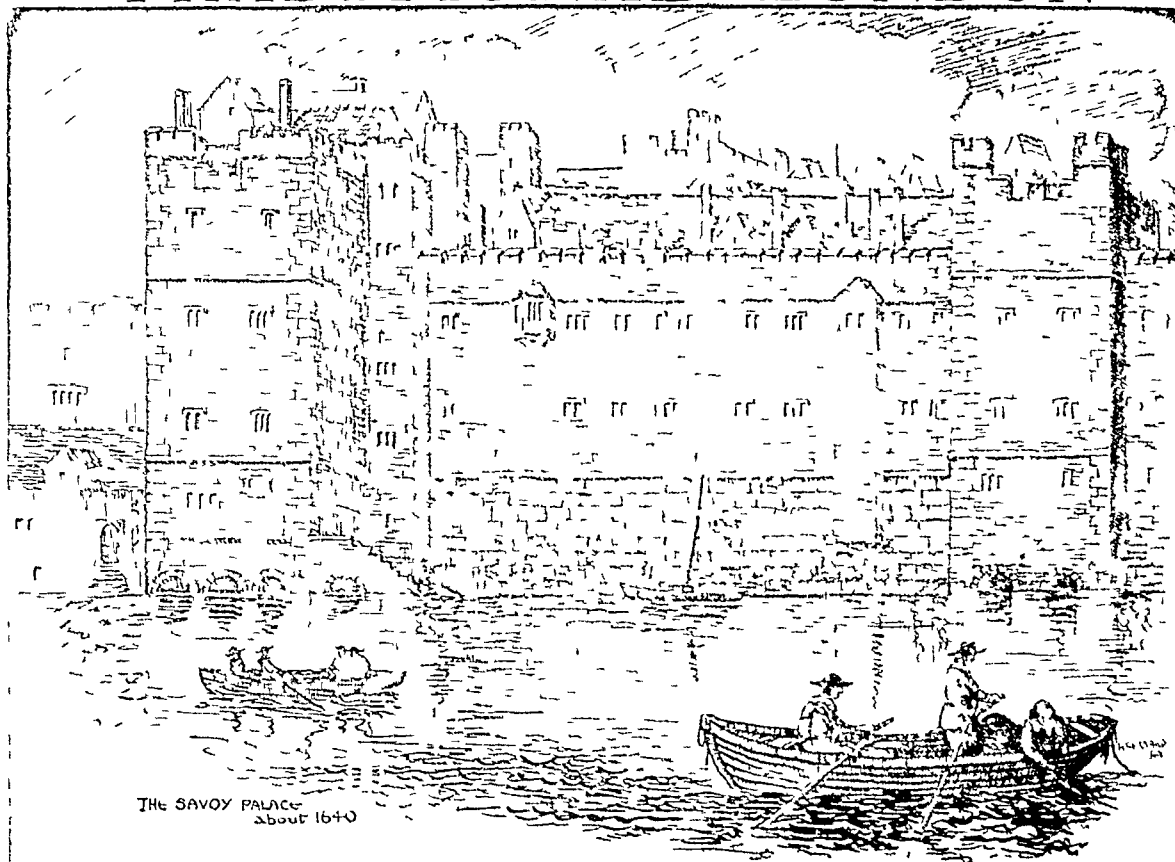
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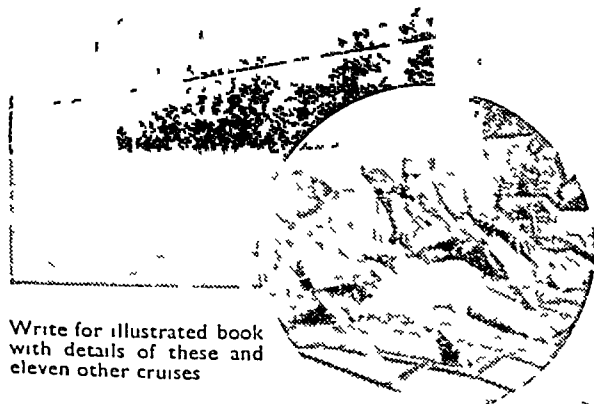
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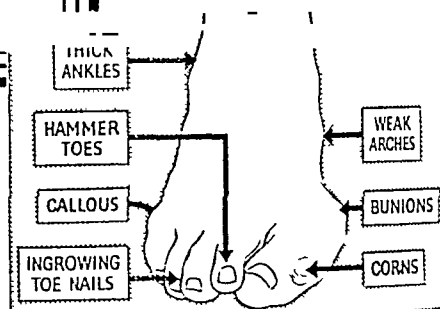
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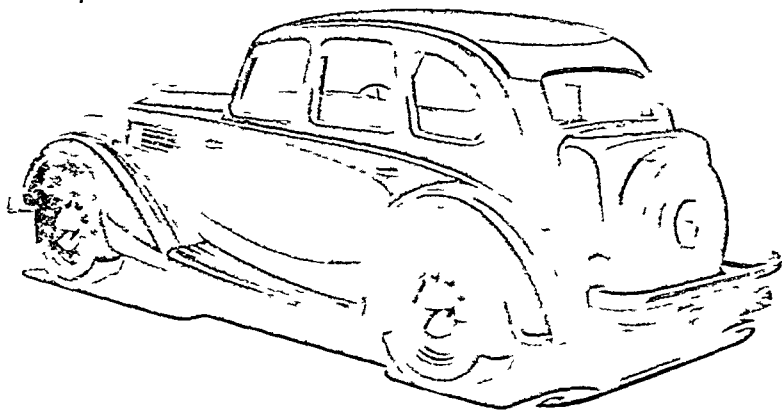
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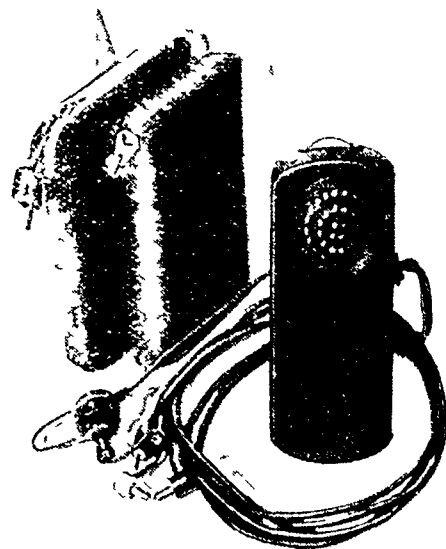
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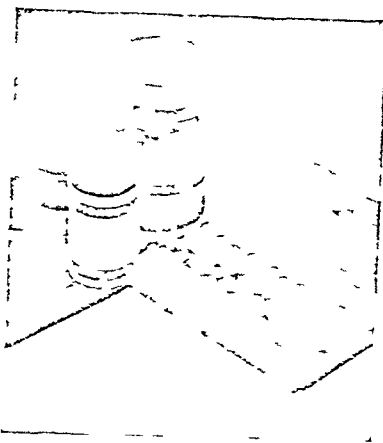
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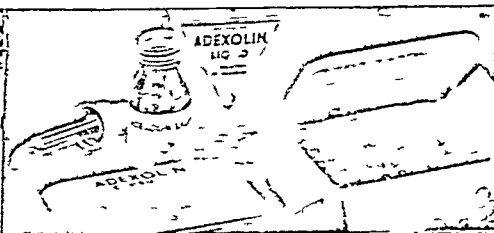
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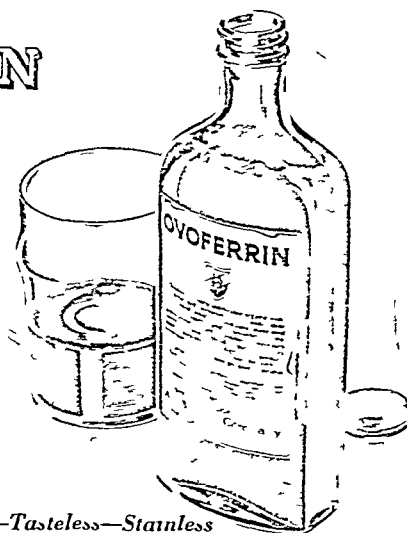
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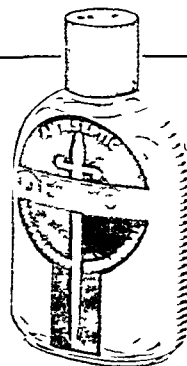
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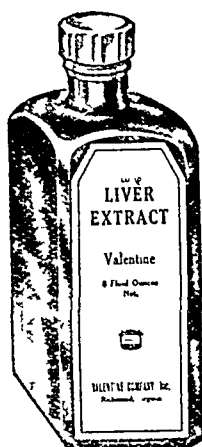
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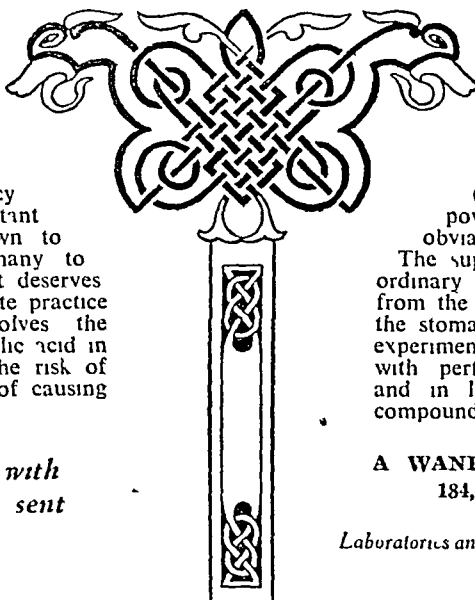
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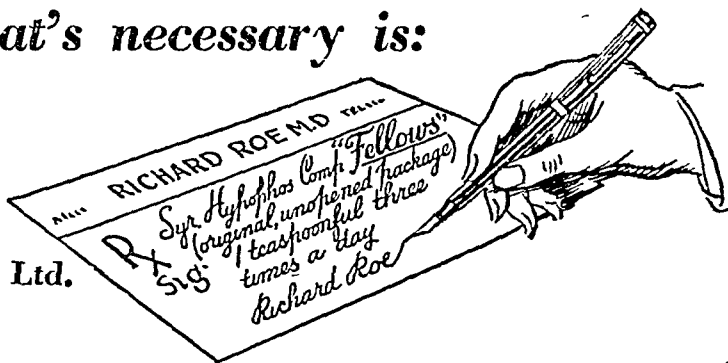
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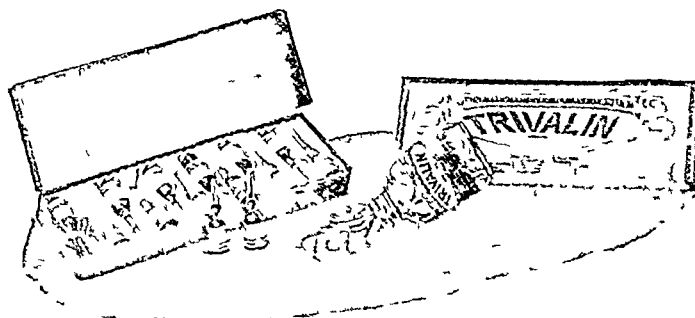
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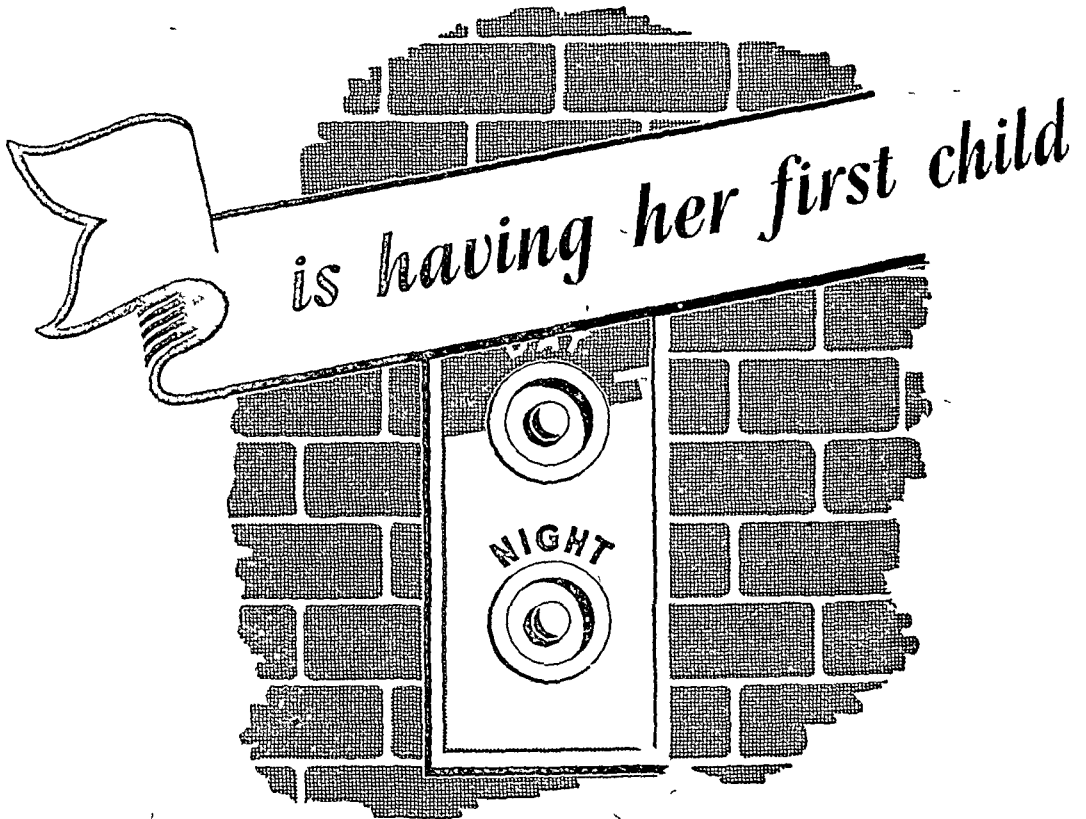
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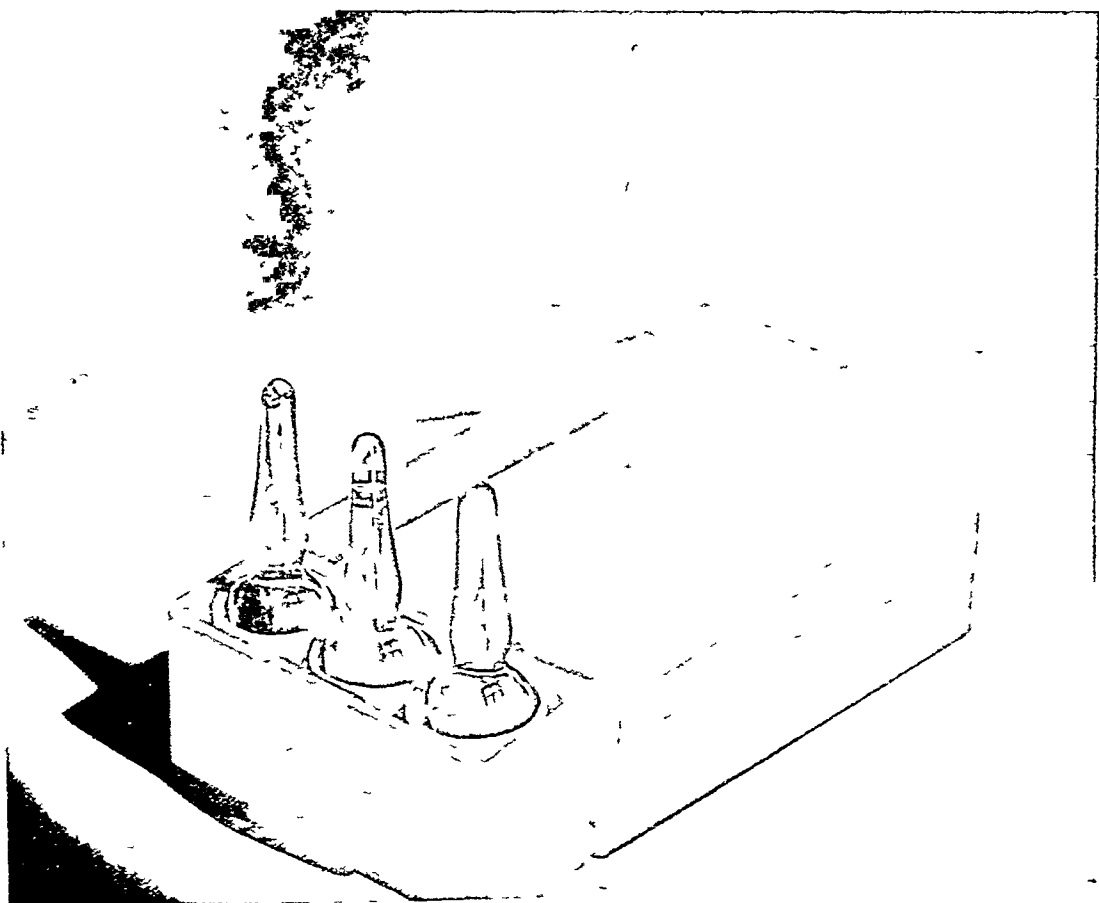
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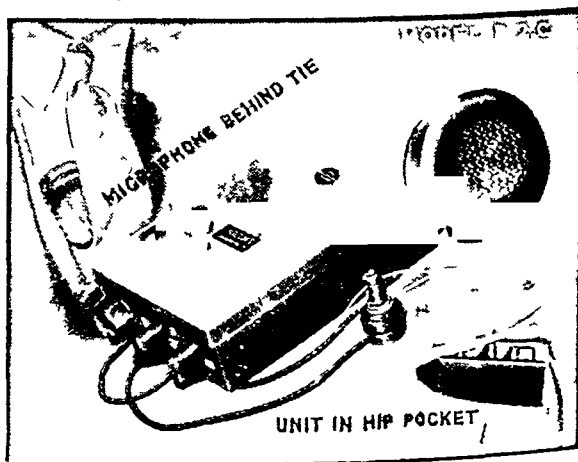
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# BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 14 1938

## CLINICAL PROBLEMS OF THYROTOXICOSIS

By

PETER McEWAN, M.A., M.B., F.R.C.S. Ed

Honorary Surgeon Bradford Royal Infirmary

(WITH SPECIAL PLATE)

Among the many interesting problems of thyrotoxicosis there is none more urgent and more obscure than the high and rapidly increasing death rate. During the year 1936 no fewer than 1,696 deaths were attributed to that condition in England and Wales. There has been a steady rise for many years the exact figures being

Year	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925
Males	360	338	322	470	490	466	473	464	433	490	69	54	6
Females	360	434	400	399	395	357	473	464	433	490	69	54	6
Year	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Males	64	84	91	119	123	111	135	165	181	137	137	143	143
Females	630	743	852	933	936	1114	1166	1259	1444	1315	1373	1433	1433

It is a curious fact that during the last ten years the operation for the cure of thyrotoxicosis has attained its peak of excellence and has been pronounced the safest operation in major surgery. No agreement has been reached as to how to explain this wide gap between the magnificent possibilities of major surgery on the one hand and the rapidly rising mortality on the other. The main purpose here is to examine and discuss this problem. The primary method of approach has been by an investigation of the deaths during 1936. Through the courtesy of the Registrar-General I was furnished with the particulars of each death in England and Wales during that year as regards sex, age, place of residence, place of death, and causes of death. A careful analysis of these returns has been made from various points of view. For convenience the tables will be given first. They will be used in the subsequent discussion and interpreted in the light of clinical experience and I ask for indulgence if I fail to avoid some of the many fallacies inherent in statistics and deductions therefrom.

TABLE I—Geographical Distribution

County	Number of Deaths		Gr. Annual Population	Percentage of Deaths
	Annual Average for Years 1913-19	Year 1936		
Westmorland	1.57	7	6,403	10.0
Northamptonshire	3.43	6	6,405	10.7
Shropshire	3.43	18	2,415	73.7
Cornwall	7.85	2	317,965	69.1
Cambridgeshire	1.43	9	1,000	64.3
Bedfordshire	2	14	2,052	65.4
Sussex	11.25	47	770,859	60.2
Wiltshire	3.14	15	303,373	49.3
Hampshire	11.14	53	1,014,116	57.1
Cumberland	5.25	15	262,151	57.0
Cheshire	17.25	61	1,057,655	56.1
Gloucestershire	8.57	43	756,000	47

TABLE I—Geographical Distribution (continued)

County	Number of Deaths		Gr. Annual Population	Percentage of Deaths
	Annual Average for Years 1913-19	Year 1936		
Somerset	1	1	1,000	10.0
Hertfordshire	1	1	1,000	10.0
Devonshire	1	1	1,000	10.0
Dorset	2	1	1,000	10.0
Norfolk	5	1	1,000	10.0
Northamptonshire	1	15	1,000	10.0
Lancashire	71.1	1	1,000	10.0
Leicestershire	10.0	1	1,000	10.0
Worcestershire	1	1	1,000	10.0
Berkshire	1.57	1	1,000	10.0
Lincolnshire	1	1	1,000	10.0
Buckinghamshire	2.57	1	1,000	10.0
Suffolk	9.05	1	1,000	10.0
Yorkshire	10.71	12	1,000	10.0
Derbyshire	1.55	1	1,000	10.0
Kent	13.71	1	1,000	10.0
Suffolkshire	13.5	5	1,000	10.0
Northamptonshire	6.57	1	1,000	10.0
Hertfordshire	1	1	1,000	10.0
Suffolk	5.43	1	1,000	10.0
Warwickshire	1.71	1	1,000	10.0
Northamptonshire	1	1	1,000	10.0
Oxfordshire	4.3	6	1,000	10.0
London and Middlesex	10.0	10.5	6,500	10.0
Essex	1.57	1	1,000	10.0
Derham	10.0	3	1,000	10.0
Montgomery	2.43	5	1,000	10.0
Merioneth	1	7	1,000	10.0
Cardiganshire	1	5	1,000	10.0
Radnor	1	1	1,000	10.0
Cardiganshire	1	1	1,000	10.0
Armagh	1	1	1,000	10.0
Cambridgeshire	1	1	1,000	10.0
Peterborough	1	1	1,000	10.0
Bedfordshire (W. H.)	1.71	4	1,000	10.0
Devonshire	4.3	1	1,000	10.0
Flintshire	11.71	1	1,000	10.0
Glamorgan	1	1	1,000	10.0
Monmouthshire	1	1	1,000	10.0
England and Wales	10.0	10.5	1,000	10.0



TABLE II—*Sex and Age Incidence*

Age	Non operative Cases			Operative Cases		
	Male	Female	Total	Male	Female	Total
1-9	—	—	—	—	—	—
10-14	—	3	3	—	1	1
15-19	2	11	13	3	8	11
20-29	13	36	49	4	37	41
30-39	26	101	127	15	46	61
40-49	28	230	258	9	63	72
50-59	55	380	435	10	45	55
60-69	29	338	367	5	27	32
70-79	8	145	153	—	3	3
80-89	1	14	15	—	—	—
Totals	162	1 258	1 420	46	230	276

Total number of deaths 1 696

TABLE III—*Analysis of Non operative Deaths*

	Male	Female	Total
(I) Thyrotoxicosis	38	181	219
(II) Thyrotoxicosis plus some form of heart trouble	90	818	908
(III) Thyrotoxicosis or (II) plus lung complications	26	160	186
(IV) (I) or (II) plus mental diseases	—	16	16
(V) Miscellaneous	6	85	91
Total			1 420

TABLE IV—*Analysis of Operative Deaths*

	Male	Female	Total
(I) Thyrotoxicosis plus some form of heart trouble	13	79	92
(II) Thyrotoxicosis with lung complications	2	25	27
(III) Anaesthetic deaths	3	18	21
(IV) Thyrotoxicosis plus shock	2	17	19
(V) Thyrotoxicosis plus haemorrhage	—	3	3
(VI) Miscellaneous	26	88	114
Total			276

TABLE V—*Frequency of Mention of Certain Complications*

	Non operative Cases	Operative Cases	Total
(1) Atrial or fibrillation	298	18	316
(2) Embolism thrombosis hemiplegia paralysis	91	9	100
(3) Nephritis	21	2	23
(4) Rheumatism	20	—	20
(5) Cholecystitis cholelithiasis peritonitis appendicitis	15	1	16
(6) Diabetes and glycosuria	11	1	12
(7) Gastric ulcer	11	—	11
(8) Splenectomy removal of tonsils hysterectomy repair of perineum and other antecedent operations (not upon the thyroid gland)	9	—	9
(9) Tonsillitis	6	—	6
(10) Cirrhosis liver	5	—	5
(11) Tuberculosis	2	—	2

TABLE VI—*Analysis of Cases of Embolism, Thrombosis and Hemiplegia*

Medical		Surgical	
Cerebral embolism	40	Pulmonary embolism	5
thrombosis	23	Cerebral	1
haemorrhage	1	Femoral	1
Hemiplegia	5	Coronary	1
Pulmonary embolism	7	Multiple emboli	1
Femoral	2		
thrombosis	2		
Cardiac embolism	2		
Coronary thrombosis	4		
Aortic embolism	1		
Embolism of the iliac arteries	1		
Subclavian embolism	1		
Popliteal embolism	1		
Thrombo angitis migrans	1		
Embolism (unspecified)	2		

TABLE VII—*Analysis of Deaths under Anaesthetic*

Avertin	1	Gas and oxygen	1
Avertin gas and oxygen	5	Paraldehyde, morphine, and perocaine	1
Avertin, gas oxygen and ether	2	Novocain	1
Ether	3	Anaesthetic not specified	1
Ether and oxygen	1		1
Gas, oxygen and ether	3		1

## Geographical Distribution

A glance at the map (Fig A) or a study of the figures given above will show the unevenness of the distribution, the highest percentage death rate occurring in Westmorland, the mountainous counties of Wales, and Huntingdon. A similar map was published by Campbell (1924-5) showing the geographical distribution of the death rate during the group of years 1913-19. The close parallelism of Campbell's map (Fig B) and my own is remarkable. These two maps bring up two points of practical interest regarding thyrotoxicosis. First, the stress and strain of modern life has by some been regarded as an important factor in causation. Campbell's map does not bear this out, outlying mountainous counties not being the areas of greatest stress. Now if during the twenty years that intervene between the maps (the mortality rising from an average of 442 to 1,696) the stress of life were an important factor the distribution must have altered in favour of the big cities. It has not changed, therefore the stress and strain of life is, if a factor at all, a minor one, whereas the geographical factor is a major one, in causation. The second point is, Does the death incidence correspond to the incidence of simple goitre? Campbell studied this question carefully. He found that it was impossible to obtain reliable data as to the distribution of simple goitre, but he concluded that the evidence pointed to some degree of correspondence between the incidence of simple goitre and that of the thyrotoxic deaths. If this be true, and we take into account the acknowledged fact that many simple goitres become toxic, the further question arises, How far may the death rate be reduced by timely operation upon simple goitres or goitres that are in the early stages of toxicity?

### Sex and Age Incidence

The proportion of deaths as regards sex has scarcely altered: one man dies to seven or eight women: this fact scarcely supports the strain of life as a notable causal factor. Between the ages of 10 and 30 years 118 deaths occurred—sixty five medical fifty three after operation: the number of surgical deaths at these ages appears unduly high. Many thyrotoxic patients live to a good old age (60 to 90 years). Have these old people become toxic shortly before death or have they suffered for many years from ill health and debility? Could operation have given them a longer and healthier life?

others not recorded) are numerous and the deaths under anaesthesia (twenty one) frequent. The varied nature of the anaesthetics used in these fatal cases suggests that skill in administration rather than the anaesthetics employed is the important factor in safety.

### The Medical Death Rate and Complications

The mention of cardiac mischief in 908 cases and of auricular fibrillation in 298 of these shows how conspicuous a place cardiac complications take in the thyrotoxic picture. The vascular complications (embolism, thrombosis, hemiplegia) come next in frequency. It is noteworthy how often the brain is affected (sixteen

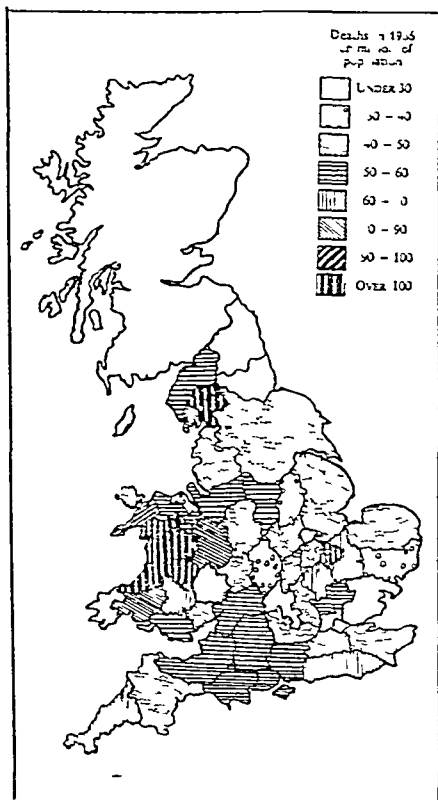


FIG A.

FIG A—Map of England and Wales showing the distribution of deaths from thyrotoxicosis during 1941 according to the Registrar General's Reports (based on place of residence, not place of death).

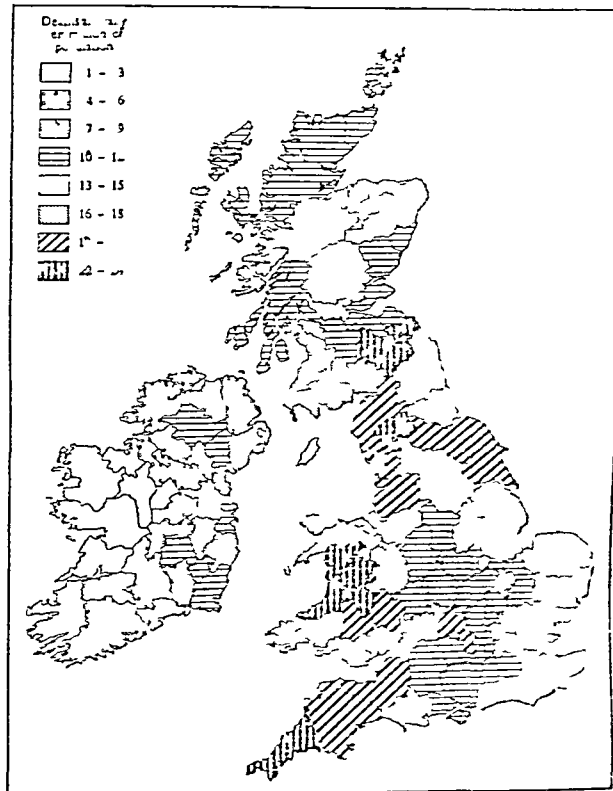


FIG B

FIG B—Map of Great Britain and Ireland showing the distribution of deaths from exophthalmic goitre during 1911-19 according to the Registrar General's Reports (Campbell).

### The Surgical Deaths

Operation is stated to be the cause of death in 276 cases. The number of deaths following operation may exceed this figure as operation may not have been mentioned in certain cases especially in the 219 cases in which thyrotoxicosis alone (or a synonym) is given as the cause of death. Indeed de Courcy Wheeler (1934) states that in those severe cases where ligation of arteries is performed if the patient dies surgery is blameless: the operation therefore has no title to appear on the death certificate. The certifier may consider that death has occurred in spite of and not because of the operation. The figure of 276 appears high: the fatal chest complications (twenty seven specified and doubtless many

cases) and that auricular fibrillation occurs frequently, whereas arteriosclerosis and hyperostosis are mentioned only five times suggesting that auricular fibrillation is a more notable factor in the production of thrombosis and embolism than high blood pressure. Nephritis is mentioned twenty three times, pneumonia twenty times, the tonsils no more than once, rheumatism and also in the production of a connecting link. Diabetes and glandular disease often (twelve times) than other vascular diseases especially pulmonary tuberculosis and abdominal disease are dangerous to the thyrotoxic patient so also no doubt the operation on these organs. Tuberculosis is not mentioned in the same way as the other diseases mentioned once or twice and once as a cause of death.

kyphosis this is in line with the antagonism that is believed to exist between tuberculous disease and thyrotoxicosis

### The Sphere of Iodine in Thyrotoxicosis

The view is seriously advanced by Joll (1932) that the employment of iodine as a medical treatment is *the* new factor causing the increase in the death rate. It is well recognized that the use of iodine in areas where goitre is endemic may lead to a definite increase in thyrotoxicosis, the increase in the deaths in the hilly districts, presumably endemic goitre areas, would support Joll's view. Many writers emphasize the danger of giving iodine to thyrotoxic patients, and uphold Joll in his contention that iodine should be entirely reserved for the use of the surgeon as a pre-operative safeguard. Fraser (1936), on the contrary, advocates that iodine be given a trial in all cases of thyrotoxicosis. Yet Fraser adds "Iodine does not cure the condition, and it is doubtful if it cuts short the course of the disease." There is, however, no doubt at all that the case in which iodine has failed, sent later for operation, often causes the surgeon much anxiety, leading to increased hazard and delay. For, as Morley (1936) puts it, iodine acts best on virgin soil. Given for the first time it is a magnificent safeguard against post-operative toxic crises. Its full efficacy is seldom reached during a second or subsequent course. Whereas in acute primary thyrotoxicosis the pulse may often be controlled and kept at 80 during the first administration of iodine, the pulse in the same patient at a later date may race along at 130 to 140 despite the use of that substance, the originally soft and responsive gland being now large, firm, and indifferent. Iodine is to the thyrotoxic patient what opium is to the "acute abdomen"—it masks the symptoms without curing the disease. Doubtless cases recover under iodine and under opium, but for the many failures the penalty is severe. Even in the very acute thyrotoxic crises where iodine must be used as an emergency measure to save life the surgeon should be called in, as these cases may speedily become operable, and the opportune time, if not taken advantage of, may not quickly recur. Unless surgical treatment is permanently excluded in an individual case iodine is best reserved for the use of the surgeon before operation. If iodine as a mode of treatment in general practice were given up it is quite possible that a fall would occur in the death rate.

The dose usually recommended for pre-operative treatment is from 5 to 15 minims of Lugol's solution three times a day for five to fourteen days before operation. The following two cases are of interest as showing that in rare cases this dose may be greatly exceeded with usefulness and safety.

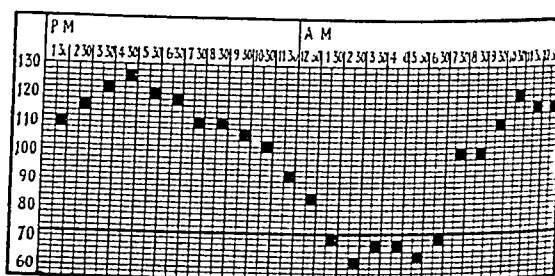
#### CASE I

Mrs. B., aged 28 (acute primary thyrotoxicosis, operated on during a severe crisis)—The patient had enjoyed good health until she suffered from crippling rheumatic arthritis (1929-30). This was cured by six to twelve months' treatment with thymoglandin. The total dose of thyroid extract was trifling. Her health was fair till January 1932 when her doctor pronounced her a nervous wreck. In September 1932, a diagnosis of thyrotoxicosis was made. In March, 1933 she had a severe crisis. This was controlled with iodine, and as authoritative opinion regards operation during a crisis as contraindicated she was sent home till it should pass over. Three weeks later she was returned to the nursing home as an acute emergency case with a running pulse of 180, diarrhoea and vomiting, and in a state of uncontrollable

agitation. Her weight had fallen from a normal of 11 st 10 lb to under 7 st. The patient's restlessness was controlled by general anaesthesia (ether), heroin was administered hypodermically and Lugol's solution per rectum. In twenty-four hours she received 90 minims of the solution by mouth and rectum. Her pulse fell to 80 to 90 per minute. The Lugol's solution was discontinued and heroin was given daily. After five days the effect of the iodine ceased and she relapsed. She was then prepared with Lugol's solution for ten days and on May 15, 1933 the right side and isthmus were operated on, the left side being done on June 5. Convalescence after both operations was rapid and by October, 1933, she had regained normal weight, health, and vigour, and has since remained well.

#### CASE II

Miss H. B., aged 22 was admitted on November 2, 1937, for typical acute primary thyrotoxicosis of a year's duration, with tiredness, nervousness, shortness of breath, palpitation, and sweating but no loss of weight, the pulse rate was often 160 per minute. She had had x-ray treatment from May to September and Lugol's iodine for the same period without benefit. The basal metabolic rate on November 5 was +73 per cent and the blood pressure 168/70. The thyroid gland was symmetrically enlarged and of the firm iodinated type. The patient was kept under medical treatment and the gland became softer and the pulse less rapid but the latter rose very readily to 140 to 150. Lugol's solution was begun on December 28, 7 minims thrice daily. On January 8, 1938, her pulse was still very excitable, and rose to 142 during the period of the doctor's visits. At 2 p.m. on January 8 she had a rectal saline containing 50 minims of Lugol's solution, a half-hourly chart showed a gradual and remarkable descent



dramatic effect of a Lugol saline in an iodized patient (4) the dosage of hyoscine and morphine that can be given in an acute case

### Delayed Diagnosis as a Cause of Death

The surgery of thyrotoxicosis is passing through a stage comparable to that of the long neglected hernia the big fibroid and the late acute abdomen. The same pathetic fear of surgery which delayed treatment of these lesions twenty five years ago is preventing early and safer treatment of thyrotoxicosis to day. The same waiting for a fully developed picture is retarding early diagnosis. An incomplete picture is said to wear a mask. These masks in particular the fibrillating heart in proportion as the distinctive features of the disease become better known are changed from masks to identification badges which suggest the diagnosis and lead to further investigation. Many a thyroid patient having recovered from operation says: "I feel in better health than I have enjoyed for many years—sometimes ten or twenty years—but the diagnosis is recent, and these poor patients have suffered years of ill health." Thyrotoxicosis presents a remarkable variety of clinical pictures. Its symptoms are manifested by disorder of the autonomic nervous system and fall apparently haphazard, with varied emphasis on the organs under autonomic control. Taking the commoner signs and symptoms from the top of the head to the sole of the foot the percentage incidence in cases coming under my care in this part of Yorkshire is roughly: nervousness or mental upset 100 per cent, increased rapidity of the pulse or auricular fibrillation 100 per cent, tremor distinguishable from normal, 90 per cent, easily produced fatigue 80 per cent, loss of weight 80 per cent, palpitation or thumping (or both) 75 per cent, excessive perspiration or dislike of heat 70 per cent, shortness of breath 60 per cent, digestive symptoms 50 per cent, headache 30 per cent, interference with the voice 20 per cent. Eye stare is common, exophthalmos is not so frequent and swelling of the eyelids swelling of the feet anaemia and anginal pain occur now and then. Where these symptoms are too few to render the condition obvious the disease is said to be masked. These masks are limited in number let me mention the chief ones.

### The Thyrotoxic "Masks"

1 *The Cardiac Mask*—This is the commonest a fact clearly brought out in the above statistics. These patients usually come with shortness of breath, some have a brief history others date slight symptoms many years back. Hay (1936), in a charming paper on the thyrotoxic heart, pleads for the earlier diagnosis of those cases and for treatment at a period corresponding to that of the grumbling appendix. If anyone doubts the genuine difficulty which often exists in detecting thyrotoxicosis in those cardiac cases a single reading of Hay's paper will fully convince him and diagnosis is very important as operative treatment is brilliantly successful.

2 *The Mental Mask*—The mental cases come as melancholia mental depression with suicidal tendencies and nervous breakdown with mental symptoms. Dunhill (1937) emphasizes the need for a mental expert to establish the diagnosis.

3 *The Abdominal Mask*—The presenting symptoms may consist of a very accurate simulation of gastric or duodenal ulcer or of a long history of bilious attacks. The following case demonstrates the cure of abdominal symptoms by operation on a goitre.

### CASE III

Mrs. C., aged 48 had had severe stomach trouble for five years (since 1931). The attacks lasted one to six weeks and consisted of continuous epigastric pain relieved (only for a short time) by food. Intervals of freedom lasted two or three months. She had to lie up very often and in 1935 was admitted (after x-ray examination) to have an operation for duodenal ulcer. She was sent to me in February 1936 for the above symptoms and for a right sided adenoma of the thyroid. The adenoma was growing causing dyspnoea on exertion marked fatigue especially during the last two years, sweating tremor and slight tachycardia. The removal of the adenoma (March 5 1936) completely cured the dyspnoea. The patient writes as follows: "It is no event for me since my operation my neck is now normal the adenoma unnoticeable and my dyspepsia trouble a thing of the past. I take ordinary food sleep well and my weight is normal. In fact I feel I have taken a new lease of life."

4 *General Debility and Nervous Breakdown*—Cases which have lurked behind this diagnosis to many years enter on a new era of health when the disease is identified and treated.

5 *The Absence of a Clinically Detectable Goitre*—Careful examination will often find a goitre which is not at first obvious. Joll speaking from his very large experience declares that the thyroid is invariably enlarged in thyrotoxicosis. I believe personally that there are exceptions to this rule as for example the following case.

### CASE IV

Mrs. H. aged 49 had had typical symptoms of the toxicosis of an aggravated type. The basal metabolic rate was fully and satisfactorily taken was +4 per cent. There was no goitre whatever (see Figs 1 and 2 on Plate). At operation at least five sixths of the total gland was taken away, the part removed weighed 7.81 grammes. The normal weight of the female thyroid gland exceeds 21 grammes. The patient made a dramatic improvement.

Hay (1936) states that thyrotoxicosis can exist without any clinically detectable enlargement of the thyroid gland. I believe the best rule is to assume that the thyroid need not be enlarged but that the diagnosis must be established before a case without enlargement of the gland is operated on for thyrotoxicosis.

### Surgery in Thyrotoxicosis

Can the death rate be reduced by regarding thyrotoxicosis as a purely surgical disease? Nearly all answers are very guarded indeed in their answer to this question. All are agreed that operative treatment of a gland so valuable as the thyroid is to be regretted and hope that medical research may find a better way. In human experience the operative results are such as to challenge every other method of treatment. There are no more brilliant results in the whole realm of medicine and surgery than the thyroid case after successful operation. But there can be a considerable mortality and there can be many operative failures. All writers lay emphasis upon the fact that to obtain uniform success in this operation requires a degree of skill judgment gentleness precision and experience together with a judicious selection of patient and the winning of his or her confidence and co-operation exceeding the care and skill needed in the most delicate surgical operation. Den (1931) in a critical review of the late results of operation for thyrotoxicosis reports comparatively few follow-up studies. In 1930 he published which he investigated in detail results were good. In twenty-eight there was improvement in nine and in eleven benefit in five. The same conclusions can be drawn from similar lines.

## Results of Operation for Thyrotoxicosis

The brilliant results which often follow operation, and some of the published papers, may readily give the impression that nearly 100 per cent cure is attainable. Dunhill (1934) expressly warns us that such is not the case. In order to judge my own results I investigated the cases operated on by me for thyrotoxicosis in Bradford Royal Infirmary during the three years ending July 31, 1937—that is, some months before this paper was written. During this period I performed 218 operations upon 190 patients. Scarcely any cases sent to me were rejected. All types were represented, and many elderly debilitated wrecks were included. Two patients died as a result of the operation, both from acute thyrotoxicosis, 188 out of the 190 left the hospital convalescing satisfactorily. All patients were prepared with Lugol's iodine, and operation time was determined solely by clinical judgment, independently of the basal metabolic rate or electrocardiogram, though these were often taken in the later cases. There were no deaths under anaesthesia. Morphine and hyoscine (in doses carefully adapted to the individual patient) with  $\frac{1}{2}$  per cent novocain, and occasionally some open ether at the beginning, constituted the anaesthetic. This anaesthesia compares very favourably with newer and more popular methods, it does not necessitate any special apparatus, and an anaesthetist was rarely needed. The operation is carried out quietly and deliberately, without haste, after-sickness is not common, and chest complications are practically unknown. The patients were nursed in a ward of twenty-five beds, without a special nurse.

As there was no follow-up clinic I have been unable to trace all cases. One hundred and sixty-two replies were received to a questionnaire and many of the patients were interviewed. Two had died—one two months, the other two years, after leaving hospital—from causes not known. The other 160 replied without exception that they were improved by the operation. Only 107—that is, 67 per cent—were fit for a full day's work, and, even of those, 18 per cent had some minor complaint such as feeling tired at night, occasional dizziness, or rheumatism.

The main interest of this inquiry lay in finding out the reasons why the remaining fifty-three patients (33 per cent) were not equal to a full day's work. Those patients fell into a series of groups: (1) the elderly and debilitated who never would do a full day's work again, (2) those who had never enjoyed good health and upon whose debilitated physique thyrotoxicosis had been engrafted, the cure of the thyroid condition restoring them to their original indifferent health, (3) those with associated diseases, such as arthritis and heart disease, (4) those who could not afford a proper convalescence and returned to a troubled domestic atmosphere, adverse economic circumstances, or even the nursing of sick relatives, (5) those in whom there had been a defect in the operative technique such as leaving rather more thyroid gland than the individual required, (6) a miscellaneous group where the patient refused removal of the second side or retained obvious septic foci, or where not enough time had elapsed for complete recovery.

In private patients the results are much better than in hospital: the original physique is better, operation is performed earlier, and conditions for convalescence are much more favourable. Ample time should be allowed for convalescence, as not only has the patient to recover from the operation and the antecedent debility, but the remaining fragment of thyroid gland has to adjust itself to the needs of the body and the unknown

cause of the thyroid malfunction has to subside. A follow-up clinic is very useful.

Two cases of exceptional interest may be recorded.

## CASE V LOCALIZED MYXOEDEMA

A sea pilot aged 43 suffered from typical thyrotoxicosis developing over two years, characterized by much loss of weight, palpitation, excessive perspiration, hoarseness, cough, occasional depression, tremor, and quick pulse. Subtotal bilateral thyroidectomy was performed. He made a rapid and perfect recovery in every respect except one. Four months before operation two thickened areas had appeared over the front of each shin-bone. These grew somewhat after operation for a few months, then remained steady, and a year and a half after operation grew slightly again. They constitute large patches, each about 7 inches by 7 inches, on the front of the tibia starting  $1\frac{1}{2}$  inches above the ankle, with a raised margin, slightly reddened surface, not tender, not pitting on pressure and causing the patient no inconvenience whatever except from their weight and unsightliness (see Fig 3 on Plate). This case was identified by Dr J T Ingram, who published an article (1933) on circumscribed myxoedema associated with hyperthyroidism. This condition is referred to by Dunhill (1937), and he considers it to be mucinoid degeneration.

## CASE VI JUVENILE PRECOCITY AFTER OPERATION

A girl aged 9 years had suffered for a year from typical symptoms of Graves's disease with exophthalmos. Her pulse readily rose to 160. She had failed to respond to non-operative methods of treatment. Her condition being well controlled by iodine she was cured by a two stage operation in the summer of 1932. I had some misgivings about performing a subtotal thyroidectomy at the age of 9 for fear of interfering with her future development. On the contrary, at the age of 14 this girl might easily have been mistaken for a finished young lady 23 years old, her manner, habits, outlook on life, and physique being those of a modern young adult. Dunhill (1937) refers to juvenile precocity occurring after operation for thyrotoxicosis.

## Summary and Conclusions

The central problem discussed is the high and increasing death rate from thyrotoxicosis. The 1,696 individual deaths occurring in England and Wales in 1936 are analysed. Allied problems such as the sphere of iodine in treatment, early diagnosis, and surgical results are discussed. The general conclusion is that the increase in the certified death rate is due not to a single cause but to several. There is an apparent increase owing to more accurate diagnosis, so that cases in which patients were previously certified as dying from heart disease and many other causes are now correctly classified under the heading of thyrotoxicosis. There is a notable surgical mortality. Delay in surgical treatment until the patient is very ill is a contributory cause. The abuse of iodine as a medical treatment may play an important part. There may be an actual increase in the severity of the disease. These conclusions suggest that the certified deaths are more likely to increase than to diminish in the immediate future.

## REFERENCES

- Campbell, J M H (1924-5) *Quart J Med* 18 191  
 Don C S D (1931) *British Medical Journal* 2, 287  
 Dunhill, T P (1934) *St Bart's Hosp J* 67 184  
 — (1937) *British Medical Journal* 1, 515  
 Fraser, F R (1936) *Index of Treatment* (Ed R Hutchison) 597  
 Bristol  
 Hay, J (1936) *Lancet* 2, 1378  
 Ingram, J T (1933) *Brit J Derm Syph* 45, 19  
 Joll, C A (1932) *Diseases of the Thyroid Gland* 486, London  
 Morley, J (1936) *British Medical Journal* 1 828  
 Wheeler W I de Courcy (1934) *Ibid*, 2, 609

# LOBAR PNEUMONIA, SUBPHRENIC ABSCESS, DUODENAL FISTULA RECOVERY

BY

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(WITH SPECIAL PLATE)

While the complications of a pneumococcal infection may be many and various a series of unexpected events such as occurred in the following case of lobar pneumonia must be rare. It is not unknown for a pneumococcal infection of the pleura to spread down through the diaphragm and cause a subphrenic abscess but it must be exceptional for a separate large collection of pus in the apex of the same pleura to be present at the same time and to empty itself into the air passages. Again while cases have been recorded, especially in children in which after the drainage of a pneumococcal empyema the wall of the neighbouring oesophagus has leaked into the abscess cavity so that food comes through the wound it is doubtful whether there is any record of the wall of the duodenum leaking into the cavity of a subphrenic abscess within forty eight hours of its evacuation.

The man's immediate recovery from the danger of starvation owing to this leakage of food must be largely attributed to the jejunal feeding which for two weeks was the sole means of providing him with food. Happily he has recovered his health and to day seven years later is working full time as a miner at the coal face. It need hardly be said that in the earlier stages of the illness it was not easy to form a clear picture of what was happening. The following is the history of the case.

## Case History

A coal miner aged 21 single was admitted to the Sheffield Royal Hospital under one of us (A. J. H.) on February 15 1931 as a case of right basal empyema following pneumonia. Up to this time he had never had any serious illness. One month previously he developed influenza and went to bed. A few days later he was told by his doctor that he had pneumonia. He was very ill and had a bad cough with a pain in the right side which was at first acute and hurt him on coughing and breathing deeply. He coughed up brownish phlegm often very sticky. Three weeks before admission the doctor said he had got over the crisis but still he continued to cough up foul phlegm and his breathing became more difficult.

On admission he looked ill his temperature was 99 F pulse 125 and respiration rate 36 his skin was moist and pale. He had no pain and was taking food well. On examination his chest showed decreased movement on the right side with absolute dullness at the base behind up to the scapular region with lessened fremitus and diminished breath and voice sounds over this area. Impaired resonance was observed over the right front. The heart was slightly displaced to the left. The right base was needed the same evening and thick pus containing pneumococci was obtained.

The diagnosis of a pneumococcal empyema at the right base being thus confirmed on the following day (February 16) a portion of the right tenth rib was resected under local

anaesthesia in the post axillary line. When opened a large amount of offensive greenish pus shot out with great force. Although a considerable amount was lost about half a pint was collected. A large drainage tube was inserted. There is no record of anything unusual happening next day but a note dated February 18 says: "Very copious discharge from the tube. It is thin watery fluid brownish in colour with patches of sodden lymph in it. It smells sour and offensive like stomach contents. There is very little actual pus." On February 19 the discharge was still thin and copious. On February 20 the fifth day after operation mil and piece of orange found in the dressings showed that there was a fistulous communication with the digestive tract this had evidently begun within forty-eight hours of the operation. For the first two days only fluids leaked through but the opening was now large enough to transmit solid

## RADIOGRAPHIC EXAMINATION

On February 21 films were taken by portable apparatus as the patient lay in bed. A straight radiograph of the chest (Plate Fig. 1) showed the resected right tenth rib and a drainage tube *in situ*. A rather ill-defined upper border of the diaphragm is seen crossing the eleventh rib. The subphrenic angle is occupied by a shadow which extends upwards towards the axilla. Also there is a linear shadow extending obliquely downwards from the apex of the right lung to the middle of the lateral thoracic boundary. This is the edge of a collapsed portion of the lung enclosing a collection of fluid.

Shortly after the above film was taken the patient was given a small barium meal. Ten minutes later some of the barium came out through the drainage tube. A further radiograph was then taken (Fig. 2). In this the stomach is seen to contain barium. The right diaphragm dome begins at the base of the twelfth rib and rises to the tenth rib level. Barium is seen in and around the drainage tube. An irregular spray like shadow seen just to the right of the third and fourth lumbar vertebrae is probably the duodenum. Between this and the barium shadow about the drainage tube there are two small shadows. These lie vertically above one another about half an inch from the right side of the vertebral column. The lower opposite the lower edge of the second lumbar vertebra is less dense somewhat elongated and about half an inch long by a quarter of an inch broad. The upper and denser shadow is opposite the lower margin of the third lumbar vertebra rounded and the size of a small pea. They are linked up to the collection about the tube by two shadows of barium. The dome of the right diaphragm is seen at the level of the tenth rib just at the point at which it has been excised curving across to the ninth rib. Its inner end is indistinct but the general abdominal shadow up to about the eleventh dorsal vertebra can be observed. The spray curved line with a shadow outside it in the right upper part is seen as before. Between this and the dome of the diaphragm there appears to be a considerable area of lung.

It was clear from the radiographs that the fistula was not from the oesophagus nor from any part of the thorax but probably from the duodenum. This explained the sour smell of the discharge (like stomach contents) as noted on February 18 and also the fact that barium did not appear in the tube until about ten minutes after the opaque meal had been swallowed. For the time being however it was not possible to make further investigations as to the exact nature of the lesion which the radiographs had disclosed.

## FEEDING THROUGH THE JEJUNUM

The man's general condition was so rapidly improved owing to leakage of food through the wound that the problem of how to feed him was no longer of immediate urgency. It was decided to try feeding in situ the jejunum. On February 22 the abdomen was opened by one of us (G. S. S.) and a large sized rubber catheter introduced obliquely into the jejunum. The drainage tube was then removed. At the same time removed. During the next two days (February 23 and 24) feeds of milk were administered by the jejunum tube none of which came through the opening at the chest thus

confirming the site of the fistula as above this level. Nothing was given orally. On February 25 a little milk pudding was given by the mouth as a test and it came out at the chest wound. The discharge had now become more definitely purulent.

On the 27th water taken by mouth still leaked through the wound. On March 5 the general condition was improving. There was still some watery discharge with the pus from the wound the edges of which appeared to be partially digested. Air was sucked in and blown out in coughing. He was taking food well by the mouth and only very little escaped through the chest wall. On March 14 he was taking full meals by the mouth none leaked through the wound. The jejunostomy tube was finally removed. The chest wound was still open with a slight purulent discharge. A radiograph taken after an opaque meal showed no track towards the right diaphragm. The shadow in the right upper chest seen on February 21 had become denser.

#### PHYSICAL EXAMINATION OF UPPER CHEST

It was now possible to make a fuller physical investigation of the upper chest. There was an area of dullness in the right axillary region corresponding with the shadow in the radiograph, with tympanic resonance mesial to this. A needle in the right fourth space over this area in the mid-axillary line brought away about 15 ccm of yellowish pus, freely mixed with air. With this evidence of a pyopneumothorax at the right apex, distinct from the collection of pus which had been drained at the right base, a fuller inquiry was made into the details of the man's illness before admission. For much help in this we are indebted to his medical attendant, Dr L. Jago.

#### DETAILS OF ILLNESS BEFORE ADMISSION

The facts were as follows. He began with a typical lobar pneumonia in which both lungs were affected. It ended by lysis. Three days later the temperature began to rise again and empyema was suspected. There was practically no sputum throughout until the afternoon of February 14 (the day before admission) when the man himself states that he suddenly began to spit up foul-smelling yellow phlegm. His breathing became very bad and the phlegm continued to come up in large amounts until about 10 p.m. The next morning he was seen by his doctor who needled the right base and finding pus, arranged for the man to be sent to hospital the same day. It would seem that the doctor's attention had not been specially called to this sudden bringing up of pus on the previous afternoon, about which the patient is very clear.

#### Discussion

From this description of what happened on February 14, the day before admission, there can be no doubt that pus had then burst into the air passages. The collection of pus evacuated at operation on February 16 could not have been the one which had burst into the lung, because its contents were in a state of hypertension and were not mixed with air. On the other hand, the shadow in the right upper chest seen in the radiographs of February 21 (Figs 1 and 2) and the clinical findings of pus and air in this region on March 14 are consistent with the view that it was this apical empyema which had burst into a bronchial tube the day before admission.

The presence of a large empyema in the upper part of the right pleura, which according to the history had burst into the air passages the day before admission, made it difficult to believe that the big tense collection of pus evacuated two days later could have been in the right pleura at the same time. The explanation which seemed to fit all the facts was that the pus evacuated at operation on February 16 came from below the diaphragm and not from above it—in other words, that what on admission was thought to be a basal empyema was actually a

subphrenic abscess of pneumococcal origin in the right extraperitoneal area. On this assumption the occurrence of a fistulous communication with the duodenum became less difficult to understand. The close anatomical relations between the duodenum and this subphrenic area are well known. A duodenal ulcer may give rise to a subphrenic abscess, or a subphrenic abscess arising from some other source may burst into the duodenum.

In the present case, however, neither of these things happened exactly. There is nothing which points to any primary trouble in the wall of the duodenum. The man had never suffered from any gastro-intestinal symptoms previously, although the leak was from gut to abscess cavity. On the other hand, everything points to the pneumococcal origin of the abscess. It followed directly after a definite lobar pneumonia, pneumococci were present in the pus, and there was a coincident pneumococcal empyema in the upper part of the pleura on the same side. The fact that the duodenal leak did not occur until the abscess cavity had been emptied and drained suggests that at the time of operation the abscess had already tracked down and reached the wall of the duodenum, into which it would soon have emptied itself had the pressure not been otherwise relieved. As it was the pressure in the abscess cavity being reduced, indeed becoming negative during inspiration, the relatively greater pressure inside the duodenum after a meal was sufficient to break through the thin remnant of wall between it and the abscess cavity. In fact, what happened in this case was very similar to what happens occasionally in cases of oesophageo-pleural fistula following the opening of an empyema. In these, as a rule, it is the thinned and adherent wall of the oesophagus that gives way and bursts into the empyema cavity when the external pressure is reduced by evacuation of its contents and the internal pressure is increased by the passage of food.

Whether the pneumococci reached the subphrenic area directly from the adjacent pleura or whether they were blood-borne is perhaps more of academic interest than of practical importance. The radiographs show evidence of fluid in the right costo-phrenic angle, but it is not now possible to say if this preceded or followed the subphrenic collection. The most simple explanation is direct infection from the pleura above, though such extension of infection downwards is, as has long been recognized, very rare.

Barnard (1908) saw only one such case, and noted as remarkable that while nearly all subphrenic infections pass readily through the diaphragm to the lungs or pericardium, it is rare for the contrary to occur. He discusses the possible reasons for this, which need not be gone into here. He mentions one case of right lobar pneumonia which was followed by a pneumonic abscess in the right anterior and posterior fossae—probably a lymphatic infection—and one case of localized empyema at the left base which burrowed into the left extraperitoneal cellular space, passing below the external arcuate ligament.

Rischbieth (1911), commenting upon this rarity of direct spread through the diaphragm, illustrates it by the varied and devious other directions in which a long standing "empyema necessitatis" will go before emptying itself. Ochsner and Graves (1933), in a critical analysis of more than 3,000 recorded cases of subphrenic abscesses, together with fifty cases personally observed, give the following figures. In 88 per cent the primary lesion was in the abdomen. In from 3 per cent to 6 per cent the infection was blood-borne from some distant focus, while still less

frequently suppurative lesions in the thorax may extend through the diaphragm into the subphrenic space. This occurred in 2.6 per cent of the collected cases. Musser and Norris (1907) in a review of 13,550 cases say that subphrenic abscess is very rarely a sequel of pneumonia and add that the diagnosis of empyema is usually made.

That in our case the pleura was not directly infected by either of the two aspirations or by the subsequent operation was probably owing to adhesions from a local pleuritis either preceding or secondary to the subphrenic abscess. The rest of the history of the case is as follows.

#### Further History of Case

By March 20 the patient's general condition had improved steadily. The apical empyema which had been filling up again (Fig. 3) began to empty itself more freely, the sputum being now copious, purulent and offensive and increased by lying on the left side. This continued for some time. On April 8 the dull area in the right axilla was again needled but only air was obtained. On April 15 the sputum had become much less. He began to put on weight and was sent to a convalescent home. The discharge from the chest wound was very slight. A radiograph taken on April 28 shows the shadow in the right upper chest to be much smaller. The man was now discharged home.

He was not seen again for three years (August 1934). His condition was then as follows.

He was active and well. He had no cough, his chest expansion was three inches. The cardiac impulse was slightly nearer the middle line than normal. The front of the chest showed very little abnormality. The right side was resonant to the sixth rib in the nipple line in front and was rather hyperresonant just above the liver—possibly some marginal emphysema. He plays a wind instrument in a local band. The liver edge was not palpable. At the right back there was a large depressed scar at the site of the excised rib and dullness with loss of vocal fremitus and breath sounds up to about the lower angle of the scapula. The axillary border was resonant. He had a good colour without any tendency to cyanosis. The fingers were clubbed. He lost his job at the coal face while he was ill and up to this time had been out of work owing to bad conditions. A radiograph (Fig. 4) of the chest taken on September 18, 1934, did not show any remains of the shadow at the right apical region.

In February 1938—that is seven years after his illness—he was again seen by one of us (A. J. H.). He was then in excellent health, working full time at the coal face.

Had the existence of a right apical empyema which had burst into the lung and the subdiaphragmatic situation of the collection of pus been correctly diagnosed at the time of his admission, as it probably would have been had a radiograph been then taken, it is possible that the line of treatment adopted might have been different. It could not have had a more satisfactory end result.

#### REFERENCES

- Barnard H. L. (1903) *British Medical Journal* 1, 571 and 429.  
Musser J. H. and Norris, G. W. (1907) *Osler and McCrue's System of Medicine* 2, 557.  
Ochsner A. and Graves A. M. (1933) *Ann Surg.* 98, 961.  
Ritchie H. (1911) *Quart. J. Med.* 4, 205.

The seventh joint conference of the National Association of Cemetery and Crematorium Superintendents and the Federation of Cremation Authorities in Great Britain will be held at Edinburgh from June 27 to 30. The first of a new series of annual conferences covering all aspects of cremation administration and propaganda will be held under the joint auspices of the Cremation Society and the Federation at Balliol College Oxford from July 22 to 25 under the presidency of Lord Horder.

## AN ANALYSIS OF 350 CASES OF ABORTION

By

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(WITH SPECIAL PLATE)

In view of the frequency of abortion and especially of procured abortion in industrial districts an analysis has been taken of 350 cases admitted to the Derby City Hospital during the eight years 1930-7 and an endeavour made to assess the probable cause in each case. To bring the figures to a round number of 350 eleven cases of threatened abortion in which the pregnancy concerned had been included.

#### Statistical Analysis

Table showing Number of Abortions per Year (1930-7)

1930	9	19	
1931	5	19	
1932	7	19	6
1933	36	19	67

The low figures for 1930 and 1931 were those relating to the first two years after the hospital opened. The large number in 1937 may be due to medical practitioners sending more cases into hospital instead of dealing with them at home on account of the proceedings taken against certain professional women abortionists.

The civil state of the patients was

Married	3
Single, widow, or legally separated from husband	347

In addition a certain number of abortions occurred in married women living apart from their husbands but not legally separated.

#### Number of Previous Children

None	97	Seven
One	82	Eight
Two	63	Nine
Three	27	Ten
Four	3	Eleven
Five	1	Twelve
Six	12	

The highest proportion of presumably natural abortion was in women with no children. The highest proportion of presumably procured abortions was in women who had had four children.

#### Number of Previous Abortions

None	20	Three
One	91	Four
Two	23	

It is probable that the history obtained was not always accurate. Thus in a procured abortion a history of previous abortions might be given in an attempt to divert suspicion.

#### Stage at which Abortion Took Place

Under two months	46	Four to six months
Two to three months	130	Five to six months
Three to four months	124	

#### Attitude of Patients

As a whole the patients gave their reasons and symptoms fully. In 316 cases the condition was described freely, in thirty-four the patient was apprehensive and afraid apart from a transient nervousness which was never was not always present in cases due to a criminal



act that subsequently proved fatal. In several instances the history given on admission was modified later. In other cases, subsequently proved to be criminal abortions, the patient denied interference of any sort, sometimes strenuously and to the end. In some cases, evidently procured, the patient said "she did not think she was pregnant." Eleven patients volunteered the information that they were anxious to have a baby, and were disappointed at the abortion, as they were without children. In one septic case, almost certainly procured, the patient said she desired a baby, as her only child had died.

Some curious causes were ascribed by patients, such as "Seeing a strange dog," "Hearing the howling of a dog in the night," "Nearly seeing an accident," and "The death of a relative" (not a close one). No patient who ascribed such a cause was observed to have any instability while in hospital. It is probable that in procured abortions a history is freely given, but is usually quite unreliable.

### Causes

Analysis of the causes of abortion resulted in the following classification:

Maternal disease and foetal abnormalities	63
Falls, strains, overwork, etc.	30
Personal use of drugs. Probable 5. Certain 8	13
Personal interference	6
Interference by someone else	6
Proved interference by unknown person	4
Undetermined	
(i) Probably natural	57
(ii) Probably procured	91
(iii) Indefinite	80

### MATERNAL DISEASE

In sixty-three cases maternal disease or foetal abnormality was present to such a degree that it might reasonably be assumed to be the main factor in the abortion. In some instances an injury was also described, such as falling down steps, etc.—for example, abortion occurring after a fall, with a retroverted uterus.

### FALLS, STRAINS, OVERWORK, ETC.

In thirty cases a history of some such occurrence was given, apart from any other condition. The usual events were falling downstairs, a heavy day's washing, and moving heavy furniture. In some other cases where a fall was described there was proof that local interference had taken place, and the history given was apparently a feeble attempt to divert suspicion.

### PERSONAL USE OF DRUGS

1 *Probable*—In five cases the presence of vomiting and diarrhoea indicated the probable use of drugs.

2 *Certain*—In eleven cases the taking of drugs was admitted, usually a strong purgative in excess or a large number of 'female pills'. One woman became seriously ill with acute nephritis, but ultimately recovered. Some women openly admitted taking drugs, saying they had had three or four children and considered they had done their share. In two further cases, referred to later, the women described the taking of drugs followed by the use of an instrument.

### PERSONAL INTERFERENCE

In six cases personal interference was admitted, in three of them by means of 'slippery elm' bark. In one of these cases the strip of bark was still present in the cervical canal on admission. In two cases the use of a

knitting needle was described, following the unsuccessful employment of drugs—no injuries were visible. In one case it was said that abortion followed a douche. In some of these cases it appeared probable that interference had been carried out by another person.

One woman attempted to procure abortion by introducing a thin stick of "slippery elm" bark. Nothing happened, and some months later she was delivered of a normal full-term child. A further six months later she was admitted to hospital with a stone in the bladder the size of a hen's egg, which on section was found to have as a core the stick of "slippery elm," which had evidently been inserted through the urethra (Plate, Fig. 3). Another case occurred in which the patient took drugs and then used a knitting needle because she thought she was pregnant, whereas she was not, the amenorrhoea being due to the menopause.

### INTERFERENCE BY SOMEONE ELSE

In five cases interference by another person was alleged. In two cases a solid article such as a crochet hook was stated to have been used, in neither case was there any visible injury. The other three cases were caused by the introduction of the finger of a professional abortionist, by the use of a Higginson's syringe in the vagina, and by drugs "forcibly administered by her young man" respectively. In two of the above cases convictions were subsequently obtained against professional abortionists.

### PROVED INTERFERENCE BY AN UNKNOWN PERSON

Definite injuries were present in four cases, in none of which was any clear information obtainable, either at the time or at subsequent inquiries. Two of these cases proved fatal. They consisted of one case of perforated uterus, one of perforated vaginal fornix, and two cases of lacerated vaginal wall.

### UNDETERMINED

1 *Probably Natural*—In fifty-seven cases no information was forthcoming, but in the absence of anything abnormal there were no grounds for supposing that the abortion was other than natural.

2 *Probably Procured*—In ninety-one cases no information was obtainable, but there were reasons for supposing that the abortion was procured. Rough conclusions were drawn from the history, the attitude of the patient, the presence of pyrexia, a septic uterine discharge, and the knowledge that during the period in question various professional abortionists had been carrying on a very extensive practice. Some women evidently had had procured abortions repeatedly.

3 *Indefinite*—In eighty cases the evidence was indefinite, some being probably natural and some probably procured, the majority perhaps in the former class.

### Pyrexia

The patients' condition in respect to pyrexia was classified as

Present on admission	124	Local cases
Not present on admission but present subsequently	26	
Temperature present but due to some other disease	12	
No temperature	13	

It will be seen that in 124 cases pyrexia was present on admission. In twenty-eight of these it did not recur, and was probably due to some reaction after haemorrhage and to the patients' removal to hospital. In the remaining

ninety six it was associated with uterine sepsis. A further group of twenty six patients developed a temperature after admission with the presence of uterine sepsis. In twelve patients pyrexia was present but was due to other causes—for example pneumonia causing abortion. In 188 cases there was no temperature but thirty three of these patients had a purulent uterine discharge. In one case pyrexia was present with uterine sepsis following abortion apparently due to a bicycle accident some days previously.

It is possible for a natural abortion to be accompanied by a temperature—for instance a natural abortion which occurred in hospital in a patient suffering from heart disease.

#### Course of Illness

Normal course	273	Critically ill	12
Ill	55	Died	10

The table shows that in 273 cases the illness ran a normal course. Fifty-five of the patients were decidedly ill, several of them having various sequelae. Twelve were desperately ill and just escaped with their lives. Of the ten patients who died nine had sepsis; the remaining one had chronic nephritis and died of uraemia. Some of the inquiries into the fatal cases produced an open verdict but these cases were possibly associated with women subsequently convicted.

#### Period in Hospital

The time spent in hospital varied from under fourteen days to over three months as follows:

14 to 23 days	222	1 to 3 months	23
14-28 days	98	Over 3 months	2

The conditions present in patients in hospital over one month were profound anaemia, phlebitis, arthritis, pelvic cellulitis, pelvic peritonitis, septicaemia and pyaemia.

#### Slippery Elm Bark

From inquiries it appeared that the most frequent cause of procured abortion in this locality was the insertion of slippery elm bark into the cervical canal and there is reason to believe that it is a common practice. It may be inserted either by the woman herself or by an abortionist (professional or amateur).

Slippery elm bark or *Ulmus fulva* cortex is derived from a tree found in Central and North America. The bark is separated from the trunk and is dried after the outer corky portion has been removed. It occurs in flat pieces several inches long, a few inches wide, and a few millimetres in thickness. It contains much mucilaginous material which exudes on soaking the bark in water. It is claimed to be of value in the preparation of poultices and as a food in illness and debility. If a small portion be soaked it increases considerably in width (Plate Figs. 1 and 2) which becomes approximately doubled but the same comparative increase does not occur in larger pieces. Probably one or more small pieces are placed in the cervical canal and abortion is procured partly on account of the presence of the foreign body and partly from the dilatation of the cervix following swelling of the bark.

#### Conclusions

From a survey of a series of 350 cases covering eight years it appears that of abortions admitted to hospital in an industrial town some 40 per cent are probably procured.

The history in procured cases is usually true, given, but it is unreliable. The commonest cause of procured abortion in the locality in question is probably the insertion of slippery elm bark into the cervical canal.

Local interference is usually performed with a certain amount of mechanical skill and it is rare to find positive evidence of injury—this would appear to indicate that it is more frequently done by someone else than the woman herself. On the other hand local sepsis is exceedingly common. Uterine sepsis accompanied by pyrexia was present in 35 per cent of the cases and uterine sepsis without a temperature in a further 10 per cent approximately.

Of the patients 20 per cent were decidedly ill and 3 per cent died. All the deaths were due to sepsis except one resulting from chronic nephritis and uraemia.

## THE PATHOGENESIS OF BRONCHIECTASIS\*

BY

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(WITH SPECIAL PLATE)

In a recent publication (Lander and Davidson 1933) we put forward a hypothesis in regard to the causation of bronchiectasis and endeavoured to show that mechanical factors played by far the most important if not the sole part in the production of bronchial dilatation, the role of infection being secondary and by no means inevitable. One of the points brought out in this communication was the occasional occurrence of bronchial dilatation in a collapsed lobe during the course of artificial pneumothorax therapy and the fact that such dilatation was appreciably lessened in degree when in consequence of a refill a reduction of the intrapleural pressure was brought about. The object of the present paper is to amplify this point and to show that a similar variation in the degree of bronchial dilatation occurs in clinical cases of clinical bronchiectasis under normal conditions of respiration.

Practically all bronchograms are made when the chest is in the position of full inspiration. This is so with all cases at the Brompton Hospital except those of patients under a general anaesthetic when the picture is usually taken at the moment of complete expiration. It seemed good to us to make a series of bronchograms from cases of bronchiectasis both in full inspiration and in full expiration in order to determine whether any difference could be detected in the calibre of the affected bronchi. Some twenty cases were investigated in this way and in all those in which satisfactory bronchograms were obtained dilated ectatic bronchi could be measured in the same patient under the two conditions. A significant alteration in calibre was observed: the expiratory position showed an appreciable diminution in size of the bronchi in comparison with that seen in the inspiratory position. Such alterations in size were much more marked in ectatic than

in normal bronchi they were, moreover, symmetrical, and were not merely alterations in shape due to pressure from surrounding structures

The lung is a highly elastic organ and its retraction during expiration must be the result of this elasticity, and not of any external pressure from the thoracic cage. Diminution in size of the thorax results not in pressure on the bronchi but in further retraction of elastic tissue in the surrounding lung. Consideration of these facts in relation to the cases under observation has led us to the conclusion that the elastic tissue of ectatic bronchi, so far from being destroyed by disease, is intact and functioning perfectly

### Pathogenesis of Bronchiectasis

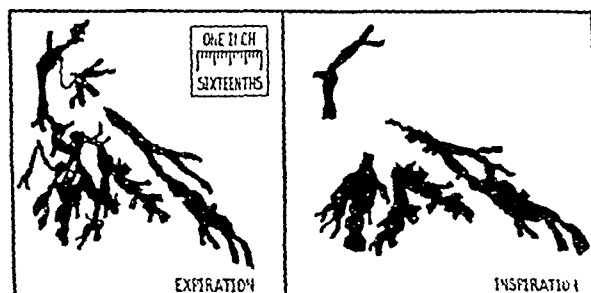
The significance of the foregoing observations in relation to the causation of bronchiectasis is considerable. The traditional teaching as to its infective origin is still accepted by the majority of clinicians, although the importance of pulmonary collapse as an aetiological factor is receiving increasing recognition. If infection is postulated as a primary cause it may be supposed to act in one of two ways: (a) by weakening the bronchial wall and the elastic tissue, so that elasticity is diminished or lost and dilatation follows immediately, or (b) by causing actual ulceration of the bronchial wall, leading to complete destruction, the enlarged cavity being thus lined by fibrous tissue and mucous membrane (Erb 1933).

In view of the proof we have just given of the persistence of functional elastic tissue, the first of these hypotheses would appear to be untenable. The second might hold good for a short time while the ulcerated cavity is still not lined by fibrous tissue, since it is known that some tuberculous cavities vary in size with respiration. This, however, is only the case when the cavity has no true wall, and expansion and contraction are therefore only explicable by the elasticity of the lining lung tissue. Furthermore, those tuberculous cavities which do thus vary in size tend in the course of time to become larger, since there is as yet no fibrous tissue to demarcate them clearly from the surrounding parenchyma.

The two cases whose expiratory and inspiratory bronchograms are reproduced were both of long standing

### Illustrative Cases

In Case I the bronchogram of 1928 showed a marked degree of bronchiectasis. A phrenic evulsion was performed in that year and from that day to this the patient has remained well though he still has some cough, with about three ounces of sputum daily. The bronchogram of 1938 shows a degree of

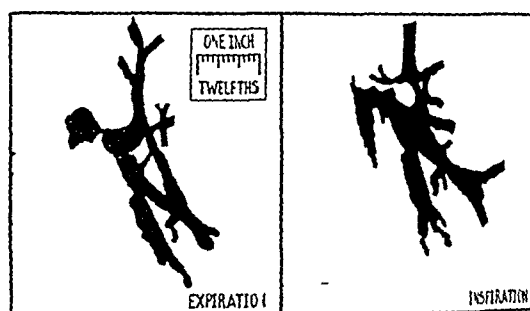


Case I

bronchial dilatation slightly less than that present in 1928, presumably due to the counteraction of the excessive negative pressure by the diaphragmatic hemiparalysis. The expiratory bronchogram depicts a state of the bronchi that is almost

normal, but the inspiratory picture shows a fairly marked degree of dilatation.

Case II is that of a girl of 15 who has had a cough ever since she was 2 years old. A plain radiograph showed a collapsed left lower lobe of such small size as to suggest that the collapse occurred in early life. Bronchography revealed not only bronchiectasis in the collapsed lower lobe but also dilated bronchi in the lingula of the upper lobe. The inspiratory and expiratory bronchograms again show a marked difference in size, not only in the bronchi of the lingula, but also in those of the collapsed lower lobe.



Case II

The diagrams have been made from actual tracings of the original x-ray negatives. The attached scale enables accurate measurements to be made of the calibre of the affected bronchi. Prints of the x-ray films are reproduced in the plate, but the contrast in these is not sufficient to show the details so well as can be done by diagrams.

### Summary

Two cases are described in one of these there is radiological proof of the existence of bronchiectasis for a period of ten years, in the other there is very strong presumptive evidence of pulmonary collapse of thirteen years' standing. Comparative bronchograms in these cases show that, despite the existence of dilatation of the bronchi, the affected bronchi still retain their full degree of elasticity.

The persistence of normally functioning elastic tissue in bronchi thus distorted affords a strong argument against the theory that infection of the bronchial wall is the primary cause of bronchiectasis.

### REFERENCES

- Erb, I. H. (1933) *Arch. Path.* 15, 357.  
Linder, F. P. L., and Davidson, M. (1938) *Brit. J. Radiol.* 11, 65.

The second International Spa Federation Congress will be held in Berlin during the second half of September. The arrangements are in the hands of the Reichsfremdenverkehrverband, Potsdamer Platz 1, Berlin, to which should be sent notification of intention to attend. The first general meeting of the International Spa Congress will be held simultaneously in Berlin and at some German spa. There will be five subcommittees of the Federation Congress to plan for economic, legal, medical, technical, and tourist and propaganda sections respectively. The proceedings of the first Spa Federation Congress have now been published. This volume of six hundred pages contains the official programme and a report of the various discussions at the Bucharest Congress last year, together with lectures which were then delivered and the papers read on the occasion of the centenary celebrations of the Royal Medical Society of Bucharest and the medical postgraduate course which was held concurrently. The price of the Congress Bulletin is 20s or the equivalent in any other foreign currency which sum should be forwarded to the account of the International Spa Federation at the Hungarian General Credit Bank, Budapest 107, as soon as possible.

## HETERO-LATERAL ECTOPIA OF THE RIGHT KIDNEY

BY

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(WITH SPECIAL PLATE)

This abnormality is rare but is of clinical importance. The chief features are brought out in the following case.

### Case Record

A young man of 31 a keen athlete and in perfect health had been rejected for life insurance five years previously because a trace of albumin had been found in his urine. Examination showed no albumin in the early morning urine and no casts or other pathological findings microscopical or chemical at other times. He was normal generally but palpation of the abdomen was difficult. No kidney could be felt on either side. The blood pressure was 136/80 and the blood urea 42 mg per 100 ccm both figures high for his age. Urea concentration was 2.18 per cent in 95 ccm of urine passed in the second hour urea clearance with urea (Fowweather's test) 76.9 ccm per minute. Blood urea at the end of the second hour was 66 mg again a rather high figure. Intravenous pnelography to exclude polycystic kidneys showed no kidney on the right side and two on the left. He was then examined by cystoscopy and retrograde pnelograms—frontal lateral and stereoscopic. These were the findings.

**Examination.**—Bladder normal ureteric orifices normal the right ureter 20 cm in length the left 27 cm. The left kidney was normal in size and location and also in calyx distribution and formation. It was incompletely rotated the pelvis lying in front. The right kidney had passed over to the left side. It lay below and ventral to the left kidney overlapping its lower third. The pelvis was anterior and small and was divided immediately into three major calices. The lower calices were normal the upper large. The papillae of the latter were however not flattened. Both kidneys were about equal in size and showed good and equal function in the excretion of perabrodil. The whole mass extended from the eleventh rib to just above the iliac crest. The left ureter passed forward over the upper part of the lower kidney and then gradually backwards reaching the bladder on its own side. The right ureter crossed the middle line at the level of the last lumbar vertebra and entered the bladder at the normal place on the right side (see Plate). When the kidney mass was pressed upwards the relative position of the two pelves was altered and this together with the clear overlapping individual shadows, indicated only slight fusion or none between the two kidneys.

There was nothing in these findings to indicate the reason for the albumin though possibly the postural or vascular conditions which may bring this about in orthostatic albuminuria were imitated by the lower or displaced kidney.

### Discussion

Stewart and Lodge (1923-4) in 6,500 necropsies found fourteen horseshoe sixteen solitary and one hetero-lateral ectopic kidney. Morris in 15,908 necropsies found one case of the latter type. If it is permissible to apply these figures to general populations London would have about 14,000 people with horseshoe kidneys 16,000 with only one and 1,000 with hetero-lateral ectopia. Owing to the enhanced susceptibility of abnormal kidneys to disease more of these groups are likely to apply for treatment than similar groups of the ordinary population. Now solitary kidneys may be detected by cystoscopy because of a distorted trigone and only one functioning ureteric

orifice or if the kidney is double two orifices on the same side. Horseshoe kidneys may cause embarrassment but are at least recognized at operation. Hetero-lateral ectopic kidneys on the other hand are not readily diagnosed by either of these methods. The ureteric orifices are normal and the passage of ureteral catheters without radiographs does not help. The two kidneys if not fused are in close relation within the capsule of Gerota and even if two ureters are found it may be considered that they belong to a simple double kidney. Unless the surgeon is aware of the condition the whole of the renal substance may be removed and this has happened on more than one occasion. In no case then should pnelograms or radiographs of opaque catheters be omitted.

The cause of hetero-lateral ectopia especially in the 15 per cent of cases without fusion is not clear but the condition must have its origin when the embryo is little larger than a grain of rice—probably through persistence of the usually transitory direction of the ureteric bud in a dorso-medial direction which would carry the kidney anlage towards the middle and ultimately to the opposite side. Acute lesions such as rupture place these patients in the greatest danger if pnelography be omitted. Those interested in the subject will be able to follow the literature by referring to recent articles by Carleton (1937) and Patch (1937).

### REFERENCES

- Carleton A (1937) *J Anat* Lond 71 292  
Patch F S (1937) *Brit J Urol* 9 339  
Stewart M J and Lodge S D (1923-4) *Brit J Surg* 11 27

## HYPEROSTOSIS FRONTALIS INTERNA (STEWART MOREL'S SYNDROME)

BY

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AND

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(WITH SPECIAL PLATE)

During the past few years neurologists have shown an increasing interest in the syndrome often associated with the name of Morel and each new publication has made some contribution to our knowledge of its aetiology or clinical features. Schiff and Trelles (1931) were inclined to attribute the disorder to trauma. L. van Bogaert (1930) has brought forth evidence to associate the visual defects with compression of the optic nerve in the bony foramen. There is still however a good deal of uncertainty both as to its pathogenesis and to its status as a clinical disorder. At the 1935 Congress of Pathologists in Oslo Henschen even expressed doubts as to the existence of the syndrome.

### Case Report

Eleven years ago the patient, a woman aged 72 had been ill with a herpes zoster in the left ophthalmic area followed by persistent neuralgic pains. A treatment produced a severe dermatitis and ulceration over the head which healed with extensive scarring. A year and a half later she had entered the lower branch of the left trigeminal nerve. Since that time she has been subjected to numerous forms of treatment—with vaccines opium physiotherapy and psychotherapy—without benefit. She had been getting over during the last ten to fifteen years a peculiarly severe form of the trunk or polydipsia was present. Sleep was interrupted the patient being restless during the night and sleepless and dizzy

during the day. Other symptoms included depression, anxiety, tearfulness, and apathy to her surroundings.

On examination she was seen to be small and obese, her weight being 83 kg (182 lb). The obesity had gradually developed during the past ten to fifteen years in the abdomen, around the pelvis and trunk. The extremities were slender, with proximal adiposity. The distribution of hair was normal. The internal organs were healthy, and the blood pressure was 180/110. The second aortic sound was accentuated. There was a somewhat sluggish reaction of the pupils to light, more especially the left, but the fundus was normal. There was impairment of all forms of sensation over the first division of the fifth nerve on the left side and tenderness over the supra orbital and infra orbital notches. The corneal reflex was brisker on the right. Occasional vasomotor changes were observed over the second and third divisions of the left trigeminal area. Other cranial nerves were normal. There was no muscular wasting, and tonus and reflexes were normal. The patient's mental attitude was characterized by a lack of confidence and by irritability. She was markedly egocentric, all her interests and her activities being claimed by her affliction. She strove to make people around her realize the seriousness of her complaint. Her disease dominated the whole of her thoughts. Concentration, attention, and memory were impaired; her general intellectual level was poor, but her critical faculties were good, though primitive. The alkaline reserve was 54 per cent by volume, the serum calcium 11.2 mg per 100 ccm, and the urinary creatine 59.8 mg per 100 ccm.

**Radiographic Examination.**—A skiagram of the skull taken nine years ago shows a conspicuous thickening of the cranial bones, especially in the frontal area. The same appearance is seen in the pictures taken four years ago (Plate, Fig. 1). The thickening of the occipital bone is now somewhat less pronounced and there is a senile atrophy of the mandible. No abnormality can be detected in the vascular pattern, the sella turcica, the sphenoidal sinuses, and the petrous bone. A skiagram taken one year later shows a more pronounced thickening in the frontal bone above the sinus, with marked enostosis. The frontal portion of the falx cerebri is calcified. The same changes, but more pronounced, are seen in the skiagram taken in 1936 (Fig. 2). Here the sella turcica shows some degree of decalcification.

The above case report corresponds with the Stewart-Morel syndrome of hyperostosis frontalis interna in the following particulars:

- 1 The progressive, symmetrical and diffuse thickening of the cranial bones, most marked in the frontal and less marked in the parietal regions. The anterior portion of the falx cerebri is calcified and there is enostosis on both sides of the frontal bone.

- 2 Obesity of the rhizomelic type, developing during the past eleven years.

- 3 Intractable headaches, especially localized in the left frontal region.

- 4 Inverted sleep rhythm.

- 5 Psychological disturbances: (a) impairment of memory and attention, (b) depression, anxiety, and irritability, (c) personality changes—egocentricity, hypochondriacal trends.

On the other hand our patient gave no evidence of excess of appetite, epileptiform attacks, visual disturbance, or dysuria—symptoms which are occasionally present in this disorder. According to Carr (1936) convulsive manifestations have been observed in 35.3 per cent of the cases on record.

#### Comment

This case is of interest for two reasons. In the first place repeated radiographic examination has shown slow progression of the bony changes. Secondly, the onset of

the symptoms at the age of 61, following a trigeminal herpes zoster, is noteworthy. In this connexion we recall van Bogaert's case, that of a woman aged 62 with bilateral optic atrophy associated with the progressive ossification of the frontal bone. The unilateral occurrence of trigeminal symptoms in our patient is most probably due to the asymmetrical extension of the frontal hyperostosis.

#### Aetiology

Most writers have attributed this disease to a disorder of the fat and calcium metabolism. It is a striking fact, however, that Schiff and Trelles alone have been able to demonstrate a hypercalcaemia. Carr recorded a period of creatinuria in his patients, this also occurred in the present case.

The theory of disordered fat metabolism has been corroborated by Mortimer's (1936) experiments on rats. Mortimer gave the animals the ketogenic factor of the anterior lobe of the pituitary gland. The animals so treated not only became fat but also showed a marked sclerosis of the calvarium. This experiment is of importance, too, in that it localizes the causation of the disease to the anterior lobe of the hypophysis. Stewart (1928) also inclined to a dyspituitary hypothesis, while Morel (1930) found in four patients very pronounced histological changes in the nuclei around the third ventricle. On this basis he localizes the lesion generally to the tuber infundibulum-hypophyseal system, particularly in the posterior lobe of the pituitary body. In association with this conception is Moore's (1935) finding of thyroid disorder in 4.4 per cent of his cases, while Carr described menstrual disturbances in 76.4 per cent.

Can the syndrome in question be considered an independent disorder? Henschen (1936) denies it, since frontal hyperostosis without accompanying symptoms is to be observed in 50 per cent of women above the age of 50. In his own words, "the so called Stewart-Morel syndrome is merely imagination."

In the light of the work carried out by Moore (1935), Mortimer, and others one must suppose that Henschen observed abortive or incompletely developed cases. The early stage of the disorder is well illustrated by Somogyi and Bak's (1937) patient, in whom there was only an early degree of hyperostosis with all the other symptoms fully developed.

Our case, together with the data to be found in the literature, inclines us to the opinion of Schiff and Trelles, according to whom the picture is not at present sufficiently circumscribed to be called a specific disease. We must consider the term "syndrome" correct and justifiable from a clinical viewpoint.

#### REFERENCES

- Bogaert, L. van (1930) *J. belge Neurol.* 30, 502.  
Carr, A. D. (1936) *Arch. Neurol. Psychiat. Chicago* 35, 982.  
Henschen, F. (1936) *Acta path. microbiol. scand. Suppl.* 28, 5.  
Moore, S. (1935) *Surg. Gynec. Obstet.* 61, 345.  
— (1936) *Amer. J. Roentgen.* 35, 30.  
Morel (1930) *L. Hyperostose Frontale Interne Paris*.  
Mortimer (1936) *Arch. Neurol. Psychiat. Chicago*, 35, 56.  
Schiff, P., and Trelles, J. O. (1931) *Encéphale* 28, 763.  
Somogyi, I., and Bak, R. (1937) *Disch. Z. Nervenheilk.* 143, 199.  
Stewart, R. M. (1928) *J. Neurol. Psychopath.* 8, 321.

In fifty-eight large towns in Germany there was a 28 per cent decline in the mortality from tuberculosis in 1937, compared with 7.1 in 1936. On the other hand there was a rise in the mortality from tuberculosis in Berlin, the Sicilian towns, and the harbour towns in 1937.

## Clinical Memoranda

## Reviews

Saccular Aneurysm of Left Common  
Iliac Artery

In the evening of December 21 1937 a stout married woman aged 71 was admitted to hospital with the following history

## CASE RECORD

The patient had enjoyed good health until the previous evening when she developed a pain in her back which although not severe caused her to retire to bed earlier than usual. The next day she got up and did her usual work until about 3.45 p.m. when a sudden severe pain occurred in the lower abdomen. Shortly afterwards she sent for her doctor who had her immediately transferred to hospital.

On admission she was very pale and restless was perspiring freely and was suffering from marked dyspnoea. Her temperature was subnormal and her pulse rate 140 per minute and of very poor volume. Examination revealed a large



palpable mass in the left side of the abdomen attended with little tenderness and no rigidity of the overlying muscles. Nothing abnormal was detected on rectal examination. The patient died about half an hour after admission.

The post mortem examination disclosed a large retroperitoneal haematoma in the left side of the abdomen displacing the descending colon forwards and separating the layers of the pelvic mesocolon. Removal of the blood-clot revealed a saccular aneurysm of the left common iliac artery about the size of a hen's egg. There was a well marked constriction of the vessel immediately proximal to the aneurysm. The lateral wall of the sac was found to be ruptured at its proximal end and the anterior wall was split into two layers over an area of about two square inches suggesting that a dissecting aneurysm had preceded the actual rupture. Many atheromatous plaques were present in the aorta, microscopical sections of which showed advanced atheromatous changes with degeneration and calcification but no typical appearances of syphilitic aortitis. Sections showed changes in the vessel wall at the edge of the aneurysm similar to those present in the aorta except that there was no actual calcification.

My thanks are due to Mr J. M. Slater for permission to report this case and to Dr W. McNaughton for preparing the pathological sections.

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RESPONSE OF LIVING TISSUES TO  
INJURY

*The Basis of Tissue Evolution and Pathogenesis* By Albert A. Gray M.D. F.R.S.E. (Pp. 92. 11 illustrations with Frontispiece. 7s. 6d. net.) Glasgow: Jackson Son and Company, 1937.

The late Dr. Albert Gray left the draft of a book which it is believed that he intended to publish some time in 1936. After consultation with Sir Robert Muir and Professor Graham Kerr the manuscript has been edited by Dr. Oliver Gray with the least possible alteration and published in memory of his father under the title of *The Basis of Tissue Evolution and Pathogenesis*.

The theory proposed is based upon the nature of the response which the living tissues make to injury. The question is asked at the beginning: Why should repair or healing take place at all in a living body? It cannot be admitted that it was originally teleological. Evolution by spontaneous variation either gradually or by sudden mutation is rejected as needing such an extraordinary sequence of coincidences that it is utterly improbable. The essay is based upon the hypothesis that the variations which result in evolution are induced variations caused by the response to injury and the repair of tissues. The term "injury" is used by the author in the widest possible sense and includes the idea of stimulus so that it may be repeated repair from the effect of injury what to men constituted an injury has become a stimulus. Thus the response to changes in environment takes the form of induced variation in contrast to the idea of "spontaneous variation" which is rejected. Evolution on these lines is illustrated by the comparative anatomy of the labyrinth, an organ which had been the object of particular study by Dr. Gray. The evolution of the labyrinth is discussed at some length and illustrated by a number of figures taken from the author's book *The Labyrinth of Animals*. The origin of the changes which produce chronic inflammation is also discussed and brought into line with this theory which shows how the qualities possessed by fibroblasts and young epithelial cells have been produced. These were not originally teleological in the sense that they were designed to protect the individual animal though the process ultimately comes to have the appearance of a purposive act.

This study of evolution by Dr. Gray is of profound interest because he insists upon the need for taking into account pathological as well as physiological processes and because he attempts to show that the process of repair in a wound is an epitome of the process of the differentiation of the tissues in the evolution of the race and parallels the development of the embryo which is an epitome of the development of the individual. In pathology the examples chosen are inherited deafness and otosclerosis. Whether the theory proposed is true or not it is at least logical. It has come from one who was an accurate thinker and cautious writer. It embodies the philosophy of comparative anatomy and pathology in a fascinating manner and therefore it will receive the attention as a contribution to the study of evolution. It is unlikely that had the author survived he would have published it exactly in the form in which it now appears. This must disarm criticism and allow for a measure of the defects of style and composition.

## DIGITALIS THERAPY

*The Clinical Use of Digitalis* By Drew Luten, A.B., M.D.  
(Pp 226 16s) London Bailliere, Tindall and Cox  
1936

In this monograph Dr Luten takes as his text the aphorism of Wenkebach that "what helps the individual most is to be taken as the best treatment for him, whether it be possible or not to analyse its action in every detail." This principle applies with special force in the case of digitalis, much is known of its effects upon the heart and circulation, but a great deal remains to be discovered. Not content with admitting the gaps in our knowledge, the author considers in his first chapter a most controversial and fundamental problem—the direct effect of digitalis upon the heart muscle. The well-known evidence from clinical, pharmacological, and experimental sources is dispassionately sifted and the conclusion is reached that digitalis has an effect upon ventricular muscle, many have held this to be true, but orthodox teaching at the present day would hardly go as far as Dr Luten in claiming that "the therapeutic efficacy of digitalis results from the action of the drug upon ventricular muscle," or agree with his implication that ventricular slowing during treatment by digitalis of heart failure with fibrillation is an incidental effect rather than one of primary importance.

Many other matters of interest and clinical value are discussed, in his section on dosage and methods of administration the author rightly insists that in the vast majority of cases digitalis should be given by the mouth, the best preparation being the powdered leaf in capsules, tablets, or pills. While intravenous or rectal administration may be demanded on account of urgency or vomiting, respectively, discomfort and uncertainty of absorption rule out the subcutaneous or intramuscular routes. There is no doubt that such haphazard injections are given far too frequently and often quite without regard to indications for digitalis therapy. Dr Luten's monograph is balanced, thoughtful, and well produced.

## PHYSICAL MEDICINE AT FULL LENGTH

*Precis de Physiothérapie Clinique* By Dr Paul Duhem  
(Pp 604, 165 figures 130 fr) Paris Gauthier-Villars  
1937

This weighty volume is indeed an encyclopaedia of physical medicine, dealing with all the principal physical methods and describing their use in many diseases. So comprehensive is the consideration given to individual maladies that the book almost serves as a treatise on medicine, and it has throughout an essentially clinical character which is valuable in a subject which has at times lent itself to much theoretical speculation. The author Paul Duhem, has for years been dismayed at what he considers to be one of the greatest gaps in medical organization in France—namely, the lack of liaison between specialists practising different branches of physiotherapy which made it almost impossible until recently for a patient needing several kinds of treatment to obtain them under one roof. The patient was obliged to travel from one place to another and be treated by different people for such obviously related processes as x-ray, manipulative, and electrical treatment. Dr Duhem has been at pains to end this failure of co-ordination, and in his *Precis de Physiothérapie Clinique* he has endeavoured to present a broad view of physiotherapy as a whole in order to show the unifying interrelationship which exists between its different branches.

As the book has been based on the personal experience of thirty-five years' practice in a rapidly developing science, it has an engaging and practical interest which should attract both student and specialist. The section on diseases of the nervous system (some 170 pages) describes the most original part of the author's work, and the study of disorders of nutrition is considered from a fresh and stimulating point of view. Among the simpler forms of electrical treatment it is interesting to note that Dr Duhem regrets the passing of the static bath. He regards radiant heat as a wonderful therapeutic agent, but is perhaps somewhat spartan in his use of cold douches when prescribing hydrotherapy. While commending diathermy as the best method of epilation, he has used thallium acetate in ionization with good results, and he describes ionization with histamine, though very irritant, as "specificque des douleurs rhumatismales rebelles." He has more than the usual faith in the Bergonie treatment of obesity. Of short wave therapy he has little to say beyond observing that up to the present it has not cured any more patients than ordinary diathermy. We can find no mention of the success of short waves in furunculosis, but Dr Duhem describes radiotherapy in well-filtered doses as a "marvellous" means of procuring rapid healing.

The author confesses to a certain degree of laziness in using borrowed illustrations for his book. The photographs illustrating the testing of muscle movements are good and are accompanied by clear explanatory remarks. The contents of the book are classified in chapters under headings which in Part I relate to the different physical methods, and in subsequent parts to the different systems and diseases under discussion. The last two chapters are on accidents and dangers in electricity. There is no index arranged in alphabetical order.

## SURGICAL DIAGNOSIS

*Precis de Diagnostic Chirurgical* Published under the direction of Ch. Lenormant. Volume I *Généralités Tête et Cou* By Ch. Lenormant, J. Seneque and P. Wilmoth (Pp 764, 196 figures Paper cover 80 fr, bound 105 fr). Volume II *Thorax Sein, Paroi Abdominale Organes Génitaux Extérieurs* By J. Patel (Pp 490, 138 figures Paper cover, 50 fr, bound, 70 fr). Volume III *Abdomen et Pelvis* By G. Menegaux (Pp 964, 212 figures Paper cover, 100 fr, bound, 125 fr). Volume IV, *Membres* By J. Seneque (Pp 630, 168 figures Paper cover, 70 fr, bound 90 fr) Paris Masson et Cie 1937

*Precis de Diagnostic Chirurgical* is a compact four volume work which has been published under the general direction of Professor Lenormant. It is ambitious in scope, covering general surgery and gynaecology and comprising nearly three thousand pages, which are, however, well illustrated, and, since their subject matter is well grouped and set out, they make by no means tedious reading. The work constitutes the latest of the well known "precis" series published by Masson et Cie, and its various parts are written by Professor Lenormant himself or his pupils—MM G. Menegaux, J. Patel, J. Seneque, and P. Wilmoth. The editor points out that it is designed not for the beginner but for the more mature student and practitioner. In his introduction, which is repeated in each of the four volumes, he quotes a remark of Rabelais, "La Médecine est un farce a trois personnages: le malade, la maladie et le médecin," and this textbook should prove of great assistance to certain of those who have to play one of the parts in the farce, from the chief actor—the patient himself—however, it must be kept, since the illustrations are so graphic that their effects might be disastrous to him and the farce might be turned to tragedy. Most of the

illustrations are photographs and their reproduction is excellent and the same may be said of the majority of the x-ray pictures

Volume I deals with general considerations and with surgical diseases of the head and neck and is written by Professors Lenormant Seneque and Wilmoth volume II the chest abdominal walls and external genitalia is by Dr Patel volume III the abdomen and pelvis by Professor Menegaux and volume IV the limbs by Professor Seneque In a necessarily rather limited work dealing with a vast field it is easy to be critical of the degree of emphasis given to certain subjects and the comparatively brief reference to others Criticism is almost bound to arise no matter how carefully and judiciously subject-matter has been selected by the contributors but after making due allowance for such considerations there are parts which are somewhat disproportionate Thus a picture is shown of a meningococci outlined by lipiodol in an infant of 8 months but a series of good ventriculograms or arteriograms is absent A lipiodol injection in a case of cord compression by secondary carcinoma is shown but the lipiodol appearances in spinal cord tumour and in meningitis serosa are wanting although secondary carcinoma in the spine is unfortunately not uncommon cord compression theretfrom is while spinal tumours and chronic meningitis are not infrequent and their differentiation is important In future editions it is to be hoped that such omissions will be rectified When this has been said there can be nothing but praise for the work It is likely to have an appeal to many other than the pupils of Professor Lenormant and his distinguished assistants and beyond France itself It will make a useful addition to the bookshelf of the consulting surgeon who reads French

### CHEMISTRY OF SEX HORMONES

*The Chemistry of Sex Hormones Tabulae Biologicae* Vol. xv Part I Edited by W. Junk, C. Oppenheimer and W. Weisbach (Pp. 144 Whole volume Fl. 35 reduced price for subscriber Fl. 30) The Hague Dr. W. Junk, 1938

This outline of knowledge concerning sex hormones provides an interesting illustration of the results of the impact of organic chemistry on physiology The chemical nature of the oestrin group was first discovered in 1932 and readers will remember the interest created by the discovery that this hormone was a sterol derivative Soon afterwards it was discovered that the hormone of the corpus luteum and the male sex hormone had a similar chemical composition This group happens to be one which favours the manipulations of organic chemists and the result of their activity is shown by a series of tables now published from Professor Laqueur's department

One hundred and twenty-eight compounds are listed under the title Male sex hormones and their derivatives and the physiological activities of about one half of these have been demonstrated and measured Sixty-nine compounds are included under the head of Substances with oestrogenic activities but this list is really incomplete because it contains only the sterol derivatives and does not include the various simple aromatic compounds which also have been shown to possess powerful oestrogenic activity Forty-six compounds are described under the heading Corpus luteum hormone and its derivatives These figures suggest that members of the sex hormone group of sterol derivatives are developing a complexity comparable to that of some of the groups of dyestuffs and it is evident that the developments in a subject of such

complexity can only be followed by specialists who devote their whole time to such a study

That a subject of this complexity can develop in less than a decade suggests that biological workers will find increasing difficulty in keeping pace with the activities of the organic chemists a development that may call for an increasing degree of organization and collaboration between physiological laboratories The facts mentioned provide a striking proof of the rapidity of the advance in knowledge of the chemical substances which control the sexual functions and it is reasonable to hope that this will lead in its turn to important clinical advances

### YEAR BOOK OF DERMATOLOGY

*The 1937 Year Book of Dermatology and Syphilis* Edited by Fred Wise, M.D. and Marion B. Sauer, M.D. (Pp. 736 110 figures 500 dollars 12 6d Postage 6d) Chicago Year Book Publisher Inc London H. K. Lewis and Co. Ltd. 1938

As usual the editors have produced an interesting volume in which they review the work that has been done in dermatology during the past year In accordance with their usual custom they start with an article of special interest to the general practitioner and on this occasion they devote it to the modern treatment of common fungous affections the importance of which has become well recognized during recent years Their article is full of practical points and we are glad to notice that they warn the reader against making the diagnosis of mycotic infection without adequate reason and they rightly state their opinion that many cases of so-called dermatophytosis and dermatophytids are not of fungous origin at all and hence do not respond to a therapy based on an erroneous diagnosis No very striking advance appears to have been made in dermatology during the past year though there is plenty of evidence of very active work all over the world Many workers have been trying to extend the application of the comparatively recently introduced Grenz rays into dermatology and it appears that these have a very definite place in therapeutics They are much safer than x-rays and in certain cases are more efficient notably in the treatment of very superficial naevi such as port wine stains and also in the rare Darier's disease a complaint which is practically resistant to x-rays From the public health point of view the most important progress to be noted is the rapid spread of measures to the control of venereal disease throughout the United States of America Apparently they have been several years behind this country in adopting a comprehensive scheme for this purpose The editors of the year book regret the absence of provision for inpatient treatment of all patients actively infective otherwise they heartily support the efforts of the authorities We recommend the year book to the attention of dermatologists

### Notes on Books

In our review of the first edition of *The Social Structure of England and Wales* by A. M. CARR-SAUNDERS and D. CARADOC JONES its value was indicated and we were not surprised that a new edition has been required (Oxford University Press 10s) The object of the book is to give a succinct account of the numbers, age distribution, housing, education, occupations, wealth and qualities of the people an account based mainly upon official census data Since the first edition appeared some ten years ago another census has been taken and in this edition the new data are incorporated and in some cases comparisons between the results of the last two censuses are made



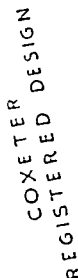

It is a monograph on tropical ophthalmology to satisfy, as he explains, the need of the Italian colonial empire for a book of reference on this kind. Such departures from the usual classification adopted in textbooks of this kind are accepted as there are consist of eponyms instead of more accepted international usage. The book is profusely illustrated, and should help to fill a gap in Italian ophthalmic literature. It is published at Milan by Ulrico Hoepli, and the price is 45 lire.

**Preparations and Appliances**

## A DRIP FEED FOR D.A.

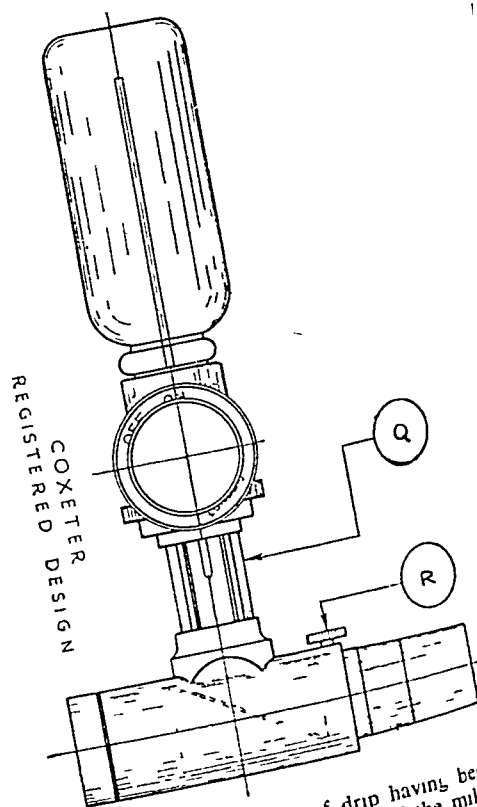
Dr T A B HARRIS, anaesthetist to Guy's Hospital, writes

The drip feed illustrated below has been designed to be used on any type of Boyle or McKesson apparatus. It is made so that it can be carried or left attached to the apparatus without fear of the liquid escaping by evaporation or leakage. This is made possible by a revolving sleeve controlled by the larger milled wheel C which in the position 'off' closes both the inlet and the drip outlet when the attachment is not in use.



A standard size bottle of divinyl ether is screwed firmly into the base care being taken to see that the foil covered washer Q is in place. In this position the bottle base and sight feed are suspended vertically beneath the tubular mount.

When required for use, the apparatus is revolved on its tubular mount through 180 degrees and is held in place by the screw R. The sight feed is now in free communication with the tubular mount with the bottle standing inverted above the mount. The larger milled wheel C is then turned counter clockwise to the position on'. This opens the inlet thus equalizing the air pressure, in the bottle above the fluid and in the tubular mount and sight feed and allows fluid to enter the drip outlet. The rate of drip is then regulated by means of the smaller milled wheel D which turned counter clockwise, increases and turned clockwise, decreases the rate. Anaesthetic fluid drips through the glass chamber Q on to a metal gauze (I) in the tubular mount, where it is vaporized.



by respiratory gases. The rate of drip  
it can be interrupted at will by means of the mini-  
without altering this adjustment

I have used this attachment for the past eighteen months with  
satisfactory results mostly for divinyl ether but also for ether  
and chloroform. It is especially suitable for closed anaesthetics,  
for fluids are volatilized without resistance to breathing.

It has been made to my instructions by Coxeter and Son Ltd,  
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Company new throat a  
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**THROAT AND NASAL ATOMIZERS**

**THROAT AND NASAL ATOMIZERS**

We have received from the Gardner Company new throat and nasal atomizers. One type of atomizer has a patented adjustable jet and shield both are so firmly attached that there is no danger of the shield slipping off when the spray is released and the spray can be directed upwards or downwards through a range of some 90 degrees. The retail price of the atomizer is 5s 9d. Further details may be obtained from the manufacturers at 7, Chapel Street, Milton Street, London E.C.2.

## BRITISH MEDICAL JOURNAL

LONDON

SATURDAY MAY 14 1938

## THYROTOXICOSIS

The awakening of the medical profession of this country to the importance of thyrotoxicosis or hyperthyroidism has come from various sources. We may recall that in this *Journal* eighteen years ago J Strickland Goodall and Lambert Rogers<sup>1</sup> pointed out the paramount importance of the cardiac condition in the disease and strongly advocated surgical treatment—subtotal thyroidectomy—because they were convinced that it offered the best means of success. Surgical treatment which had fallen into abeyance owing to the difficulties of anaesthesia and disastrous toxic after-effects of operation was re-established as a reasonably safe procedure by Berry Dunhill and Joll. The new teaching spread to practitioners throughout the country they became more alive to the facts and their diagnosis was thus improved. These features alone cannot fully account, however, for the increase in the number of cases reported, and the evidence would show that the disease is more prevalent. In a careful analysis of the Registrar-General's figures made by Mr Peter McEwan and reported elsewhere in this issue it is shown that there is a high and rapidly increasing death rate. During the year 1936 no fewer than 1 696 deaths were attributed to thyrotoxicosis in England and Wales, and of these some 60 per cent had some form of heart trouble. McEwan's analysis of the homes of these patients leads to the conclusion that there is a very varied distribution of cases throughout the country and that the incidence is highest in the mountainous regions of Westmorland and Mid Wales and in Huntingdon. Among the aetiological factors in thyrotoxicosis the stresses of life have been emphasized. These can hardly be great in the country districts named certainly not as great as in the towns and thickly populated areas and it may well be that the in-breeding prevalent in these regions has a tendency to bring out the hereditary factors. Nevertheless many shrewd and competent observers are convinced that the stresses of life do play an important part for instance, Dunhill<sup>2</sup> writes. The frequency and the extent of emotional disturbance among these patients surprise me. It may be that in

certain districts soil conditions may conduce to sub-efficiency of the thyroid gland. Campbell's survey of the geographical distribution of the death rate during the years 1913-19 shows a close parallelism with McEwan's figures and Campbell concluded that there was some degree of correspondence between the incidence of simple goitre and of the thyrotoxic deaths. Dunhill may be quoted again as stating that very few patients who carry a simple goitre into middle life escape the development of toxic symptoms.

Thus it may be profitable to argue that the death rate would be reduced by timely operation on simple goitres or goitres that are in the early stages of toxicity. Before passing judgment on this however it is necessary to discuss two further points: first are the statistics a complete statement of the occurrence and death rate of thyrotoxicosis<sup>3</sup> and secondly are therapeutic measures other than surgery available and adequate? The term thyrotoxicosis introduced when an altered secretion or dysthyroidism was postulated remains a convenient generic term to cover a number of manifestations of hyperthyroidism and to bring under one heading the varied nomenclature without defining the underlying pathology. There is much to favour the adoption of the term toxic goitre since it should be insisted on that in thyrotoxicosis there is always a goitre though it may not always be obvious. Pursuing his interpretation of the underlying pathology Dunhill has remained an advocate of the essential unity of toxic goitre. Thus the only masked thyrotoxicosis is where the goitre is situated behind the sternum and can only be revealed by x rays or surgery. The varied clinical manifestations are to be regarded as complications not masks. Digestive disturbances of stomach and bowel emaciation mental instability, and above all heart symptoms may dominate the picture but in all there is the central toxic goitre. The cardiologists have especially insisted on thyrotoxic cardiovascular phenomena—irregularity of the heart especially auricular fibrillation hypertension and angina<sup>4</sup>. Thyrotoxicosis is however not an oasis with a central toxic goitre as a well situated in an unrelated desert. It is distinctly engrafted on a soil that takes a share in the resulting phenomena. Thus in the *formes frustes* there is a gradual series to which goitre and patient contribute as variable factors radiating outwards from frank<sup>5</sup> thyrotoxicosis to neuro-circulatory asthenia to neurosis to mental instability to digestive disturbances to cardiac failure apart from thyrotoxicosis to emaciation so that at the periphery no element of thyrotoxicosis is present.

## THYROTOXICOSIS\*

Because of this there is an important medical aspect and function in diagnosis and treatment. Early recognition followed by rest and nursing may arrest or retard deterioration, but the most careful supervision is necessary, since the patient may quickly slip back. There is a place, too, for iodine in medical treatment. Its use in surgery may be shown in the widely published views of Pemberton from the Mayo Clinic that the total death rate during the period before iodine was used in preparation for operation was at least eight times greater than it is to-day. Sound medical opinion is that the use of iodine obstructs the delivery of the thyroid hormone to the body at any stage of the disease, and may thus hold control while the stimulus to the production of the hormone has time to subside. For iodine affects not the course but the intensity of the complaint, and appears to be useful at any stage. Indeed, apparent iodine resistance may mean that the disease is increasing too rapidly in severity.

Authoritative surgical figures show that 60 to 70 per cent of patients are able to resume normal life and work, and that over 80 per cent of cases of auricular fibrillation regain normal rhythm. But in McEwan's analysis operation was stated to be the cause of 276 of the 1,696 deaths reported in 1936. On the other hand, there are under 3 per cent of deaths over a series of all sorts of cases, often very severe, when the preparation, the technique, the division into stages and the after-care are thoroughly planned. They would seem to be worth while. It is necessary to judge which cases are due to toxic goitre and will therefore respond to surgery. With accompanying heart disease, irregular rhythm and congestive heart failure, far from being contraindications, are really strong indications for operation. The operation of complete thyroidectomy in all cases of congestive heart failure is, however, not rational, good may be done to many, perhaps to more than we think, but not to all. These clinical problems of thyrotoxicosis deserve ventilation, and careful balanced work such as Mr McEwan presents is needed, and welcome.

## THE ADRENO-GENITAL SYNDROME

Dr H W C Vines and Mr L R Broster, together with their collaborators, are to be congratulated on an admirable step in the elucidation of the complicated subject of the adrenal cortex and intersexuality. It was a fortunate circumstance that Dr Vines was able to establish a definite fact as

a starting point for this research—namely, the association of a fuchsin-staining cell with virilism. This observation, which has been confirmed, can now be accepted as proved, and it affords a touchstone by which theories can be tested. With its aid progress became rapid. The whole research is an example of successful teamwork involving the consulting-room, the operation theatre, and the laboratory, as the plan of this monograph shows, and Sir Walter Langdon-Brown brings out this point in his foreword.

The first part is devoted to a clinical study of the adreno-genital syndrome, the physical and surgical section by Mr Broster, and the psychological by Dr Clifford Allen. There is a full account of the technique and results of the operation of unilateral adrenalectomy as worked out by the former, and the correlation of the physical and psychological aspects of virilism has led to some useful results. Such abnormalities may be either endocrine or psychological in origin, while often both factors are involved. The evaluation of the extent to which either is responsible must have an essential influence on the type of treatment to be adopted. It is a familiar fact to all physiologists that any departure from normal sexual development produces a degree of psychological disturbance and distress which is quite incommensurate with the physical abnormality. Nor is the injury confined to the victims alone, their influence in the community must also be taken into account, as the scientific study of delinquency is daily showing more clearly. The second part of the monograph is devoted to laboratory studies. Here Dr Vines gives an account of the histology of the syndrome, which is followed up by two investigations on the biochemical side, one by Dr Jocelyn Patterson and Dr Alan Greenwood, the other by Professor Marrian and Mr Butler of Toronto. It is this all-round approach to the subject which gives the study its particular value.

There is to-day general agreement that virilism in women may arise from one of three main causes—pituitary, adrenal, or ovarian, the pituitary disturbance usually involving the basophil cells. Since Professor Woollard threw doubts on the specifically gonadotropic function of these cells there has been a change in our interpretation of some of the features of Cushing's syndrome. While Crooke has shown that the essential characteristic of the syndrome is a hyaline change in these cells, it has also been found that thyroid growths can lead to the condition, by some means as yet unknown. In other instances the adrenal changes far exceed the pituitary ones. Thirdly, virilism may result from a tumour of the testis or the ovary, the arrhenoblastoma, which sometimes

*The Adrenal Cortex and Intersexuality*. L R Broster M Ch, H W C Vines M D, Clifford Allen M D, H W C Vines M D, Jocelyn Patterson M Sc, Ph D, Alan W Greenwood Ph D, D Sc, G F Marrian D Sc, G C Butler B A (Pp 1091 37s 6d). Chapman and Hall 1938.

simulates the structure of seminiferous tubules. This has emphasized the bisexual nature of the ovary and we are led to the view that the influence of the pituitary basophil cells normally inhibits the androgenic cells already existing in that organ. Virilism of pituitary origin then is of the nature of a release of androgenic factors in the ovary. Primary adrenal virilism on the other hand by increasing the fuchsinophil cells in the gland positively increases the androgenic factor though as shown by Achard and Thiers as long ago as 1921 both pituitary and adrenal factors may be involved. This was confirmed by Parkes Weber's case reported in 1926 and included in Cushing's original survey in that case there was a small basophilic adenoma in the pituitary with adrenal cortical hyperplasia. But in such cases it would appear likely that the pituitary changes are primary so great is the influence of the pituitary on the other endocrine glands. In this monograph by Mr Broster and his fellow workers the general principle is laid down that the occurrence in the female during early foetal life of a short period of androgenic heterosexual development of adrenal cortical origin introduces an element of instability in the female which is rare in the male. It is generally admitted that the earlier in life that such heterosexual elements increase the greater the physical abnormality while with later changes the psychological abnormalities predominate. We are left with the conclusion that feminism in males is purely psychological except in the rare instances of an included female twin forming a teratoma.

The thanks of the profession are due to Lord Wakefield of Hythe whose generosity has made this valuable addition to medical knowledge possible.

### A PNEUMONIA EPIDEMIC

Primary pneumonia is a notifiable disease in this country wherein presumably it is recognized as being communicable. Infection with a virulent pneumococcus from an extraneous source is usually assumed to be one of the factors in its origin but the established disease is not infectious to any degree warranting the accepted use of this term. Nevertheless it does occasionally assume epidemic form and an extensive outbreak of this kind with several points of unusual interest is recorded by W G Smilie G H Warnock and H J White<sup>1</sup>. It occurred in the State Mental Hospital at Worcester Mass. which has a population of 2400 patients and 600 staff and was preceded by an epidemic of influenza the pneumonia which followed however was primary and did not arise as a complication of an attack of influenza in the individual case. In all nearly 100 cases of pneumonia occurred over a period of eight weeks the great majority

of which were of the lobar type and proved to be due to a Type I pneumococcus. From the fact that they arose in many different parts of the hospital it appeared likely that this pneumococcus had become widely distributed and this assumption was confirmed by nasopharyngeal cultures from a random sample of the population fully 10 per cent. were carriers. The identification and isolation of all the carriers of whom there must have been at least 200 was considered impracticable and it was decided to try to check the epidemic by active immunization of the entire population. It will be remembered that studies have lately been made in the U.S.A. of immunization with preparations of pneumococcus polysaccharide. It has been shown by Felton that a single injection stimulates apparently adequate antibody production. Proof of actual protective power is naturally difficult to obtain in ordinary circumstances since the likelihood that any significant number even among some thousands of people will develop pneumonia within a given period is small. In circumstances such as those existing at this hospital the liability was great. Following almost universal treatment with a single dose of Felton antigen there was a sudden fall in the incidence of pneumonia of the few further cases which occurred only four were of Type I and all but one of these were in individuals among a group of 200 who had refused the antigen. At a late stage in these events a branch hospital which until then had escaped became involved in the outbreak and there were good reasons for attributing this to the transfer of a single patient who conveyed the infection from the main hospital. The experience already obtained was here repeated on a smaller scale with the important difference that the outbreak was apparently checked after only a fortnight whereas argument by analogy would justify an expectation that if unhindered it would have continued longer. In the absence of an adequate proportion of control cases these observations are not fully conclusive but they amply justify resort to this method of immunization whenever the rare and serious emergency of a pneumonia epidemic should arise.

### PREMEDICATION FOR TONSILLECTOMY

Questionnaires though a source of legitimate annoyance to busy hospital superintendents and practitioners serve as a convenient means of collecting statistical information if due allowance be made for the personal factor. On the whole they appear to be more widely used in America than in this country. An interesting survey concerning the use of pre-operative medication for tonsil and adenoid operations in thirty American hospitals has recently been made with the aid of questionnaires by H D Harlowe<sup>1</sup>. Of the 140000 operations reported in about 90000 some form of pre-operative medication was received. The number of hospitals using premedication as a routine was sixteen (approximately 50 per cent.) five hospitals (20 per cent.) used premedication to some extent and nine (20 per cent.) not

<sup>1</sup> *Bulletin of the National Association of Nurse Anesthetists*, February 1933.

at all. The surgeons in the habit of employing pre-operative drugs agreed that these were a definite aid in the anaesthesia. In a three-year period no serious complications were attributed to their use. The author's personal experience is based on a series of 250 tonsil and adenoid operations prior to which atropine, atropine and codeine, atropine and nembutal, or atropine and morphine had been administered. The observations were compared with those in a control series of an equal number of operations without pre-medication. The surgeons, anaesthetists, and nurses were invited to record their impressions carefully in each case. There was general agreement that with pre-medication induction of anaesthesia was shorter, the anaesthesia itself smoother, and less anaesthetic was required, and that the children behaved better after the operation. On the whole a combination of atropine with nembutal ( $\frac{1}{2}$  to  $1\frac{1}{2}$  grains from 6 to 16 years) was found to give the best results.

### MENIÈRE'S DISEASE

An important contribution to our knowledge of the pathology of Meniere's disease comes from the Otological Research Laboratory of the Johns Hopkins University,<sup>1</sup> based on a study of ninety-four patients with severe and intractable vertigo who were cured by intracranial division of the vestibular nerve. According to Dr Crowe it is a mistaken idea to look upon this brain operation as a terribly severe one. There is a great difference between the removal of a brain tumour and the operation for the cure of Meniere's disease. In one the intracranial pressure is increased, while in the other there is no change at all. In 90 per cent of the cases the disease was unilateral and the hearing in the affected ear was markedly impaired. The entire auditory nerve was cut in forty-nine cases, curing the vertigo but destroying what hearing was left. The necessity for preserving hearing, however bad, in the occasional case with bilateral Meniere's disease, or bilateral deafness from other causes led to the development of the ideal operation—division of the vestibular nerve alone—and this was done in forty-five cases. The vertigo is nearly always associated with tinnitus. Anatomically the only region where a single lesion could cause these two symptoms is in the membranous labyrinth where the vestibular and cochlear end-organs are bathed by a fluid common to both—the endolymph. Vestibular tests should be done in patients with Meniere's disease as part of the clinical investigation. Dr Crowe employed only the milder caloric test, because the rotation test may precipitate an attack of vertigo—so much dreaded by the patient. Nearly 30 per cent of the cases gave no vestibular response on the affected side, this is usually interpreted as pointing to a destructive lesion. Yet these patients with no vestibular response whatever, and whose chief complaint was vertigo were all cured when the vestibular nerve was cut, proving the inconsistency of the vestibular tests. If the symptoms of Meniere's disease were

caused by a lesion which destroyed the labyrinth or the nerves, they would be self-limiting. But many of the author's patients had had attacks of vertigo for fifteen or twenty years, and only an irritative lesion could cause symptoms over such a long period. A history of "whirling of surrounding objects" during an attack is most important in differentiating between the dizziness of Meniere's disease and that resulting from other conditions. The similarity of the symptoms of Meniere's disease to those produced by artificial stimulation of the labyrinth is evidence that this disease is due to a lesion in the static labyrinth, and not in the nerve or central vestibular pathways. If the symptoms of Meniere's disease were the result of a disordered metabolism of fluids (Mygind) or of sodium (Furstenberg), it is difficult to understand why such a disorder should affect one side only, and why division of one vestibular nerve cures patients whose dietary habits remain unchanged. Nevertheless, it is doubtful whether the metabolic theory can be dismissed so easily. If the symptoms of an irritative lesion of the membranous labyrinth are removed by cutting the vestibular nerve, the same must apply when the vertigo is due to oedema of the membranous labyrinth, or to an irritation of the nerve endings by excessive sodium ions. And the difficulty of accepting a unilateral irritation is the same whatever explanation of the pathology is put forward. Dr Crowe firmly believes that the vertigo and deafness of Meniere's disease are always caused by stimulation of, and degenerative changes in, the peripheral auditory and vestibular structures, most likely the result of pressure or chemical changes in the endolymph. It is impossible to have vertigo after section of the vestibular nerve, and the cure of the disease is due to this fact.

### CANNABIS INDICA

The pharmacology of *Cannabis indica* has been providing copy for the daily press in various ways. Since 1937 a great craze for hemp smoking has spread up across the United States from Mexico. Peddlers have sold it to young people under the name of "marihuana" or "Mary Warner," or it has been made up into cigarettes, which are known as "reefers." Numerous crimes have been attributed to marihuana, and special legislation has been introduced against its distribution. Nothing comparable with this has happened in this country, but cases do occur. The hemp seeds which are sold for feeding birds will sometimes germinate and grow in England, and not long ago a young man intoxicated himself with hemp grown in an English garden. Marihuana was blamed for the crimes of one of the soldiers involved in the recent shooting affray at Barkingside. Various different kinds of hemp were recognized at one time, but it is now thought that there is only one species and botanists do not distinguish between *Cannabis indica* and *Cannabis sativa*. The plant is an annual herb, which is usually three to six feet high, but may grow to eighteen feet. It is closely related to the flax. Its original home was Central Asia, but it has been spread by man all over the world. It is grown as a crop

<sup>1</sup> *Medicine* 1938, 17, 1

China Russia Southern Europe the United States and Chile for the sake of its inner bark or bast which is used for making twine harness thread carpet warp canvas sails and rope. The drug is prepared from a resin which is found on the flowers and stems and from the leaves and may be chewed swallowed or smoked. It was at one time included in the *Pharmacopoeia* as a hypnotic but was found to be too variable in activity. The active principle has not been isolated and the only method of determining whether a given sample is active or not is to test it on man or on animals. In some ways its action is like that of alcohol: it diminishes self-control and gives a feeling of exaltation and increased power. It has a curious action on the sense of time like that of the New Accelerator or H. G. Wells though less potent so that minutes seem like hours and hours seem like days. Dance band musicians find that when they have taken hemp the beat seems to come quite slowly to them so that they have time to interpolate improvised notes with comparative ease. The results of a careful investigation of the effects of hemp on a group of patients in the Pretoria Mental Hospital<sup>1</sup> have recently been published. It was found that the effects could be classified into several stages of intoxication. In the first stage the patients were mentally dull in the second silly and fatuous in the third emotionally unstable. After this some patients became irritable and pugnacious while others became depressed. The final stage was always one of deep sleep. There were surprisingly few after-effects. Addicts often show moral and mental degeneration but it is difficult to say whether this is the cause or the effect of the addiction. Murders suicides and sexual assaults have frequently been attributed to hemp and the word assassin which was first applied to a Muslim sect of the time of Saladin is said to be derived from the fact that this sect was in the habit of committing secret murders under the influence of hemp which is known as hashish in Arabic. In a recent paper which deals with the wave of hemp addiction in America Yawger<sup>2</sup> throws doubt on the theory that hemp leads to crime. A number of sensational cases have been reported but none of them has been fully analysed and Yawger doubts whether *Cannabis indica* is as potent an instigator of crimes as alcohol.

### AQUATIC LIFE

A pamphlet belonging to the Economic Series of the Natural History Museum has been prepared by Dr Anna Hastings for the better guidance of visitors to the extended exhibit at the Museum on the subject of water biology.<sup>3</sup> Among the forms of plant life which enter waterworks the green algae the blue green algae and the diatoms are described and species illustrated. Among the numerous animal invaders reference is made to the sponges rotifers and molluscs the planarian and oligochaete worms the crustaceans including *Daphnia* together with midge larvae stick-

lecks and cels. Algae and diatoms are abundant in rivers and crustaceans few. In reservoirs on the other hand all are strongly represented. Active plant proliferation in reservoirs is in general preferred to animal yet the animal type may sometimes serve to check superabundance of the plant as was shown lately when the removal of mussels from the walls of a reservoir was promptly followed by the appearance of excessive swarms of algae. These forms indeed may on occasion multiply beyond all reason. In 1931 *Oscillatoria* caused the water in a London reservoir to resemble cocoa and stained the filters so roval a purple that the whole system had to be put out of commission for several months. Normally however the algae render excellent service in waterworks by forming the biological film on the surface of sand filters which strain pathogenic and other bacteria out of the water though sticklebacks and midge larvae may at times mar the result by boring through the film and so causing unpurified water to pass into supply. In connexion with the present day use of traces of copper to control algal growth Dr Hastings cites the view of a Sanskrit author who wrote in 800 B.C. to the effect that it is good to keep water in copper vessels. In support of storage as a means of purification she recalls that Professor P. Frankland said:

The leap over Niagara leaves bacteria unscathed but they quickly disappear in the still waters of Lake Ontario. This compendious and pleasant brochure presents well chosen information which will be of interest to both purveyors and consumers of drinking water.

### PAROXYSMAL HYPERTENSION

Although one of the rarest diseases known the paroxysmal arterial hypertension associated with benign tumours of chromaffin tissue continues to excite interest probably because it has the distinction of being the only condition in which there is fairly precise evidence as to the causation of raised blood pressure. The condition was first described by L. Abbe Tinel and Doumer in 1922<sup>1</sup> and eighteen cases in all have since been reported: these are the subject of a recent review by Howard and Barker. The malady is characterized by attacks in which the arterial pressure rises to a level which may exceed 300 mm Hg for the systolic and 240 mm Hg for the diastolic readings. Between the attacks the blood pressure is usually normal in the early stages but later tends to be raised. The attacks themselves are often of a dramatic nature. They begin with palpitations paraesthesiae in the arms intense headache or severe pain across the chest. The skin becomes blanched or presents an ashen cyanosis the patient looks anxious or gravely ill. Intense constricting pain in the chest or epigastrium is common and also severe headache. The attack usually lasts for an hour or two and leaves the patient severely prostrated. Death occurred from acute pulmonary oedema in five patients during an attack. In every instance benign tumours of chromaffin tissue

<sup>1</sup> *S. Afr. med. J.* 1933 12 85.  
<sup>2</sup> *Amer. J. med. Sci.* 1938 195 351.  
<sup>3</sup> *Biology of Water Supply*. By Anna B. Hastings. M.A. Ph.D. London: British Museum (Natural History) (1s.)

<sup>1</sup> *Bull. Mem. Soc. med. Hop. Paris* 1922 46 932.  
<sup>2</sup> *Johns Hopk. Hosp. Bull.* 1937 61 371.

so called phaeochromocytomata, were found in the abdomen at operation or at necropsy. In most cases the tumour was situated in the medulla of the suprarenal gland, but in some it was distinct and in one case lay lateral and superior to the hepatic flexure of the colon. The size of the tumour varied from that of a cherry to that of a grapefruit. It is certain that in this disease the characteristic attacks result directly from the presence of the chromaffin tumour, for in nine cases in which the tumour was successfully removed at operation the attacks abruptly ceased. Since chromaffin tissue is the tissue which secretes adrenaline, it is natural to ascribe the attacks to the release of large quantities of this substance from the tumours. The behaviour during the paroxysms is not inconsistent with what we know of its action, but there are phenomena, such as the intense thoracic and abdominal pain and acute pulmonary oedema, which have never been produced in man by injection of adrenaline. It is, however, probable that the amount released from the tumours during the paroxysms is far in excess of the dose which even the boldest experimenter has yet dared to inject into his human subject. In this connexion it is of interest to note that the adrenaline content of the tumours has been estimated in five cases, in one it was within the normal range at 6.7 mg, but in four others the amounts were enormous, being 240, 275, 285, and 300 mg respectively.

### VITAMIN K

When chicks are fed on a diet deficient in certain fat-soluble compounds but adequate in respect to vitamins A, B<sub>1</sub>, B<sub>2</sub>, C, and D, and in total fat and cholesterol, they develop internal, subcutaneous, and intramuscular haemorrhages. This bleeding is associated with and apparently due to a fall in the amount of prothrombin in the blood. It can be cured by administering a substance found in the unsaponifiable non-sterol fraction of hog liver fat and in alfalfa. This substance is named provisionally vitamin K by Dam and his co-workers.<sup>1,2,3,4,5</sup> Dogs which have a biliary fistula suffer from a shortage of prothrombin. Since bile acids are necessary for the absorption of fats and sterols from the intestine, it may be that this shortage of prothrombin is due to the non-absorption of the fat-soluble compound, vitamin K. This factor cannot, however, counteract the haemorrhagic tendency in animals fed on spoiled sweet clover hay, which Roderick<sup>6</sup> and Quick<sup>7,8</sup> have shown to be apparently dependent on a deficiency of prothrombin. Vitamin K is found in hog-liver oil, cabbage, spinach, tomatoes, and alfalfa. It is not found in cod-liver oil or in wheat-germ oil. It is not easily prepared from these substances in a state of sufficient concentration for therapeutic use but fish meal freed from fatty

material by extraction with ether and allowed to putrefy forms a good source of this factor, which can be extracted from it by petroleum ether. The yield of oily extract is about 1 c.c. per lb. of fish meal. The activity of the product was demonstrable on chicks when quantities of 10 mg. were added to each kilogramme of food. Almquist<sup>10,11,12</sup> prepared a crystalline distilled product with protective activity when given as 2 to 4 mg. per kilogramme of food. The material contained no nitrogen, phosphorus, or sulphur. Its molecule contained an aromatic nucleus but not a sterol ring. Almquist found it to be alkali-labile but fairly heat stable. Apparently it is optically inactive and has a molecular weight of about 600. Ultra violet light and absorption materials such as aluminium oxide and magnesium oxide destroy its activity. The determination of vitamin K in foodstuffs must be made biologically. Chicks are fed on a vitamin K deficient diet for three weeks. Blood samples are taken and the plasma is diluted with Ringer's solution and caused to coagulate by adding enough of a clotting agent to make the clotting time normal. The substance whose potency is to be determined is then given to the chicks for several days and blood samples are again tested for clotting time. Clinical trials have been made of preparations of vitamin K whose potency had been determined by experiments on chicks. The doses used by Butt, Snell, and Osterberg<sup>13</sup> were 200 mg. of a preparation of which 23 mg. should be sufficient for a human adult as judged by a comparison of body-weights and food intake of human adults and chicks. Human bile or doses of bile salts (1,000 to 4,000 mg. of "bilron Lilly") were given with the vitamin K extract, the bile being given (in pineapple juice) by mouth or through a tube directly into the stomach or duodenum. Eighteen patients who had obstructive jaundice have been so treated, several as a prophylactic measure. Where the prothrombin time was already high a rapid decrease was obtained by the treatment. Vitamin K given alone to a patient who was not taking food by the mouth was ineffective, but when bile and vitamin K were given together there was a fall in the prothrombin time within twenty-four hours. Bile alone has frequently been effective in controlling bleeding in jaundiced patients who still eat normally. It is concluded that a normal diet contains vitamin K, or this factor may be formed by the action of putrefactive intestinal flora on the food. By the aid of the bile the vitamin K is absorbed. There is, however, no information yet as to how the vitamin affects the prothrombin content of the blood or the activity of the prothrombin in the phenomenon of clotting.

The next session of the General Medical Council will open on Tuesday, May 24, at 2 p.m., when the President, Sir Norman Walker, M.D., will take the chair and deliver an address. The Council will continue to sit from day to day until its business is concluded.

<sup>1</sup> *Nature* 1934, 133, 909

<sup>2</sup> *Ibid.* 1935, 135, 652

<sup>3</sup> *Biochem. J.* 1935, 29, 1273

<sup>4</sup> *Ibid.* 1937, 31, 22

<sup>5</sup> *Ibid.* 1936, 30, 1075

<sup>6</sup> *J. Amer. vet. med. Ass.* 1929, 74, 314

<sup>7</sup> *Amer. J. Physiol.* 1931, 96, 413

<sup>8</sup> *Amer. J. med. Sci.* 1935, 190, 501

<sup>9</sup> *Amer. J. Physiol.* 1937, 118, 260

<sup>10</sup> *Plur. Sci.* 1937, 18, 166

<sup>11</sup> *J. biol. Chem.* 1937, 120, 635

<sup>12</sup> *Ibid.* 1935, 111, 105

<sup>13</sup> *Proc. Mayo Clin.* 1938, 13, 74

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## TREATMENT OF OTITIS MEDIA

BY

WYLLS FORMBY, F.R.C.S.

Chronic Catarrhal Otitis Media

This is an insidious sclerosis of the middle ear often referred to as dry catarrh causing deafness of varying degree which is almost always progressive. Frequently the ear condition is associated with definite pathological changes in the upper respiratory passages but in some instances no such changes can be discovered. In other

cases teeth, tonsils and adenoids should be eradicated and deformities of the nose interfering with the normal airway corrected. While gross abnormalities requiring surgical intervention will often be present many cases will be met with in which no abnormality is evident. In these the prognosis is bad but the patient's general health should be maintained at the highest possible level and every effort be made to safeguard him against catarrhal infections of the nose and throat. The patency of the Eustachian tubes is of the utmost importance and obstruction of them leads to a rapid loss of hearing and to changes in the middle ear which soon become permanent. The condition of the Eustachian tubes is ascertained by

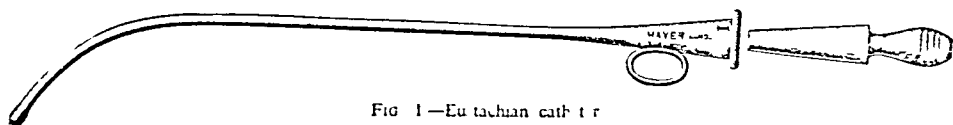


FIG 1—Eustachian catheter

cases the ear affection occurs some months or years after an acute otitis media.

Starting at any age there is a history of increasing deafness in one or both ears usually tinnitus and frequently a blocked feeling in the affected ear. The variations from the normal seen on inspection of the drums over a series of cases are numerous but in any one patient little alteration may be visible. Unfortunately the condition of the membrana tympani has no direct relation to the degree of deafness. The most constant alteration in the drumhead is an increase of its normal concavity usually called retraction. The cone of light is distorted the long process of the malleus is drawn upwards and backwards and the

inflation with a catheter or by Valsalva's method. The latter is a simple procedure and should be tried first. Viewing the drumhead through a Siegle's speculum instruct the patient to close the anterior nares by pinching



FIG 2—Auscultation tube

short process projects conspicuously into the meatus. The outer surface of the drum is dull instead of shiny, whiter in colour and irregular in texture. In some cases this latter change is due to patchy thickening of the tissues of the drum and in others there are areas of atrophy. Viewed with a Siegle's speculum these irregularities are more evident and it will be found that the mobility of the drum is altered as a whole and often is not uniform over its extent. General retraction produces a lax and very mobile drum; atrophic areas move freely while the remainder is stationary. Not infrequently adhesions form between the drum and the inner tympanic wall and in these cases portions of the membrane are fixed and slight variations of air pressure produce no movement.

### PREVENTIVE MEASURES

Every case of chronic catarrhal otitis media must be thoroughly investigated with a view to determining the aetiology and giving treatment likely to prevent rapid increase of the deafness. Infection of the nasal accessory

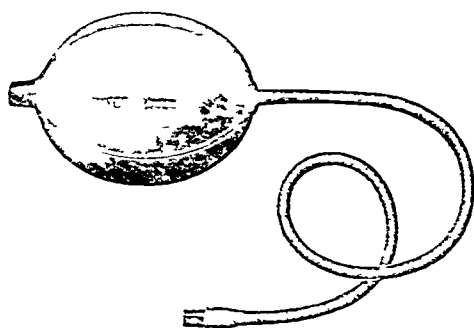


FIG 3—Poltizer bag

sinuses, teeth, tonsils and adenoids should be eradicated and deformities of the nose interfering with the normal airway corrected. While gross abnormalities requiring surgical intervention will often be present many cases will be met with in which no abnormality is evident. In these the prognosis is bad but the patient's general health should be maintained at the highest possible level and every effort be made to safeguard him against catarrhal infections of the nose and throat. The patency of the Eustachian tubes is of the utmost importance and obstruction of them leads to a rapid loss of hearing and to changes in the middle ear which soon become permanent. The condition of the Eustachian tubes is ascertained by

### EUSTACHIAN CATHETERIZATION

This is a means of determining the degree of freedom with which air can enter the middle ear via the Eustachian tube in cases where Valsalva's test is negative or doubtful and as a method of treatment for Eustachian obstruction. The requirements are a local anaesthetic (a solution containing 5 per cent cocaine hydrochloride and 1 per cent ephedrine), a nasal atomizer, a malleable cotton wool applicator, cotton wool, a Eustachian catheter, a Politzer bag and an auscultation tube.

First spray the nose with some of the local anaesthetic mixture in the atomizer. This makes the subsequent manipulations less painful and facilitates the passage of the catheter by shrinking the nasal mucosa. After four



or five minutes paint the orifice of the Eustachian tube and adjacent area of the lateral wall of the nasopharynx with more of the local anaesthetic. A brush is made for this purpose by twisting a small piece of cotton-wool firmly on one end of the applicator and bending the latter into a shape resembling a Eustachian catheter. A six-inch length of thin copper wire flattened at one end to hold the wool makes an excellent applicator. Applied in this manner the anaesthetic diminishes sensibility of the nose and nasopharynx still more, and at the same time, by its local vasoconstrictor effect, tends to open the orifice of the Eustachian tube.

Choose a catheter of suitable size—Nos 2 and 3 are the most serviceable, make certain that its lumen is clear, by a preliminary blowing through with the Politzer bag, and that the attachment on the latter fits the catheter easily and securely, sterilize, and introduce. The introduction is made by gently pushing the catheter along the inferior meatus of the nose, the distal end being in contact with the floor until it glides over the upper surface of the posterior wall and the convexity of the curve touches the posterior wall of the nasopharynx. The point is then rotated outwards into a horizontal position, where it meets the lateral wall immediately posterior to the Eustachian cushion. Keeping the proximal part of the catheter on the floor of the nose, withdraw it slowly, and the point will be felt to pass over the Eustachian cushion. In this position rotate the point of the catheter upwards and outwards, and it will come in contact with the orifice of the tube. The amount of curve on the catheter has to be adjusted to the width of the nasopharynx. If, after touching the posterior wall of the nasopharynx, the catheter cannot be rotated into a horizontal position, the curve is too large and must be lessened. If, on the other hand, the lateral wall cannot be felt, the curve is too short. Having placed the catheter in position—a manipulation that must be performed with the utmost gentleness—steady it with the thumb and index finger of the left hand, resting the remaining fingers on the patient's nose. One end of the auscultation tube is placed in the operator's ear, and the other the patient holds firmly in his ear on the side being inflated. Instruct the patient to breathe quietly through the mouth, attach the Politzer bag to the catheter, and gently blow. If the Eustachian tube is patent air will be heard to enter the tube with each inflation, and the loudness and pitch will vary with the diameter of the tube and the force with which air is blown in. When obstruction is complete no air entry is audible, and a blockage removed by inflation is heard as a sudden 'pop,' which usually causes the patient to jump. In most cases in which the lumen of the tube is unobstructed the patient is conscious of the pressure of air on the inner surface of the drum. Complete obstruction, unrelieved by inflation, is treated by the passage of bougies.

The above method of politzerization should be employed to relieve Eustachian obstruction that persists after an acute coryza, and in the treatment of those cases of chronic catarrhal otitis media in which the lumen of the tube is unduly narrow and is occluded from time to time. The frequency with which the process has to be repeated depends upon the response. This is estimated from the state of the hearing and the readiness with which an obstructed tube can be relieved after the lapse of one or more weeks. Between treatments many cases derive much benefit from an inhalation of menthol each night.

In spite of every attention there is often a steady increase in deafness to a degree that necessitates the employment of a suitable aid to hearing or instruction in lip-reading.

### Chronic Suppurative Otitis Media

In this condition, for weeks, months, or years there is a continuous or intermittent discharge of pus from the middle ear unassociated with pain or pyrexia, with a perforation of the tympanic membrane and some degree of deafness. The initial infection is a specific acute suppurative otitis media which for some reason has not resolved. A consideration of the factors likely to lead to chronicity is the first step towards determining the correct line of treatment. These factors may be classified under three main headings.

1 *Mastoiditis*—Inadequate drainage in acute suppurative otitis media leads to adhesions in the middle ear, persistence of infection, and not infrequently its spread to the mastoid antrum and cells. The so called chronic suppurative otitis media is then associated with a chronic mastoiditis, and must be treated as such. Mastoid infection is to be suspected as the cause of the chronic otorrhoea in cases where the perforation is in the attic region, where polypi persistently re-form in spite of cholesteatoma removal and cleansing, and when flakes of cholesteatoma are present in the discharge. An acute suppurative otitis media continuing to discharge for more than four to six weeks in the absence of an obvious cause should be drained by mastoidectomy.

2 *Poor Hygiene*—This leads to chronic suppurative through mixed infection and as a result of a lack of resistance on the part of the patient. Proper cleansing, good food, and improved environment will terminate the condition in many suppurating ears that are apparently becoming chronic.

3 *Infection via the Eustachian Tube*—This is the pathway by which the acute infection reaches the middle ear, and not infrequently it is the path by which the suppurative process is kept alight from a focus of infection adjacent to the nasopharynx. Strictly speaking, no case of otorrhoea should be labelled chronic suppurative otitis media while gross infection is present in the teeth, tonsils, adenoids, or nasal accessory sinuses. The middle ear is reinfected in a manner comparable to that occurring in mastoiditis, and it is the source of the infection that must first be treated.

Having excluded cases that can be classified under the above three headings, there remain those in which suppurative otitis appears to be limited to the middle ear cleft, and these may be designated uncomplicated chronic suppurative otitis media. No one method of treatment is satisfactory for every case. The most suitable therapeutic measures are indicated by certain individual characteristics.

### Large Perforations

Where the whole or a large portion of the tympanic membrane has been destroyed, the mucous membrane is normally moist, which lines the middle ear is exposed, and is readily irritated by foreign particles gaining access via the external meatus. The natural response is an excess of mucus, which is discharged into the outer ear. If the Eustachian tube is patent an acute coryza will largely produce a profuse discharge. The correct treatment for such an ear is to provide adequate protection, and a convenient method is to keep the external auditory meatus well greased with a mild antiseptic ointment—for example, ung. hydrarg., oxid. flav. 1 per cent. The patient must be warned against allowing water to enter the outer ear, and should be persuaded to co-operate in constantly attending to the necessary protection. The hearing in the ear should be

LESTER McEWAN CLINICAL PROBLEMS OF THYROTOXICOSIS



FIG. 1



FIG. 2.—Case IV. Photographs show absence of goitre in a case of well marked thyrotoxicosis (H.M.R. +54 per cent).

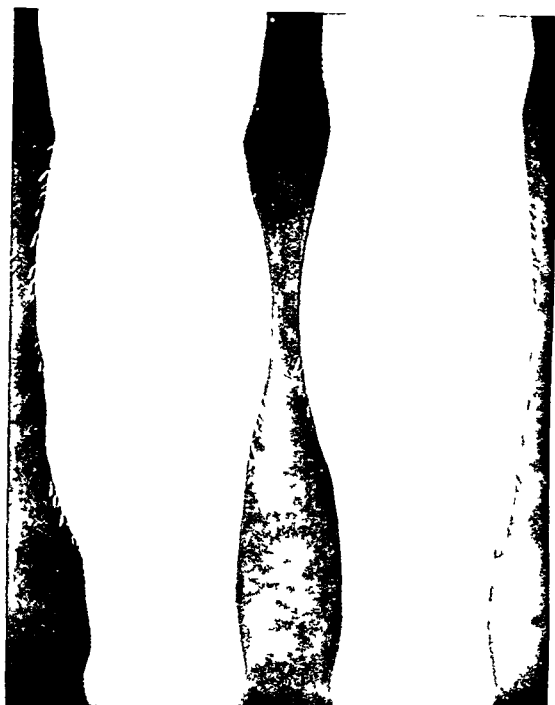


FIG. 3.—Case V. Localized myxoedema occurring before and increasing all highly after an otherwise complete cure of thyrotoxicosis by subtotal thyroidectomy.

R. C. COOKE AN ANALYSIS OF 350 CASES OF ABORTION

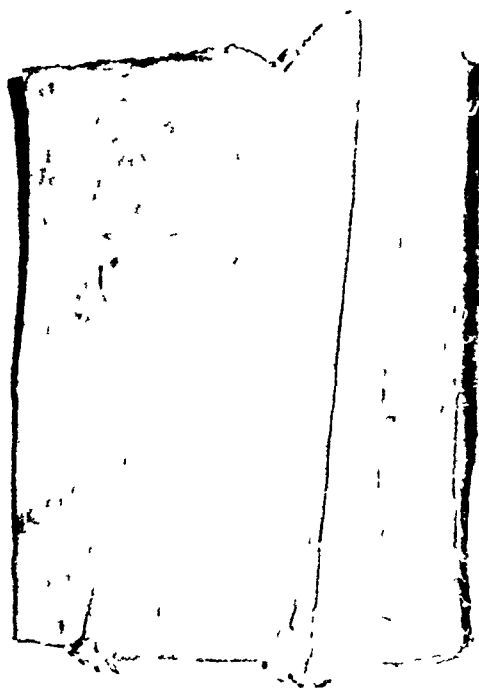


FIG. 1.—A piece of slippery elm bark.



FIG. 2.—Showing increase in size of a small piece of bark on soaking in water.



FIG. 3.—Stone from the bladder with nucleus of slippery elm.



R CAMPBELL BEGG HETERO LATERAL ECTOPIA OF THE RIGHT KIDNEY



FIG 1—Pyelogram of the right & lower kidney. An opaque catheter lies in the left ureter but the pelvis has not been injected

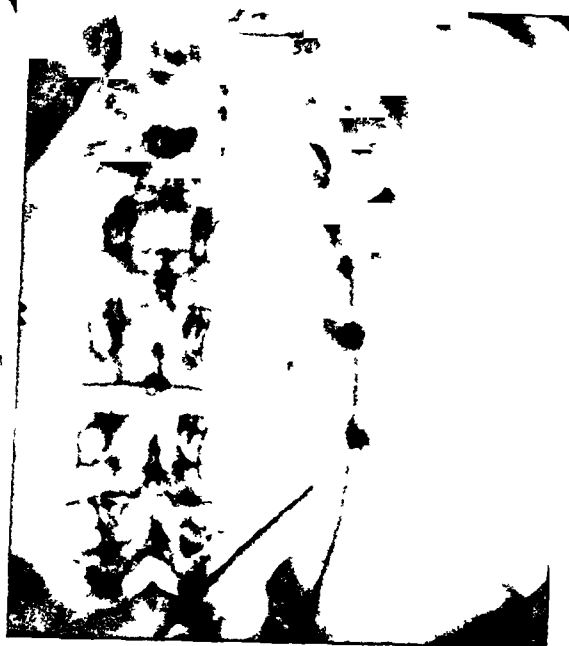


FIG 2—Retrograde pyelograms of both kidneys

F DE TEHOCZKY AND A ORBÁN HYPEROSTOSIS FRONTALIS INTERNA



FIG 1—Skiazgram of skull taken in 1934 showing conspicuous thickening of cranial bones with senile atrophy of the mandible



FIG 2—Skiazgram taken in 1936. Same changes as in FIG. 1 but more pronounced especially in the frontal bone above the sinus. The frontal portion of the falx cerebri is calcified



often quite good and measures employed to dry up the middle ear destroy the mucous membrane and greatly increase the deafness.

#### Small Perforations

A tiny hole in the drum hinders drainage and prevents any treatment being applied directly to the middle ear. In dealing with the condition therefore first enlarge the perforation with a myringotome; this can be done under local anaesthesia. Six to eight drops of Bonnin's fluid (equal parts of phenol menthol and cocaine hydrochloride) introduced into the meatus after it has been thoroughly cleansed will produce complete anaesthesia in from ten to fifteen minutes. Subsequent treatment consists in daily cleansing with peroxide drops followed by syringing with boric lotion and the application of spirit drops. If simple cleansing fails to terminate the suppurative condition zinc ionization will probably do so.

#### Otitis Externa

This has been dealt with in a separate article. (See April 30 p. 988)

#### Granulations and Polypi

When present these must be removed. Small collections of granulation tissue are best destroyed by touching the surface with solid silver nitrate having first anaesthetized the area by applying 10 per cent cocaine hydrochloride for ten minutes. A convenient way of applying the silver nitrate is by fusing a small bead on to one end of a copper wire probe. Larger collections should be removed with a small scoop or aural curette after anaesthetizing with Bonnin's fluid. Apply a few drops of adrenaline 1 in 1000 to stop the bleeding then cauterize the area with silver nitrate.

#### Polypi

The main mass is removed with an aural snare. If the meatus is not obstructed to a degree that prevents the introduction of a local anaesthetic Bonnin's fluid will suffice but many cases will require a general anaesthetic. The snare is introduced over the polypus and slid down to its base which is then cut through. On no account must a polypus be dragged away from its attachment which may be to the inner tympanic wall. Bleeding is controlled by adrenaline and packing. Any pieces of the polypus remaining after the use of the snare are removed with a curette and by cauterization. After treatment entails regular cleansing and frequent inspection so that any recurrence can be immediately dealt with by the further application of caustic.

#### Marginal Perforations

These and the presence of polypi and granulations usually indicate infection of bone. The carious area is frequently quite small and can often be eradicated through the meatus. As mentioned above the base of a polypus should be scraped with a curette or be cauterized. Marginal perforations often continue to discharge because of the existence of caries in the tympanic ring where it forms one edge of the perforation. Removal of the diseased area with a small sharp scoop and subsequent cleansing will usually terminate the otorrhoea.

## INTERFERENCE WITH WIRELESS RECEPTION BY ELECTRO-MEDICAL APPARATUS

At the suggestion of the Postmaster General the Minister of Health has issued a circular letter to local authorities (No. 1693) enclosing a memorandum on the prevention of interference with radio reception from certain types of electro-medical apparatus. A leading article on this subject appeared in the *British Medical Journal* of April 9 1938 p. 786. The memorandum was prepared by the Radio Branch of the General Post Office and its purport has already been brought to the notice of the principal voluntary hospitals in this country through the British Hospitals Association in the issue of *The Hospital* for September 1937. The memorandum is primarily concerned with certain types of diathermy installations working on medium waves short waves and ultra short waves.

#### Electrical Screening of Rooms

Radio receivers situated at up to one mile or more from the electro-medical apparatus may be affected so that a single apparatus may affect a very large number of receivers. The radio services which may be affected are not only the BBC broadcast and television transmissions on long medium or ultra short waves but also Government service Air Force civil aircraft police shipping and other commercial services in some of which the safety of life on land at sea and in the air may be involved.

The interference may reach a radio receiver by two means—either by conduction from the source along the electric supply mains from which it is eventually radiated to the aerial or by radiation from the source directly to the radio receiving aerial. The former method of propagation is known as mains borne the latter as direct radiation. Mains borne interference can be suppressed by connecting in the mains supply to the diathermy apparatus a suitable filter consisting of condensers and/or radio frequency inductors (chokes). Directly radiated interference can only be suppressed by enclosing in an electrical screen or Faraday cage not only the apparatus but also the patient and the operator. This is not practicable in the case of the mobile ward unit but may be applied to the considerably more common case in which the bulk of the treatment is given in one room set apart for the purpose. This latter case is the one which in practice gives rise to the large majority of complaints of interference with radio reception.

It is obviously undesirable to enclose the apparatus patient and operator in a closely fitting screen and the method of screening which have been developed by the GPO Radio Branch rely on fitting the screening material to the surfaces which enclose the room in which treatment is given. Two methods in particular have been developed one primarily for dealing with an existing room the other for application to a building which is in course of erection. In the former case metallized paper is applied to the walls doors and ceiling of the room above the plaster the floor being covered with either heavy gauge metallized paper or else with quarter inch wire netting. The floor screening material is covered by linoleum or other floor covering. The recommended type of metallized paper consists of aluminium foil (not sprayed aluminium or aluminium paint) supported on a paper backing. The windows are covered with wire netting.

It is desirable that provision should be made in any new hospitals or extensions to existing hospital buildings in which apparatus of this kind is likely to be used for the inclusion of screened rooms of the type outlined in the memorandum. The Radio Branch of the General Post Office is prepared to advise on any problems arising in the provision of screened rooms for future installations as well as on the prevention of interference which may be found to be caused by existing plant.

Pending further consideration of the important question discussed in our leading article regarding the suitability of certain wave bands which might be reserved for the users of electro-medical apparatus the Secretary of the British Medical Association would like to have as much information as possible from members possessing expert knowledge.

On the occasion of the appearance of the hundredth volume of the *Klinische Monatsblätter für Augenheilkunde* the publisher Ferdinand Enke of Stuttgart has founded a Theodor Axenfeld Prize for the best paper published in that journal during the past two years.

## CANCER OF THE CERVIX UTERI

## GROUPING OF CLINICAL STAGES

In the autumn of last year<sup>1</sup> we reviewed a pamphlet issued by the League of Nations Health Organization on the results of radiotherapy in cancer of the uterine cervix. This has now been followed by the publication of an *Atlas illustrating the Division of Cancer of the Uterine Cervix into Four Stages*—which has been prepared by Dr J Heyman and Dr M Strandquist of Stockholm. It consists of a series of thirty-eight diagrams in which the extent of neoplastic spread is clearly indicated, while facing each page of diagrams is the descriptive text in English, French, and German. The compilers have taken special care to ensure an exact correspondence of meaning in the terms used in the three languages, a circumstance which greatly adds to the value of the book.

## Revised Definitions

In view of the experience gained since the four grades or stages were first defined in 1929, it has been found desirable to make some modifications in the various definitions, and these are included in the present work. Under the old rules of classification it often occurred that there were marked discrepancies in the reports from different centres owing to lack of agreement in the exact interpretation of the directions regarding grading.

The main causes of difficulty have arisen in differentiating between the second and third groups in those cases where the degree of parametric invasion was the deciding factor. In the definitions as originally given the extent of parametric invasion was based mainly upon the degree of uterine fixation. In the revised definitions the distinction between the second and third stages is based entirely on what can be ascertained by rectal and vaginal examination regarding the relationship between the growth and the pelvic wall. For this purpose the "pelvic wall" is understood to include the pelvic bone, muscles, fasciae, blood vessels, and lymphatic glands—that is, the pelvic wall as appreciated by the finger of the examiner. Considerable simplification has been made in those definitions where the grouping depends upon the vaginal extent of the growth. The definitions of 1929 were drawn up on an anatomical basis, and, as regards Stage IV, in order to counteract a generally accepted although erroneous idea that all "hopeless" cases should be referred to that stage. It often happens that cases which anatomically belong to Stage III are nevertheless "hopeless" owing to the patient's general condition, and conversely a certain number of cases which under the 1929 definitions belong to Stage IV are not hopeless.

## Accuracy and Uniformity of Grading

For these reasons it is suggested that Stage IV should consist only of those cases in which there is involvement of the bladder and rectum or where extension outside the true pelvis has occurred. It is admitted that this revision of definitions will reduce the comparability between results obtained at the same clinic before and after 1938, but this is regarded as of minor importance in view of the greater accuracy and uniformity of grading, while the results obtained in different clinics for the same year will be strictly comparable. The allocation of any

case to its proper grade should be governed by the conditions found on inspection, on bimanual examination—vaginal or rectal—and on cystoscopy when there is any question of the bladder being involved. In endeavouring to discriminate between an advanced example of a particular stage and an early example of a succeeding stage, it should be a general rule to allot cases to the prognostically more favourable earlier stage, so as not to raise unduly the proportion of favourable results in the less advanced grades.

The revised definitions as given in the present *Atlas* are as follows:

*Stage I*—The carcinoma is strictly limited to the cervix.

*Stage II*—(a) The carcinoma infiltrates the parametrium on one or both sides, but has not invaded the pelvic wall.

(b) The carcinoma infiltrates the vagina but does not involve its lower third.

(c) Endocervical carcinoma which has spread to the corpus.

*Stage III*—(a) The carcinomatous infiltration of the parametrium has invaded the pelvic wall on one or both sides. On rectal examination no cancer-free space is found between the tumour and the pelvic wall.

(b) The carcinoma involves the lower third of the vagina.

(c) Isolated carcinomatous metastases are palpable on the pelvic wall (irrespective of the extent of the primary cervical growth).

*Stage IV*—(a) The carcinoma involves the bladder as determined by cystoscopic examination or by the presence of a vesico-vaginal fistula.

(b) The carcinoma involves the rectum.

(c) The carcinoma has spread outside the true pelvis (below the vaginal inlet, above the pelvic brim, distant metastases).

## General Rules to be Observed

1 When allocating a case to a stage nothing but facts revealed by examination should be taken into account.

2 The stage of each case should be decided at examination prior to treatment, and this classification should remain. The classification may be postponed quite exceptionally and the reasons stated.

3 When it is doubtful to which stage a given case is to be allocated the earlier stage should be chosen.

4 The fact that a single case presents two or more of the conditions which characterize a particular stage does not affect the grading.

The *Atlas* will be found of the greatest value in all clinics where research work is undertaken, and its small size adds to its convenience for reference. We are asked to state that institutions wishing to collaborate in the international standardization of reports should communicate with Dr J Heyman, Radiumhemmet, Stockholm, from whom all necessary information can be obtained. Copies of the *Atlas* are procurable from the Publications Service of the League of Nations, Geneva.

<sup>1</sup> *British Medical Journal* October 16 1937 p 755. The original definitions of the four grades are reported in this annotation.

<sup>2</sup> *Atlas illustrating the Division of Cancer of the Uterine Cervix into Four Stages* according to the Anatomical Extent of the Growth. League of Nations Health Organization. Inquiry into the Results of Radiotherapy in Cancer of the Uterus (75 6d).

At the annual meeting of the Milbank Memorial Fund held in New York City on March 29, it was announced that nicotinic acid is now being artificially produced at so low a cost as to make it additionally useful in treating the poor man's disease. In the United States of America nearly half a million people suffer from pellagra, of whom 3500 die from the disease every year. It may be recalled that one of the pioneers to discover the cause of pellagra was Cesare Lombroso (1836-1909). An impetuous and versatile genius—at the age of 12 he published two small works on Roman architecture—he is chiefly known as the founder of the science of criminal anthropology. Fifty years ago, in his book *L'Uomo del Genio* (*The Man of Genius*) he advanced the theory that genius is essentially an epileptiform neurosis.

## Reports of Societies

### NON MALIGNANT OESOPHAGEAL STENOSIS

At the meeting of the Section of Surgery of the Royal Society of Medicine on May 4 Professor GREY TURNER delivered his address from the chair taking as his subject non malignant stenosis of the oesophagus.

Professor Grey Turner said that the practical importance of simple stenosis of the oesophagus was undoubted and during the last two or three years he had seen many examples of the condition. He had long been impressed with the difficulties in the management of some of these cases. In 1911 he saw a child aged 3 who was constantly eating and regurgitating whatever was put before him. Dilatation was carried out through the oesophagoscope and afterwards by bougies which the patient learned to pass. Now after twenty five years he remained well and with full swallowing capacity.

It had been traditional now for a long time to expect that these cases could be successfully dilated through the oesophagoscope and perhaps cured but this method was not always successful and was often attended with great risk.

A lad of 19 after dilatation of such a stricture became very ill and appeared to be dying of mediastinitis, an empyema also developed. He slowly recovered though gastrostomy had had to be undertaken to save his life. Exploration of the oesophagus from the abdomen showed that the stricture extended much too far up for any plastic operation and bougies could not be passed by the retrograde method. It seemed that a new oesophagus would have to be made but he persevered with bougies by the mouth although only the time the instrument could pass through the stricture in the first instance. The boy eventually passed the largest bougie and now four years later he was perfectly well although about once every two months he passed the bougie as a sort of insurance.

After describing two other similar cases Professor Grey Turner went on to say that sometimes this method could not be employed. In one such case he had exposed the oesophagus from the abdomen and had carried out cardioplasty with complete success. Twelve years afterwards the patient a boy remained fit and well and he had never had a bougie passed since the operation. The method of anastomosis was not often indicated but he had employed it in seven cases and in one especially in which the operation was conducted through the chest the result had been most satisfactory though unfortunately the patient was killed two and a half years later in a motor-car accident. A necropsy showed the almost impossible condition of the stricture from the point of view of any other treatment, and the effectiveness of the anastomosis.

#### Ætiology

The causation of fibrous stricture was usually quite obvious, it generally resulted from the swallowing of corrosive fluids. Nevertheless there were other causes such as local and general infections like typhoid and some of the other acute infective fevers. Though he had not seen the type of extreme destruction by digestion which Pringle and Teacher described he had very often noticed milder destructive changes in the oesophagus almost certainly due to regurgitation of very acid or perhaps toxic stomach contents in patients who had long been extremely ill. This condition must occur in many patients who recovered and he believed that a lesion thus set up might occasionally lead to benign stenosis.

Brown Kelly of Glasgow had shown that a secondary fibrosing condition might start in association with some

mild congenital defect. The diagnosis not as to the cause but as to the actual condition present was usually obvious but it was necessary to realize that there were cases in which difficulty occurred. In this connection he recalled a case which came under his observation before the diagnostic methods now employed were available. Owing to the extraordinary improvement after gastrostomy in this patient dilatation was carried out and with some success. Subsequent post mortem examination showed a well-developed growth. Such a sequence of events might be thought well nigh impossible in the old days but recent experience showed that there were still avenues of error.

#### Prevention of Stenosis

The prevention of stenosis in the presence of such conditions as were almost invariably followed by its development was important. Salzer advised the passage of instruments in the very early days although the traditional view was that it was better to defer any such treatment until four or six weeks after the accident. He had himself seen a perforation of the oesophagus by a bougie on the twenty-sixth day after the swallowing of carbolic acid. He would hesitate to attempt any dilatation until the stage at which fibrosis had become well developed. As to the ultimate condition of patients who had suffered from cicatricial stenosis of the oesophagus many—possibly the majority—might be permanently cured by persistent treatment but it must be realized that there was probably a residue of cases in which the tendency to recurrence persisted for many years and perhaps throughout life. One of his patients who first showed signs of such a lesion when aged 7 had been treated with great success and at 16 was able to swallow normal food. Of late years however she had neglected the regular use of the bougie and now had some pain behind the sternum and a skiagram showed that there was a well defined hold up at the lower end of the oesophagus. It was Trousseau the French clinician who said that a patient using the oesophageal bougie would die of the instrument sooner or later and it must be recognized of course that there was danger in this treatment. Nevertheless experience led him to conclude that the careful self passage of bougies blind though it might be was certainly not attended with more danger than the rapid dilatation carried out through the oesophagoscope. It was undoubtedly a very dangerous practice to pass a blind bougie under an anæsthetic.

#### Other Methods of Treatment

Other methods were available of the value of which he was not unmindful. The swallowed string usually associated with the name of Plummer and so successfully employed by him had a great field of usefulness but there were many cases in which it would not avail and there were others in which the patient tolerated this method badly. In all difficult cases it ought to be tried before other measures were contemplated or rather when other and simpler methods had been tried and had failed. He had personally not had any success with the retrograde passage of bougies through a gastrostomy but others had had some success and it was a method that at least could easily be tried. Cutting through the stricture with a string saw was a violation of surgical principles which made no appeal to him. His experience in oesophagectomy led him unhesitatingly to condemn attempts at excision of a simple stricture with end to end anastomosis.

In cases that had defeated the various methods mentioned there was always the possibility of making a new oesophagus and to this end a vast amount of ingenuity had been exercised with an encouraging degree of success. The late Professor Zaajer of Leiden had done much along these lines. A friend of his told him that he had seen no fewer than eleven patients in one hospital in Moscow all suffering from simple stricture of the oesophagus, the result of swallowing caustic fluids in suicidal



attempts, in each case the surgeon in charge was busy with the formation of a new oesophagus. Surely, one could scarcely imagine that such a wholesale resort to this procedure must be necessary, and he could not but feel that more and more effort should be exercised in an attempt to restore the natural path rather than to by-pass it by means of a surgical exploit of such magnitude with its attendant risks.

At the close of the address, which was illustrated with lantern slides, Mr SAMPSON HANDLEY proposed a vote of thanks to Professor Grey Turner for a communication which had embodied an extraordinary number of interesting clinical facts. The President, he said, had won many triumphs in a field where the difficulties were enormous and where only great knowledge and great determination could bring successful results.

At a meeting of the Devon and Exeter Medico-Chirurgical Society on April 28, with Dr ROBERT SCOTT, the president, in the chair, Dr W. A. ROBB read a brief paper on the necropsies carried out in two cases of sudden death, death was due in one case to pleural shock and in the other to rupture of an aortic aneurysm. Dr CHARLES SEWARD described a case of profound anaemia which seemed to be nutritional in origin.

## Local News

### ENGLAND AND WALES

#### Financial Position of Guy's

Two years ago Guy's Hospital made an appeal for half a million for rebuilding and essential re-equipment. So far about £200,000 has been received. This has enabled the dispensary to be reconstructed, a children's ward to be erected, the nurses' home to be enlarged, and the debt to be reduced by some £82,000. A new appeal is now being made for the balance of the half-million, and Lord Nuffield, the treasurer of the hospital, has offered to give £80,000 for a new nurses' home if this balance—actually £316,000—is subscribed by the public. This large sum is needed mainly for the purpose of rebuilding or replacing some of the eighteenth century parts of the hospital, the state of which has become perilous. Guy's is one of the most picturesque of the London hospitals, but the age of the building in parts is very apparent. What is now the surgical block is really the old hospital building, not much altered since its erection in 1725. Rebuilding has been deferred again and again, but the time has come when the question cannot longer be shelved. The hospital architect reports that the outer walls are beginning to sink, and the whole of the surgical work is threatened with serious curtailment, if not complete cessation, for a while. The whole of this block will have to be pulled down, though it is hoped to keep the original façade. At a luncheon in support of the appeal, held in the board room, attention was called to the cracks across the ceiling painting—a florid composition which represents Thomas Guy being wafted up to heaven on a cloud—which are due to the subsidence of the walls. It was stated to be not a question whether the hospital could continue to compete with changing conditions but whether its fabric could remain standing with safety for those who work or lie in it.

The £316,000 for which the appeal is now made is required principally for the rebuilding of the surgical block to provide 300 beds but additional accommodation for ward maids is necessary, and it is also hoped to complete the reduction of the debt by setting aside a

further £83,000. The present maintenance cost of Guy's is about £221,000 annually, the assured income is £69,000, and the balance of £152,000 has to be obtained from voluntary sources but has not in recent years been fully forthcoming, with the result that a debt of serious proportions has accumulated. The appeal, signed by Lord Goschen, president of the hospital, Lord Nuffield, treasurer, Sir Alfred Beit and Lord Ebbisham, chairman and vice-chairman of the Extension Fund Appeal Committee, and Captain Eric Waley, chairman of the Standing Appeal Committee, points out that although Guy's is a London hospital, it does not confine its work to the metropolis. The records show that over 42 per cent of its patients come from the rest of the British Isles. The doctors, dentists, and nurses from its school serve in every part of the Empire. Lord Nuffield, in commending the appeal, states that during his lengthening association with Guy's he has been deeply impressed with the skilful way in which the hospital has been run on an economic basis, while ensuring the maximum of care and attention for its patients. "It is this fact which has influenced me so greatly in my decision to make a promise of £80,000 contingent on the balance of the amount appealed for being raised. This statement is made in no spirit of self-advertisement, but purely as an assurance of my knowledge of, and implicit faith in, Guy's. I therefore feel that I can, with a clear conscience, ask others to give, and look forward with confidence to the Governors being in a position to call upon me for this amount."

#### The Tavistock Clinic

The annual report of the Tavistock Clinic (formerly known as the Institute of Medical Psychology) states that much of the nation's problem of mental ill health could be solved if only there were more doctors trained to deal with such cases. Hence the Council has come to regard educational work among medical men and women as its most important national contribution, though the resources of the clinic are so small that only twelve a year can be trained. Some time ago the Council acquired a large site on which to erect an adequate medical school, besides a hospital and out-patient department. Lack of funds has held up the work, and meanwhile mentally sick people in all parts of the British Isles are drifting nearer to the "borderline" because there is no one to help them. During the year 1937, in the clinic's restricted premises in Malet Place, Bloomsbury, more than 23,000 hours were spent by the medical staff on giving individual treatment to specially urgent cases. The Tavistock Clinic was founded in 1920, and has grown from very modest beginnings to its present position in the medical world, owing to the enormous demand for treatment of a type of illness by psychological methods for which no out-patient facilities existed in this country before that date. Its work aims at the study, alleviation, cure, and prevention of those disorders of mind which are not classed as insanity or mental deficiency, but which nevertheless cause profound and widespread suffering and economic disability in the community. These comprise hysteria, morbid fears and obsessions, sexual abnormalities, as well as behaviour disorders in children, such as lying, stealing, truancy, and the like. Those of modest means who are in need of such treatment receive as part of their preliminary consultation a thorough physical examination, and both then and during treatment are seen by appointment just as if they were attending a specialist in private. In addition to the work of regular treatment, the medical staff give consultations to numerous patients whose doctors seek special advice.

#### Community Centres and Public Health

On May 5, at the London School of Hygiene, Professor Ernest Barker gave a Chadwick Public Lecture on Community Centres in Relation to Public Health. He pointed out that such centres and the associations behind them

in primarily on new municipal housing estates, but they were spreading to private housing estates, and even to the old and established quarters of our towns. Their aim was physical and general recreation, and they included juveniles as well as adults. They were a new and important development of the general English system of voluntary association; they were also a new and important development in the history of the promotion of public health. Their activities included gardening and various forms of physical recreation; they marked a general attempt to build a good and healthy life by common effort in harmony with the environment. They formed a natural purchase which the State could use in its efforts to encourage positive physical fitness. There were three ways in which the community centre might contribute to the cause of public health. In the first place the local authority might establish there some of its statutory medical services—for example, for maternity care and for infant welfare. Secondly the National Fitness Council might provide the community centre, from the funds at its disposal with equipment (such as gymnasia and swimming baths) enabling its members to carry their aim of physical recreation to greater lengths and so develop health and happiness more successfully. Thirdly it was possible (as had already been attempted at the Peckham Pioneer Health Centre) that a community centre might include some form of regular medical overhaul and health supervision among its activities. The Peckham Centre was indeed *suo generis* medicine and a body of doctors there came first and a community developed on that basis. With the community centre proper the reverse would be the case: the community would come first organized in an association and it might then arrange with the public health medical officers or by other means for some system of overhaul and supervision. In any case this development lay in the future: the Peckham Centre as yet was on the whole unique though at least one other centre had arranged for the provision of some medical facilities. Generally Professor Barker concluded the community centre apart from these specific methods rendered a general service to the cause of public health by being a voluntary organization whose members were fully occupied with activities (mental as well as physical) which used and developed body and mind simultaneously.

## SCOTLAND

### Insanity in Scotland

The report for 1937 of the General Board of Control for Scotland shows that on January 1 last there were 19,687 insane persons known to the Board exclusive of insane persons maintained at home. The number of certified patients admitted to institutions during 1937 was 2,735 or 171 more than in the previous year and the number of patients discharged included 579 recovered and 289 unrecovered. 1,449 patients died. Referring to the results of treatment of general paralysis by the induction of malaria the report states that in many patients the disease had been arrested and some were able to return to their occupations while the mortality in Scottish asylums from this and other syphilitic affections of the brain had decreased from 201 deaths in 1921 to 67 in 1936. The administration of this treatment in general hospitals in the early stages of disease had further diminished the number of beds required for general paralytics in lunatic asylums. Treatment of dementia praecox by injections of insulin or cardiazol had been tried, but although results were encouraging it was too early to arrive at definite conclusions. The report also mentions the increasing difficulty that had been encountered in obtaining female nurses for asylum nursing and states that in six institutions a forty-eight-hour week is already in operation while it had been

decided to introduce these shorter hours in another six institutions. The number of patients boarded out under private care at January 1 1938 was 29,400 of whom 1,144 were lunatics and 1,510 mental defectives. Reference is also made to the continued insufficiency of institutional accommodation for mental defectives and the dangers resulting from lack of regular and systematized training for juvenile defectives. It is false economy the report states on the part of local authorities to allow children under 16 years to go without training in habits and occupation for untrained and poorly supervised defectives especially those living under city conditions run a grave risk of getting into trouble. The cost of rate aided lunatics for the year was £971,211 and of rate aided mental defectives £302,288. The total cost of local and imperial funds amounted therefore to £1,273,499 of which £26,948 was recovered from private sources.

### Glasgow University

At the annual meeting on April 27 of Glasgow University General Council Sir Hector J. W. Hetherington, the Principal, spoke on the needs of the university. In the last three years he university had accumulated a debt on running expenditure of about £24,000 for which he had no reserves although some relief might be forthcoming from the Scottish Education Fund. A commission appointed by the Secretary of State for Scotland had been investigating the financial position of the four Scottish universities although its report had not yet been issued. The university was also in urgent need of capital—for example a great new chemistry laboratory was being erected in University Avenue at a cost of £16,000 and of that money they had in hand £15,000 so that a further £50,000 was necessary. The Government was paying £3 to the university's £1 for the cost of a new reading room which would be the central feature in the development of the Hillhead house site at a cost of £20,000 but the university was £1,000 short on this scheme. An offer of £10,000 on a 50 per cent basis had also been received from the Physical Training Grants Committee towards the cost of quarters for the physical welfare of the men students on the site of the present gymnasium; the university's contribution for this had still to be raised.

### Health of Glasgow Children

The report for 1936-37 on the medical inspection and treatment of school children issued by the education health service of the Public Health Department of Glasgow records a general improvement in the health of children in that city. It is stated that the average heights and weights are the highest since these reports were first instituted twenty-eight years ago. Gross and serious pulmonary conditions which were frequently encountered during the early years of medical inspection are now rapidly disappearing. Many children however receive treatment for pulmonary affections of a minor nature and this may be attributed to the growing appreciation on the part of parents that early treatment is followed by more complete and more rapid restoration to a normal state of health. The report states that there has been considerable development in the provision of new open air schools and of open air classrooms attached to existing schools. Whereas in 1930 there were thirty open air schools and nine old buildings with open air classrooms as extensions the respective numbers for the year under review were fifty-two and twenty-four. It is estimated that more than 25 per cent of the school population is now housed in open air schools and classrooms. The daily milk ration inaugurated early in 1935 is another factor contributing to the improved health of the children. Bottles containing one third of a pint of high grade pasteurized milk are supplied to necessitous children free of cost and to others at a charge of a halfpenny per bottle. More than twenty million bottles of milk were distributed during the year.

## Correspondence

### The Heart in Gall-bladder Disease

SIR—I was much interested in Dr S M Laird's paper (*Journal* April 23, p 884), particularly from the statistical point of view. There are certain debatable points.

The number of cases—namely, sixty-four—examined by Dr Laird appears to be much too limited. If one realizes that it is obviously necessary to consider different age groups separately, this number becomes even smaller (five eleven seventeen, and four in Dr Laird's paper). In view of the fact that the incidence of heart lesions is comparatively high after middle age it seems reasonable to investigate at first only younger patients say, between 30 and 35 or 30 and 40 years of age. If such investigations should prove definitely either positive association or no association at all between heart and gall-bladder disease for the age group considered, one could afterwards investigate other age groups if necessary.

This criticism would equally apply to the controls of Schwartz and Herman from the point of view of the small number of cases. The choice of controls, in which they exclude cardiac cases *per se*, is also, in my opinion, a debatable point. Would it not be wiser to apply the method very often used in statistics to this particular investigation—that is, *not* to choose a certain number of gall-bladder cases and an equal number of non-gall-bladder cases but to examine *all* cases in a certain age group admitted to hospital within a certain time and to divide them into gall-bladder and non-gall-bladder cases subdivide them again into cardiac and non-cardiac cases and then to investigate the "association" between gall bladder and heart disease in each group and subgroup? If this method is used the cases with normal gall-bladders would probably be much more numerous than those with disease of the gall-bladder and the difficult question as to which cases should be excluded from the control series would not arise—I am, etc.,

Jewish Herzl Moser Hospital,  
Leeds May 5

ALFRED MODEL

### The Planning of Maternity Hospitals

SIR—In the annotation in your issue of April 30 (p 955) you quote the recommendation of the Departmental Committee on Maternal Mortality and Morbidity that "new maternity accommodation should, when practicable, be associated with general hospitals, but you add "it is now however generally accepted that this recommendation is not in accordance with the lessons of experience."

The experience of the members of the North-Western Branch of the Medical Superintendents Society has not led them to this conclusion and their experience of large maternity departments is not negligible since 2 to 3 per cent of the births of England and Wales take place in hospitals for which they are responsible. They have recently recommended that accommodation for maternity cases should be provided by municipalities in departments of general hospitals rather than in special hospitals, and they give a number of reasons for this recommendation. The municipal hospital must provide a complete service, and cannot choose and select cases in the same way as a voluntary organization. Hence provision must be made for all sorts of difficult and awkward cases that do not fit

into the neat classification scheme of the ordinary voluntary hospital. It is much easier to deal with these cases when in the background are the resources of a general hospital.

Pregnancy may be complicated by general disease or injury, by venereal disease, by tuberculosis or other infectious disease. It is greatly to the advantage of patients so affected if there is in the hospital a staff specialized in all branches of medicine and surgery to give advice on treatment. The services of the special departments of the hospital, such as the x-ray department or the physiotherapy department, can be used for diagnosis and treatment. A general hospital will have a complete pathological department. The post-mortem work can be done by someone who is not in the actual practice of midwifery. The paediatric physician on the staff will be able to advise on diseases of the new-born. Cases of puerperal sepsis can be nursed in a ward attached to a medical unit attended by nurses who are not doing midwifery, yet they remain under the supervision of the maternity staff. Cases of diseases and complications of the puerperium can be admitted to general wards under the care of the maternity medical staff.

Gynaecology is very intimately associated with midwifery. In a general hospital the gynaecology wards together with the wards for abortion, will be under the same staff as the maternity unit. In the wards of a general hospital patients who are admitted suffering from some general disease such as pneumonia, cardiac disease, etc., are sometimes found to be pregnant. These patients are likely to benefit by the advice and treatment of an obstetrician. Lastly, in a general hospital there will be a medical and lay administrative staff to give help in all kinds of administrative matters—I am, etc.,

HENRY H. MACWILLIAM  
Chairman North Western Branch Medical  
Superintendents Society

Liverpool May 2

### Sulphanilamide and Pentothal Sodium

SIR—Since the recent increase in the use of sulphanilamide preparations, an anaesthetic risk has arisen which I have not yet seen mentioned in the medical press. It is well known that in certain individuals the simultaneous administration of sulphanilamide and drugs containing sulphur may cause sulphaemoglobinaemia. As the molecule of pentothal sodium contains a sulphur atom and the drug is usually given intravenously, it seems very probable that trouble may arise if it is given to a patient who is receiving sulphanilamide—I am, etc.,

London, NW 8 May 3

C. LANGTON HEWER

### Divinyl Ether Anaesthesia

SIR—General practitioners working at small hospitals need a good method of anaesthesia which can be applied safely and conveniently to a wide range of different cases. In many such hospitals a Boyle's apparatus is available. As sent out by the maker this apparatus usually has a bottle for chloroform and one for ether. Filling both bottles with ether is a common practice and has the advantages of safety and a high concentration of ether. Induction is not very rapid and large quantities of ether have their disadvantages. Since reading Dr V. Goldman's paper (*Journal* December 25 1937 p 16) I have used one part of divinyl ether to three of ethyl ether in the first bottle and ethyl ether alone in the second bottle. (The divinyl ether has been obtained from May and Baker under the trade name of *vinyl-ether*.)

I have given this mixture to twelve children for gonorrhoea and to seventeen adult patients of both sexes whose ages ranged up to 70 for procedures varying from appendicectomy to haemicolectomy. The premedication undertaken varied: two or three nervous patients had morphine grain 1.4 and hyoscine grain 1.150. At least three of the adults and most of the children had no atropine but most of the adults had 1.75 grain of atropine. In every case induction was smooth, quick and easy except for momentary cyanosis with mucous obstruction in one child who had had no premedication but gave no real anxiety. The mixture was demonstrably stronger and less irritating than ether but does not seem so strong as to be dangerous even in inexperienced hands.

I have so far turned on the ether bottle freely for upper abdominal operations but the relaxation even in patients who were not deeply under the influence of the ether has usually been excellent. A patient under gas and oxygen and divinyl ether-ethyl ether anaesthesia who would almost become conscious if given a few breaths of air may never be fit for abdominal surgery. As regards mouth and throat operations tracheal intubation has disadvantages and is not always easy for those who do it rarely. Divinyl ether (with gas oxygen or air) has to be used in prodigious quantities in a robust patient a practical alternative to these without chloroform is valuable. The mixture given continuously with gas and oxygen into the side of a mouth open for tonsillectomy maintains as easily as chloroform would anaesthesia of moderate depth.

Recovery after short but quite deep anaesthesia is disconcertingly rapid—an excellent thing when little post-operative pain or shock is expected. Where pain or shock was expected it appeared wise to order morphine before, during, or immediately after the operation. The post-operative stage is satisfactory: there has been practically no vomiting, no untoward symptoms have arisen and I think the elderly patients have coughed a good deal less than one would have expected after ethyl ether alone. In conclusion this mixture appears to me to possess such definite advantages that in spite of the high price of divinyl (approximately 3s. per ounce) it ought to receive a much wider trial than I can give it—I am etc.

Woodford Jubilee Hospital April 28

E. B. GROGONO

### "Gonococcus Antitoxin" for Gonorrhoea

SIR—In answer to the adverse critics on this subject in your recent correspondence columns may I refer again to my reply (March 26 p. 701) to the paper published by E. T. Burke, J. Gabe, A. H. Harkness, and A. J. King (March 19 p. 605) in which they recorded complete failure to obtain a single satisfactory result with gonococcus antitoxin.

In my last paragraph I wrote

"Upon analysis of twenty-five consecutive cases treated [with gonococcus antitoxin] in the latter part of last year the results are comparable to those already published by myself. As it is impossible to give full details of the protocols here I will gladly submit these records to the authors. They are not from my pen but are the routine observations written by my various medical colleagues in the venereal department at St. Thomas's Hospital."

May I add that the cases were carefully investigated and protosil or some allied substance was not used by way of adjuvant.

These authors did not accept this invitation nor before the publication of their article, either verbally or in writing,

did they ask for my observations or inform me of their experiences with the antitoxin (a new product still in the early stages of investigation). I extend the invitation to your correspondents Dr. W. Lester and Dr. N. Seddick Taylor to visit the venereal department at St. Thomas's Hospital and inspect the protocols for themselves. There the patients suffering from acute gonorrhoea are given antitoxin as a routine. May I repeat that this would not be done nor would I permit it were they obtaining no therapeutic benefit or experiencing the severe reactions described in such a high percentage by E. T. Burke and his co-workers.

At the moment the response of cases (the tenth series under observation) to antitoxin with sulphamidamide is being investigated. The possibility of such a combination was referred to by me in *St. Thomas's Hospital Reports* (1937 2 67) and more recently in the *Medical Annual* for 1938—I am etc.

LONDON W.1. MAY 2

T. A. WYL DAVIES

### Insulin for Schizophrenia

SIR—In reply to Dr. B. H. Shaw's letter of your issue of May 7 (p. 1026) there are some points which might interest him in a paper I read before the Royal Medical Psychological Association (S.W. Division) a day or two ago. The subject was "A Variation of the Treatment by Insulin Shock" in which neither shock nor coma is produced. Insulin and histamine are used together in subtoxic doses the patient is in no way upset and the results so far are good. In this method there is no sudden spectacular return to normality but the return proceeds slowly and can be watched. If the patients react well they do not seem to slip back—I am etc.

Salisbury May 7

HORACE HILL  
Medical Superintendent  
Laverock House

### Origin of Cancer

SIR—In connexion with the interesting correspondence on the causation of cancer I would like to submit the following suggestion.

In his embryological development the individual reproduces the history of his race—that is in order to reproduce our kind a start has to be made from the beginning. In the mental sphere we find the same start *ab initio* whenever a major readjustment to circumstances is required. For instance grief is a condition not far removed from the infantile state and the same applies to many psychoses and psychoneuroses. Without a due sense of grief or other infantile regression complete recovery or readaptation is impossible and neurosis results.

The second principle concerns the nature of the tissues attacked by malignant disease. The body or that part of the psychosomatic unit which is exposed to the material environment may be said to possess two surfaces. The aerial surface comprises what is usually known as the outer surface with its intolings the skull sinuses, auditory meatus, etc. The aquatic surface on the other hand consists of the linings of the blood vessels, lymphatics, pericellular lymph spaces and the cell membranes. This separation into aerial and aquatic surfaces is not however quite perfect. The respiratory tract and the gastrointestinal canal for instance are purely aquatic surfaces in aquatic animals. In land animals on the other hand the lining membranes of these tracts are intermediate between the two types of

surface They are phylogenetically newer and therefore less adapted to their function than the older aquatic surfaces They are also moist surfaces exposed to both aerial and aquatic conditions and they have not had the chance of adaptation to their conditions that the outer aerial surface has had through constant exposure to the air In the case of the gastro-intestinal tract, bile ducts and canaliculi, etc., the constantly moist conditions preserve in them a tendency to retain their aquatic character whereas the presence of gases must create some tendency towards the establishment of an aerial form of surface That this transitional surface is a special surface is shown by the special types of epithelium with which it is covered

It is not surprising that these transitional tissues, subject to both an aquatic and aerial environment, should be burdened with an inherent instability If we may infer such an instability then readjustment must at times be necessary and as we have seen, where readjustments are required the repetition principle operates, the tissue reproduces itself in embryonic cells, and, since readjustment to such difficult conditions must be hard to achieve, the process continues, the affected organ forming as it were, a uterus in which the new tissue proliferates

Malignant disease would appear, then, to be an attempt on the part of an unstable transitional surface at readjustment in accordance with the repetition principle to external conditions which are not constant—I am, etc,

Exeter May 7 H WILFRED EDDISON, M D, D P M

SIR—There is such an amount of reasoning from analogy in the most interesting instructive, and valuable discussion on malignant disease in your correspondence columns that one might well be certain of the facts

Mr E G Fenton (*Journal* May 7, p 1024) states that the potential of a weight in a grandfather clock is greatest at the top Surely the potential is the same all the way down else the clock's speed must vary Is Mr Fenton's 'developmental energy' not our old friend and mystical power the force *hypermecanique* that vital force which, neither physical nor chemical in its nature, was held to be active in living organisms only? This doctrine was finally overthrown It slips in now and then Whether it explains anything is a point and the *Encyclopaedia Britannica* says It would, it is true appear as if in our day, after the lapse of half a century, mystical tendencies were again disposed to crop up in the investigation of life This makes it all the more important to get the facts right Surely the weight is at the same 'potential' all the way down—I am, etc,

Crews May 7

W L ENGLISH

SIR—I should like to put forward the following hypothesis is going some way to explain the relation of the two causes of cancer—virus and 'chronic irritation' If the intracellular virus which is fundamentally responsible were only able to penetrate the cell membrane and successfully invade the cell during a particular phase of cell division or mitosis in which the resistance of the cell membrane was weakened, then the operation of some factor which prolonged this phase might be a necessary preliminary to the formation of a cancer cell Such factors would be (1) most chronic irritants causing repeated division of the cells under unfavourable circumstances (2) antagonistic hormones one stimulating division and the other inhibiting it (3) the age of the patient and (4) vitamin deficiency In the case of (3) and (4) there

is a shortage of factors essential for cell growth In some animals the activity of a special strain of virus might be such that invasion was often possible without the aid of such a factor or with only the irritation of the injection itself to assist (Rous sarcoma), but normally both the seed and a certain amount of specially prepared soil would be necessary

In the human body the virus is probably universally present, but normal cell division provides an insufficient susceptible phase After successful invasion the virus causes changes in the nuclear material of the cell which, as has already been pointed out, are very much akin to fertilization, and the cell then goes on rapidly growing and dividing without regard to the needs of the body, its only function being to act as host for the virus with which every cell of the growth would be infected from the start—I am, etc,

London, W 1, May 3

C R ORME

### Sterilization of Hypodermic Syringes

SIR—In the *Journal* of April 30 (p 955) there is an annotation referring to the sterilization of hypodermic syringes I would like to describe a method I have used for over thirty years, never seeing any sign of sepsis after an injection I was taught by Sir Almroth Wright to sterilize the syringe with boiling olive oil in the following way Have in a small crucible half an ounce of olive oil and a tiny crumb of bread Put a spirit lamp underneath and boil till the crumb turns brown Then fill the syringe till avoiding the crumb Do this no more than twice, or the solder holding the nozzle to the glass barrel will melt Sir Almroth Wright told me that the heat of boiling oil will kill all spores as well as germs

The next point is the use of a platinum needle, which may cost 7s 6d but with care lasts for a year When about to give an injection all that is required is to draw the needle through the spirit lamp flame The needle becomes red hot, and is then ready to suck up the vaccine or other solution I have always used a Record syringe in a metal case that takes the syringe with the needle left on When going out on a visiting round I measured my dose in the syringe, boiled a drachm of water in the metal case, poured it out, and replaced the syringe in the case It was then ready for use If by chance I touch the needle on anything it was quite easy to put in platinum needle through a flame There is no need, in my experience, to use the boiling oil in the syringe more often than once a week if the needle is kept on the nozzle There must be hundreds of men who were trained by Sir Almroth Wright in his method of syringe sterilization Why they persist in using the messy, elaborate boiling water method with steel needles passes my comprehension—I am, etc,

Birmingham, May 4

J SANDISON CRABOE

### The Phenomenon of Refection

SIR—We have read with interest the annotation upon the phenomenon of refection in your issue of April 2 (p 741)

We have worked for some ten years on this phenomenon and our latest findings embodied in a thesis by one of us (P M Kon) in 1935 and reported in the *Journal of Hygiene* (1938 38, 1), may be of interest to your readers We agree with Nathan that no specific organism can be held to be responsible for refection Further we believe that undigested starch provides the substrate for the growth of bacteria producing vitamin B But we

found that the major difference between rejected and non-rejected rats lies in a lowering of the pH of part of the intestinal tract which in the rejected animal facilitates the absorption of the vitamin B formed by the intestinal flora. The condition thus established is analogous to that normally found in the bovine and the rejected rat like the bovine is rendered independent of an exogenous supply of vitamin B.—We are etc.

P. M. KOS  
S. K. KOS  
A. T. R. MATTHEW

The National Institute for Research in Dietetics  
University of Reading, May 2

### Tuberculo-protein

SIR—I was interested in the article on tuberculo protein by Dr A. T. Deig and others (*Journal* May 7 p. 992). Dr H. J. Parish of the Wellcome Physiological Research Laboratories kindly supplied me with a batch of tuberculo protein and I conducted a small investigation at the tuberculosis dispensary with it during 1957. I examined 100 patients, nearly all home contacts of tuberculous patients, varying in age from 3 months to 66 years. I injected into the skin of the right forearm 0.1 ccm of tuberculo protein and into the skin of the left forearm 0.1 ccm of 1 in 1000 old tuberculin. The results were noted either two or three days later.

In 26 patients the reactions were negative in both arms.

In 53 patients the reactions were positive and equal in both arms.

In 15 patients the reactions were positive in both arms but greater in the right (tuberculo protein).

In 8 patients the reactions were positive in both arms but greater in the left (old tuberculin).

In no case was one positive and the other negative.

When considering the inequality in reactions one should always remember the practical difficulty of injecting exactly 0.1 ccm into the skin on every occasion. As a result of this experience I came to the conclusion that for dispensary use, where considerable numbers of patients are tested and fresh supplies of old tuberculin are available tuberculo protein has no real advantage over old tuberculin. At the time I did not know of the work of Parish and O'Brien on the tenacity of tuberculin to glass and on some occasions the same syringes were used for both solutions, being washed out with surgical spirit and distilled water between each injection. Perhaps this was insufficient and because of it my results may be to some extent invalidated.—I am etc.

A. S. HALL

Harrold, May 9 Tuberculosis Officer to the Middlesex  
County Council

### The MRCP and Psychiatry

SIR—The L.C.C. Mental Hospitals Department is adopting a policy which may prove ultimately to be unwise. Medical officers in that department are now informed on their first promotion that subsequent promotion is dependent on their obtaining the MRCP. The following points should I think be considered:

1. Medical officers joining the service must obtain the DPM within three years or their appointment ceases. This is a reasonable stipulation as psychiatrists should be qualified in their special subject.

2. By specifying that MRCP is essential for promotion in addition to the DPM medical officers for a considerable time after joining the service concentrate on reading, theory examinations and attending courses. The result is that they have little time or attention for their proper duties of investigating and treating their patients and these will be neglected proportionately.

This stipulation is making the MRCP bear a significance which it is not designed to have. By forcing more and more people to take it it is becoming the qualifying examination in medicine and university degrees are being pushed into the back round.

MRCP does not necessarily make a person a better psychiatrist. Some medical subjects are intimately connected with psychiatry and these are presumably covered in the DPM course. But surely psychiatry is still the more important part of psychiatry in practice.

The work of a doctor in a mental hospital should be judged by his capacity to return patients to the community and to improve the lot of those unfit for discharge. To what extent is this aim being achieved under present conditions? Too often the M.O. looks at his patient through his stethoscope and being an MRCP is doubtless mightily interested. All honour to those of us who have laboured and been rewarded with the MRCP. But until a broader view is taken of mental illness and encouragement is given to psychiatrists who have a more comprehensive approach to the problems of mental illness many patients who might otherwise recover will continue to languish in mental hospitals.

I suggest that if higher academic degrees are wanted a psychiatric qualification—for example DPM Part 3—be arranged as a criterion of promotion in the service and notice be taken of the candidate's capacity to secure practical results by treatment of his patients. Our mental hospitals are overflowing. At present we are not doing as much as we might to get our patients well because we study their bodies more than their minds (if such a dichotomy can be allowed).—I am etc.

April 10

A.M.O.

### Treatment of Placenta Praevia

SIR—After dealing recently with a case of placenta praevia a condition which may be described as the general practitioner's bugbear I reflected as to the best course of action to be pursued in the treatment of this condition.

The patient was a primipara aged 22 and had had a normal pregnancy to within fourteen days of term. Twenty-eight days before term the head engaged satisfactorily and was in the first vertex position. Slight labour pains began at 6 p.m. one day and there was profuse bleeding. Vaginal examination showed a one finger dilatation of the cervix. On one side was felt the firm mass of a marginal placenta praevia. The membranes had ruptured and the foetal head was engaged in the pelvis. There was a steady loss of blood which increased with each successive pain. The mother's general condition was good. The foetal heart sounds were loud and at a rate of 120 a minute.

There appeared to be two alternatives—Caesarean section and conservative treatment. Caesarean section implied the danger and delay of transit (my patient was in an isolated cottage) with the additional risks of her exsanguinated condition before she reached the operating table and eventual sepsis. Conservative methods implied the awaiting of a slightly increased dilatation which would permit an internal version under general anaesthesia and plugging by the hand breech. I chose the latter course and waited until 9 p.m. There was now a two finger dilatation of the cervix. I therefore anaesthetized the patient and proceeded to dilate the cervix gradually with the first two fingers of my left hand without proceeding to an internal version. In about three quarters of an hour the cervix was sufficiently dilated to allow of the application of forceps. Free haemorrhage occurred during this interval but was not of an alarming degree. Delivery was performed very slowly since I was drawing an un moulded head through the pelvic cavity. An 8 lb live child was however eventually delivered without damage either to the cervix or to the perineum. The third stage was rapidly completed and the mother's condition though grave gave rise to no great anxiety. The foot of the bed was raised a binder applied hot bottles were placed at her feet and

pituitrin was injected. The district (Queen's) nurse who was my only assistant proved a very efficient anaesthetist and general help.

On the third day following delivery the temperature rose to 101° F and the lochia was slightly offensive. Prontosil by the mouth steadied the fever in two days, and the patient then had an uneventful puerperium being up and in good condition on the fourteenth day.

Is this method of manual dilatation of the cervix under anaesthesia followed by forceps delivery not a possible solution to the problem of treatment of placenta praevia, at least in its commonest lateral form? For all practical purposes the diagnosis of placenta praevia is by the vagina. This implies some degree of septic contamination, and it is very doubtful if Caesarean section is ever justifiable after a vaginal examination. Caesarean section is also a grave undertaking in the case of a young primipara in view of succeeding pregnancies. Turning by the internal or external methods and plugging by the half breech may save the mother but will lose the child. There does not appear to be any less risk of shock, haemorrhage and subsequent sepsis from the last-named manoeuvres than from that which I have outlined—I am, etc.,

Jersey May 5

H GORDON OLIVER

### Pasteurization of Milk

SIR—Much as I respect Dr Halliday Sutherland I regret to observe a tone of rancour in his letter in the *Journal* of May 7 (p. 1028). I hope I am wrong, as we are both trying to do a public service to the best of our ability. He infers that I am asserting without reasoning. I gladly leave that to the judgment of others. I do most certainly attach the greatest importance to milk tests for bacteria—he would be a fool who did not. But in Dr Sutherland's earlier letter and in mine we were discussing the effects of pasteurization on fertility, an entirely different proposition. I adhere to all I wrote. Tests on rats from that point of view are of very little value in respect of humans. I agree with Dr Sutherland that there are many causes for the falling birth rate—mostly economic—but careful reasoning does not convince me of any likelihood that the pasteurization of milk has an appreciable influence thereon. Milk in any form has but a small place in the adult diet. I fail to see any lack of logical deduction in the statement that a healthy nation, even if it should be slightly less fertile, is far and away a sounder proposition than a larger nation the stamina of which is undermined by a contaminated milk supply. I, in common with the vast majority of our people, will not accept Dr Sutherland's pessimistic prognostication that the nation will cease to exist if it persists in drinking pasteurized milk. I am optimistic enough to believe that Britons will like a lot of wiping out, and that pasteurization of milk will not help to that end.

I agree again with Dr Halliday Sutherland that no cow, if it be negative to the tuberculin test to-day, will be positive in three months unless it be infected in the interval. That is exactly what does happen, and was my obvious inference. The cow has been infected and the milk from that cow is sold to the public before the infection is detected as certified milk. He goes on to say 'and infection can be prevented. Will Dr Sutherland tell us how infection can be prevented with any degree of certainty?' The whole world is anxiously looking forward to the day when such a happy discovery is given to them.

Anyone can purchase what is termed 'clean' milk from almost any dairy, but that is not the point at issue.

The point is, Is that "clean" milk safe and entirely free from potential pathogenic germs? I deny that any raw milk, however clean it may be stated to be, can be guaranteed to be entirely free from active pathogenic germs unless and until it is pasteurized. The fact that 40 per cent of cows in Britain are tuberculous, as stated by Dr Sutherland, is a very conscious admission on his part that my contention that raw milk is an unsafe food (especially for children) is absolutely sound, and that pasteurization is the only scientific process at present known which can render milk safe for human consumption. Of course it can be boiled, but that is outside our discussion. It must be borne in mind that milk brought to London is conveyed for the most part in bulk and obtained from many sources—I am, etc.,

London S W 16, May 7

JAMES KIRKLAND

SIR—I notice that Dr James Kirkland, in your issue of April 30, questions the fact that certain strains of coli will survive the pasteurization process. I, in my ignorance, had imagined that this was now generally accepted, as certainly a number of bacteriologists whom I have questioned on the subject have been most emphatic, and if this was not the case, how was the coli test omitted from the qualifications of the pasteurized milk grade in the last Milk Act Amendments? Whilst admitting that the coli test may not give an accurate indication of the state of infection, I had always understood that at least if it was positive the evidence of infection was conclusive, while a negative result had not the same certainty.

To deal with Dr Kirkland's second question, it is I think, generally agreed that the process of cheese manufacture (in which a high acidity is induced in the milk) destroys the tubercle bacilli, and the argument for taking yoghurt has been that the bulgaricus and other lactic organisms have a controlling effect on the intestinal flora. I had imagined that the acidity induced in unpasteurized milk by the lactic organisms would have also had an effect in controlling the growth of pathogenic organisms of all kinds, and that therefore their growth in unpasteurized milk would have been less pronounced than in pasteurized milk once the bottle was opened in the hands of the consumer, for certainly the first step in pasteurization is the destruction of the lactic acid organisms. I have known people to say to me that they have kept pasteurized milk open for a week and still found it drinkable. Is this really in the interests of the consumer? It is for this reason that I ask for an experiment on the lines of my last letter.

In the annual report on the public health of Wiltshire, 1936, by Dr Wyndham Parker, County Medical Officer, it is stated that in 22 instances (one-third of the total number of samples) pasteurized milk supplied to schools failed if the standard applicable to the grade of 'Certified' milk is adopted—namely, that milk must not contain *B. coli* in 1/10th c.c.m. Does Dr Kirkland suggest that Dr Wyndham Parker did not take the necessary steps to see that these samples were not contaminated 'after the cap had been put on the bottle'?

Dr Kirkland also makes some statements about the use of the tuberculin test in ensuring a safe milk supply. As a T.T. milk producer of some nineteen years' standing and one who has taken an active part in tuberculosis eradication among our dairy cattle in Wiltshire, I think I may state that the only chance of improving the milk supply within three months of a saleable milk is where a closed lesion has broken down. Wiltshire

over the cattle have been regularly tested without restriction the chances of infection to an extent to endanger the milk supply at this stage are so rare as to be almost negligible. It would be as reasonable to suggest that travellers on buses or tube trains should insist that the vehicle should be disinfected every time a passenger left or a new passenger entered. Will Dr Kirkland suggest that there is no destruction of the enzymes or that he knows the full function of these in metabolism? I can only quote the case of a child suffering from toxine infection of the intestine who on pasteurized milk made no progress but rather went back. I was asked by his doctor to supply a reliable raw milk from my own farm and within three months that child was well on the way to complete recovery.

In view of the doubts which still exist in many minds both medical and lay are we entitled to insist that such a far-reaching step should be taken as to prevent the public from obtaining the milk supply which they believe to be best for themselves and for their children? I personally am convinced that much to their investigation is required—whether by a Royal Commission or other wise—so that some unanimity may be obtained and a decision may not be come to on short term tests with contradictory results whereas the full effects of diet may not show till the lapse of several generations—I am, etc.,

Rowallan Kirkwood, M.D.

ROWALLAN

\* This correspondence has now run its course and rhetorical questions can be answered elsewhere.—ED. B.M.J.

### Actinomycosis

SIR.—Will you permit me to point out that the reviewer of the monograph on *Actinomycosis* (May 7 p. 1006) thinks of me more highly than he ought to think when he suspects that the coloured drawings in the book are from the authors' own hand. Much as I would like it to be true the compliment is undeserved. Most of the coloured illustrations were done by Mr Thornton Shiells but the drawings of microscopic sections were from the hand of Miss Nicholson. I would like to take this opportunity of thanking them for their skilful work.

May I also correct an error which appears in the review where it is stated that about sixty cases in man occur in the United Kingdom annually. The fact is that about sixty persons a year die from the disease in England and Wales. This number would be from among several hundred attacked by actinomycosis—I am, etc.

London W1 May 8

V ZACHARY COPE

## The Services

The War Office announces that Dr I. W. Magill has been appointed honorary consultant in anaesthetics to the Queen Alexandra Military Hospital Millbank.

### NAVAL COMPASSIONATE FUND

At the quarterly meeting of the directors of the Naval Medical Compassionate Fund held on April 22 with Surgeon Rear Admiral S. F. Dudley O.B.E., Deputy Medical Director-General of the Navy in the chair the sum of £214 was distributed among the several applicants.

## Medico-Legal

### A FATAL SWAB CASE

A surgeon and a theatre nurse were sued for negligence at Manchester Assizes on April 25 before Mr Justice Atkinson and a jury by Mrs Elizabeth Mahon the mother of Thomas Mahon aged 25 who had died as a result of toxæmia due to a swab being left in his abdomen after an operation on March 4 1937.

Mr R. P. Osborne the resident surgeon who performed the operation at the Davyhulme Park Hospital near Streatham and he had done between six hundred and even rounded abdominal operations. The patient had a perforated duodenal ulcer and an immediate operation was necessary. Nurse E. M. Ashburner the second defendant, was his theatre sister. During the operation on a note of the number of swabs being used was kept on a blackboard in the theatre. The swabs were brought in bundles of five and were checked off the theatre nurse or staff nurse before use. He had no doubt that death was due to the swab and said that she had probably been a runaway as he had been told the number of swabs was correct. It was a packing off swab 10 inches by 1 inch and his theory was that the forceps must have slipped off the tape at some time during the operation. The only other explanation was that two swabs had been given him rounded up together one with forceps on and the other without. In cross examination he agreed that it was his duty to place swabs in and take them out. He had known forceps slipping off a tape during an operation. He could not explain why he had not seen the swab if it must have been hidden from immediate view. He demonstrated the operation to the jury on a plaster model.

Miss E. M. Ashburner said she counted the swabs placed them on the operating trolley and wrote the number on the blackboard. By the time they reached the table they had been checked three times. She had checked the swabs after this operation and found them correct. Mr A. Graham Bruce visiting surgeon to the hospital who said that Mr Osborne was a first class surgeon with experience and judgment, and judicious caution liked the system of checking swabs better than any other he had used or seen. Prokes or John Morley said that he had once been saved from leaving a swab in the patient by the theatre sister who told him just before he closed the abdomen that she had miscounted. A surgeon had to balance in his judgment the harm he might do by an extensive search against the harm he might do by leaving the swab behind. In order to avoid unnecessary search the surgeon relied on the nurse's count. An extensive and prolonged search might make the difference between life and death. The system in use was carefully thought out. If the surgeon had been told the swabs were correct and had no reason in his own mind to think they were not correct, it would be wrong to make a search.

The learned judge in summing up remarked that Mr Osborne whose evidence commanded belief said he had taken out all the swabs he could see and was aware of but did not suggest that he felt round for any others. The jury found that Mr Osborne did not make a reasonably sufficient search for the swabs and that if he had the search would have disclosed the missing swab. They assessed damages at £600 and £16 funeral expenses but added a rider that Mr Osborne was working under difficult circumstances. They found that Miss Ashburner had not been negligent.

In view of the possibility of an appeal comment on this interesting case must be postponed. Nurse Ashburner had actually had judgment signed against her before the trial as she had not entered an appearance—that is she had not formally acknowledged the writ or summons—owing to a misunderstanding. The judgment against her however was set aside by consent.



## Obituary

W H MAXWELL TELLING, M D, F R C P,  
Consulting Physician General Infirmary at Leeds

Dr Maxwell Telling, honorary consulting physician to the General Infirmary at Leeds and professor of forensic medicine in the University of Leeds, died at his home on April 28 at the age of sixty-three. His health had not been good for a number of years, but, except for a few brief occasions when he was actually laid aside by illness, he had continued most of his manifold activities until within three days of his decease. A somewhat slowly developing but progressive cerebral haemorrhage was the immediate cause of death.

Walter Henry Maxwell Telling was born in Surrey (his grandfather, Thomas Henry Maxwell, was a freeman of the City of London) and educated at Camberwell



Grammar School and Guy's Hospital. He graduated M B, B S Lond in 1898 and M D (with gold medal) three years later. After holding a number of junior appointments at Guy's he came to Leeds in 1900 as resident medical officer to the General Infirmary, an institution in which he was to serve faithfully and well for the rest of his life. He was elected assistant physician in 1903, physician in 1912, and consulting physician in 1932. He was elected a Member of the

Royal College of Physicians in 1902 and a Fellow in 1913.

Telling's first formal appointment in the University of Leeds—in May, 1906—was as a clinical lecturer in medicine. Prior to that he had had charge for a few years of a section of the pathological museum, and in 1907 he became honorary demonstrator in medical pathology. In 1910 he was appointed to the newly constituted post of clinical subdean, an office which he held for three years. Becoming lecturer in pharmacology and therapeutics in 1921, he succeeded Dr H J Campbell of Bradford in the chair of therapeutics in 1923. Two years later he was promoted to the chair of medicine and headship of the department of medicine in succession to Dr Wardrop Griffith. His tenure of this office was automatically terminated seven years later by his retirement according to rule after twenty years' service on the full staff of the Infirmary. As it happened, Dr F W Eurich had just retired from the chair of forensic medicine and so in 1932, Telling was appointed in his place.

While Telling's professional career was thus mainly and inseparably bound up with these two great institutions, the General Infirmary and the University of Leeds, he had many other professional connections. He was, at the time of his death, consulting physician to St James's Hospital, the Maternity Hospital, the Women's Hospital, the Jewish Hospital and the Cookridge Convalescent Hospital. In 1905 in conjunction with the late Mr

J F Dobson, he was responsible for the development of a children's clinic in what was then the Women and Children's Hospital. Seven years later this clinic was transferred to the Infirmary, and became in due course the large and important department which it now is. The department of dermatology also owed much of its subsequent success to his tireless advocacy and stimulating encouragement in the initial stages.

As physician and clinical teacher Telling held a deservedly high position. He had been trained in the school which had carried on the traditions of Bright of Addison, of Hodgkin, and of Willis, and it is not surprising that his clinical teaching was broad based on the sure foundation of a wide and intimate knowledge of morbid anatomy. In his own words "Pathology is the breath of life to clinical medicine. Upon it we rely more and more, both for data and for inspiration." There is more solid medicine to be *understood* in the post-mortem room than in either wards or out-patients, taken separately. (*University of Leeds Med Mag* 1931, 1, 11). When the writer of this memoir joined the staff of the Leeds Infirmary in 1910, Telling was in his seventh year as assistant physician, and as such was also an honorary pathologist to the hospital, responsible for the performance of post-mortem examinations on one day a week. It was a delight to see him at work in the post-mortem room. His thoroughness, his enthusiasm, his lucid and forceful expositions were at once a revelation and an incentive to the newcomer. As a clinical teacher he excelled. Thoroughness in the investigation of cases and accuracy in the recording of findings he insisted upon, and the summaries which he was accustomed to dictate to house-physician or clerk when patients were discharged (or died) were masterpieces of succinct yet comprehensive statement. In the post-mortem room, similarly, he liked to have a "pathologist's commentary" on every case in addition to the anatomical diagnosis.

Despite his concern at one time or another with various special departments Telling remained a general physician, of the broad-minded, commonsense type. For many years he had been actively interested in psychological methods of investigation and treatment, and indeed, was a pioneer, and the chief authority in the North of England, in this field. He was in full sympathy with the Archbishop of York's movement for the development of greater co-operation between doctors and clerics in psychological matters and for the better psychological education of both professions. In the field of forensic medicine he also occupied a distinguished and authoritative position. He had an intimate knowledge of the Workmen's Compensation Act and was a skilful and experienced medical witness. In the board of medical and clinical committee of the University and in the Infirmary faculty (of which he was chairman for many years) Telling did valuable and lasting work. Many of the best features of the clinical curriculum as it exists in Leeds to-day and of the teaching arrangements in the Infirmary and hospital originated in his active and fertile brain.

In his earlier years in Leeds Telling published many accounts of interesting and unusual cases. His contributions to medical literature were marked by his own intestinal diverticulitis, fibrosis, and other conditions and psychology in relation to mind. His most considerable achievement, rightly described as a classic, was the comprehensive paper, of numerous proportions published jointly with Dr O C C

the *British Journal of Surgery* (1916-17 4 465-530) entitled "Acquired Diverticuli Diverticulitis and Peridiverticulitis of the Large Intestine".

Some of his other professional and semi-professional activities may be briefly mentioned. He was intensely interested in the training of nurses and in their welfare and as an influential member of the nursing committee of the Infirmary he was able to do much for the furtherance of his high ideals in both these directions. He was largely responsible for the present nursing curriculum in Leeds and with Professor J. Kay Jamieson for the institution of a diploma in nursing in the University. The almoner's department of the Infirmary also owed much to his sympathetic interest and support. He was much interested in massage and related subjects and was a prime mover in the establishment of a department of chiropody in the Infirmary. During the war he was divisional medical officer at the East Leeds War Hospital section of the 2nd Northern General Hospital with the rank of lieutenant colonel. A member of the British Medical Association for nearly forty years he was secretary of the Section of Medicine at the Liverpool Meeting in 1912 and vice-president of the Section of Therapeutics and Pharmacology at the Cardiff Meeting in 1928.

His interests outside medicine covered a wide field. He was actively interested in freemasonry and was a Past Master of Zetland Lodge and a foundation member of the Lodge of Living Stones. In 1927 he was appointed Sen or Grand Warden of the West Yorkshire Province. He was made a Justice of the Peace for the City of Leeds in 1917 and was an active and keenly interested member of the Bench. He was a warm supporter of the Oxford Group Movement and a vice-president of the Leeds Psychic Research Society. Always fond of music and a regular attendant at the Leeds Musical Festivals he had been a staunch supporter of the ill-fated British National Opera Company. He was passionately fond of gardens especially rock gardens and in summer his own garden overlooking Kirkstall Abbey was a joy and delight. For many years he had been a keen and discriminating collector of china especially Chinese porcelain.

Personally Telling was in truth a remarkable man. Those who came in contact with him were immediately aware that here was one possessing great force of character. When he took up a cause he threw himself wholeheartedly into the fray giving and taking shrewd blows alienating some gaining the enthusiastic support and admiration of others. He was an excellent speaker persuasive in argument cogent in reasoning lucid in exposition and when occasion demanded delightfully and sparklingly humorous. No chit was ever more willingly served or held in more affectionate regard by his housemen. His was indeed a stimulating influence and he had a faculty for getting people to give of their best. In private life he was a warm-hearted generous and loyal friend and a genial and charming host. Dr and Mrs Telling's hospitality was proverbial whether in their home in Leeds in that delightful and secluded retreat at Airton in Malhamdale to which they used to go in summer or at the opera. In his later years Dr Telling had become more than ever interested in matters spiritual and psychic. In the remarkable tribute paid to him by the Vicar of Leeds at the funeral ceremony in the parish church these words occur:

"There was a quality in the mind and spirit of Maxwell Telling by no means common. He was one of the rarer

of his kind. He was one who lived his life really within his own soul. However actively and industriously he expressed himself in work for the benefit of his fellows his real life was in his own spirit. I have known few men who are quiet for truth and for an understanding of the deeper realities of life who were more devoted and more continued."

Dr Telling married Ingeborg daughter of Julius Aagaard professor of perspective in the Royal Academy of Copenhagen and sister of Dr Otto Aagaard the distinguished urologist of that city. Mrs Telling two daughters and a son (Dr Otto Maxwell Telling) survive him.  
M J S

#### G F W writes

The early and lamented death of Dr Maxwell Telling deprives Leeds of a formidable and impressive public figure. Not only was he possessed of an imposing outward appearance but he combined within himself a rare combination of remarkable zeal and diligence together with a gracious kindly and urbane nature. In the latter aspect of his character was not always immediately evident it was merely hidden by the earnestness and fervour with which he threw himself into any kind of work he found at hand. For many years he devoted himself with intense industry to the advancement of medicine in the West Riding of Yorkshire. He was a bold resolute and self-confident pioneer and he advocated many reforms which are now so much incorporated in the Leeds medical tradition that it seems incredible they could ever be the subject of controversy. Dr Telling was first and foremost an alert and learned physician but his energies overflowed freely into all kinds of activities in philosophy law art music sociology and mysticism. He was no amateur in these matters. Although he never enjoyed a complete and universal popularity yet he was rightly and proudly well aware of his commanding position in medicine. Not only did he undertake an immense consulting practice in the North of England but his opinion was eagerly sought in forensic and psychological matters and the prestige of his name was very great. In personal character he hid great kindness behind a somewhat forbidding external manner and many people looked upon him as harsh and brusque. He himself knew the whole range of human emotions and he had many triumphs and many disappointments. But in joy or sorrow he walked erect and imperturbable.

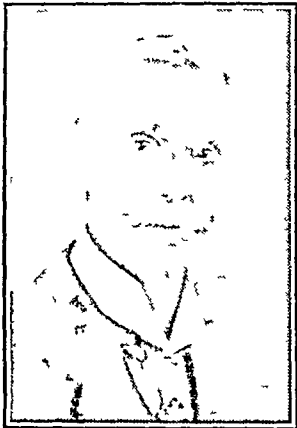
#### Dr Alexander Muirhead writes

Dr Maxwell Telling was one of those men whom our profession can ill spare. While many of our leaders were declaring that no real advance was taking place in medicine because of the lack of an undefinable something Telling came forward boldly and declared that we were being held up because we had left God out of our lives. I first met Dr Telling at a house party of the Oxford Group with which he became associated in the later years of his life. He fearlessly adopted the standards of Jesus Christ and wholeheartedly identified himself with what as a psychologist he described as "an ever increasing body of skilled and devoted workers who accomplish the healing of psychologically tangled lives in a way which comes near to the miraculous." He lost no opportunity of stressing his conviction that the true basis of health was spiritual. He was always available to "ounger" people and ready to put all the resources of his rich experience at the disposal of those whom he felt were truly serving others.

## PERCY FURNIVALL, F.R.C.S.

Consulting Surgeon to the London Hospital

Percy Furnivall who died on May 3, aged 70, received his medical education at St Bartholomew's Hospital, qualifying in 1892. After holding house appointments he took the Fellowship of the Royal College of Surgeons of England in 1895, and in 1898 was awarded the Jacksonian Prize of the College, an honour of which he was always very proud. He was next elected assistant surgeon to St Mark's Hospital for Diseases of the Rectum, and in 1899 a vacancy for assistant surgeon occurring at the



London Hospital, he applied for and was elected to this post. His coming to the

London was not too well received either by the honorary staff or by the students of the hospital, as there was in the field a strong candidate in a well-liked "Londoner," but the coldness of his reception was soon swept away by his geniality and friendliness. Furnivall rapidly identified himself with all the activities of his new hospital, and any idea that he was an "outsider" was quickly lost, and

the London Hospital never had a better or more loyal stepson. An athlete himself, as a young man he was an English amateur cycling champion. He took a keen interest in the students' sports, and was one of the first to identify himself with all the activities of the recently formed Students' Club Union. It was also largely due to his efforts that the London Hospital Masonic Lodge was inaugurated.

As a surgeon he was accurate in diagnosis, bold in his conception of treatment, and fearless in carrying it out, but at the same time was a careful and safe operator. To his patients he was always kind and cheery and optimistic, and to the nursing staff invariably courteous and considerate. As a teacher Furnivall did not hold any post in the Medical College but his clinical teaching in the out-patient department, in the wards and operating theatre, was excellent and much appreciated by the students. As might be expected of a Hunterian Professor of Pathology, he laid great stress on this subject, and grounded his opinions and his treatment on a firm pathological basis, and in the many articles he wrote this subject was always prominent. One of the traits that endeared him to the resident staff and to his junior colleagues as he rose in the hospital service, was his unselfishness and his readiness to help the younger generation both in the hospital and when they were seeking appointments elsewhere. His house surgeons were given plenty of work to do within their capacity, but such work was not given indiscriminately for Furnivall was a shrewd judge of character and ability. A house-surgeon who did not reach a high standard was quickly shown that better work was expected of him before the full benefits of the appointment were allowed him but if this standard was reached every chance and encouragement was given to a man to improve his knowledge and surgical skill.

Furnivall's geniality was almost a by-word with his colleagues and his personality was always exerted for peace in those little frictions that always occur when a

large body of men are working together. Never really a robust man, suffering always from insomnia and affected by the cold, Furnivall was frequently laid up with coughs and influenza, and finding his health deteriorating in London he resigned his appointment as surgeon to the hospital, and was at once elected a consulting surgeon in 1919. The whole hospital deplored the loss of a colleague and of a friend—the "stranger" of 1899 had become the personal friend of all in 1919, and he retired to the milder climate of Cornwall, carrying with him the good wishes of everyone who knew him. Furnivall continued to do some consulting work in the neighbouring country, and any "Londoner" visiting him was always sure of a warm welcome and a kindly store of reminiscences and stories.

The essential kindness of Percy Furnivall and his love of humanity (writes a colleague) were perhaps best shown in the publication of a diary of his experiences when suffering from the malignant disease which caused his death, and its treatment. This account, so pathetic as it is, especially to those who knew him, was not written to gain sympathy or notoriety, nor in any spirit of bravado, nor with any idea of scientific research or record, but solely with the idea of benefiting his fellow men. Rightly or wrongly, he formed the opinion that the treatment he had undergone had increased his suffering and made his passing more difficult, and he wished in his love for humanity to save others from a like fate. No medical man could read that diary unmoved, whether he agrees with its conclusions or not, but to those of us who knew him it is unspeakably pathetic, for Furnivall always enjoyed life in all its aspects. To his work and to his play he gave all that was in him and enjoyed the giving and for him to write of his life, "Is it worth while?" showed the extent of his sufferings, although, as the diary reveals, he bore them with fortitude and even with hope. But even towards the end, still in pain and distress, with little hope left in life except continual pain, Percy Furnivall's medical judgment and outlook remained sane and sound. He did not condemn the modern treatment of malignant disease, he did not curse radium and turn his face to the wall and die, but asked for generous support for a continued intensive research into the effects of radium on the tissues and a careful consideration of all the factors of a case before deciding on its use. He felt as he taught in the years gone by that pathological facts are a more sure basis for treatment than indiscriminate experiments on human beings. He asked for this research with the hope not only that others might escape his sufferings but that they might possibly be cured of the scourge of malignant disease. He only wished that the members of the profession he had served so well would be careful in the use of a remedy powerful in benefit but equally powerful to make the remedy worse than the disease.

Mr H. S. Souttar writes

It is difficult to realize that Percy Furnivall has been. Indeed, it is difficult to think of him as anything but a man in the fullest prime of life, bursting with energy. I was a dresser to the firm of Eve and Furnivall in 1904 and I still see the tall gaunt figure in a great turban smoking an enormous cigar, stepping out from one of the earliest of motor cars and striding into the house. Even then he was a figure of romance, and strange stories were told of how he had bicycled up to Cambridge in the morning, won an open mile bicycle race in the afternoon and cycled back to London in the evening. He was

his dressers as younger brothers and though his technique was entirely unconventional it was full of sound common sense and admirable surgical judgment. His skill as an operator was quite exceptional and there still remains in my memory his intense passion for asepsis. It was before the days of gloves and after we had scrubbed up he would insist on snipping off a small portion of a nail from each dresser as well as from his own hand, all to be carefully cultured. The surgery of today has been reduced to an established routine and surgeons themselves have become conventional but it is pleasant to remember and to do honour to those who struck out boldly into a new and unknown field and among them for those who knew him few could be remembered with higher regard and deeper affection than Percy Furnivall.

[The photograph reproduced is by Elliott and Fry, L.D.]

#### I. L. PROVIS, F.R.C.S. ED

Mr Francis Lionel Provis, who was well known for his work in the application of radiology to gynaecological practice, died on May 2 at the age of 68. The youngest son of the late Dr Wilton Provis of Mere, Wiltshire, he was educated at Bromsgrove School and St Bartholomew's Hospital and in 1895 obtained the English Conjoint diploma. He became M.R.C.P. Ed in 1903, having been admitted a Fellow of the Royal College of Surgeons of Edinburgh in the previous year. He held the house appointment of resident medical officer at the Tottenham Hospital and was medical registrar at the Chelsea Hospital for Women. During the South African War he was on the staff of Lady Curzon's hospital unit and was assistant physician to the Imperial Yeomanry Hospital at Pretoria. After the war he decided to devote himself to the study and practice of gynaecology. He was elected surgeon to the Chelsea Hospital for Women and gynaecologist to the Fabian Hospital; he was also surgeon accoucheur to the St Pancras Dispensary and later to St John's Hospital, Twickenham. He was for some time medical officer in charge of the venereal department of the Prince of Wales General Hospital. Mr Provis contributed various papers on gynaecological and radiological subjects to medical periodicals and became widely known in connexion with modern gynaecological treatment and also with the research work relating to therapeutics of venereal disease. His sturdy independent outlook combined with scientific acumen and great clinical abilities rendered him prominent in his specialty and he built up a large consulting practice in Harley Street.

#### Mr Victor Bonney writes

All those who are connected with Chelsea Hospital for Women will mourn the passing of Lionel Provis. He joined the hospital as registrar in 1902, became a member of the honorary staff in 1903 and for twenty-seven years did his utmost for it. He was early interested in the application of radiology to gynaecology and is justly to be considered as one of the pioneers in that subject. He was a careful and conscientious surgeon and a gentle and humane man with a high sense of the responsibility he owed to his patients. His health broke down and compelled him to resign from the staff in 1931 but he did not entirely disavow himself from his work and indeed continued it so far as he was able almost to the time of his death. He will be best remembered by those who had the privilege of working with him for his kindness of heart, his honesty, his contempt of everything savouring of jealousy or meanness and most of all for the uncompromising courage with which he bore his misfortunes.

#### EDMUND WILKINSON, F.R.C.S.

Lieutenant Colonel I.M.S. (ret.)

Lieutenant Colonel Edmund Wilkinson died suddenly at his residence, Hornacott Manor near Launceston, Cornwall, on May 1. Born in 1867, he received his medical education at University College and University College Hospital. He qualified as M.R.C.S. and L.R.C.P. in 1888 and after holding hospital appointments took the F.R.C.S. in 1892. In the Indian Medical Service he had a distinguished career as an epidemiologist and an authority on plague. He was Chief Plague Medical Officer and Sanitary Commissioner in the Punjab and Acting Sanitary Commissioner for East Bengal and Assam. He retired at the end of his period of service with the rank of lieutenant colonel.

#### Sir Arthur MacNalty writes

To a man of Wilkinson's energetic disposition and capacity for work a life of ease at home offered no attractions and we were glad to welcome him as a medical inspector when he joined us at the Local Government Board in 1914. Here his plague experience proved invaluable not only in port sanitary work but also in connexion with precautions against the spread of that disease in East Anglia. During the war he rendered great service in promoting and securing liaison between the military authorities and the local authorities in the sanitary services for military camps and hospitals. Wilkinson could appreciate both the military and the civilian aspects of these problems and was able to reconcile interests which at times appeared to be conflicting. After the war as a medical officer of the Ministry of Health his time was chiefly occupied in port work and in the investigation of epidemic outbreaks.

Wilkinson retired from the Ministry in 1932. He went to live in his native county, Cornwall, where he was fully occupied in the administration of his estate and in many local activities. He was a good shot, a keen fisherman and an ardent motorist whilst at any time he could spare from his many occupations was devoted to colour photography. At Hornacott Manor Colonel and Mrs. Wilkinson were always delighted to welcome old colleagues and several of us have grateful memories of their kind hospitality. Wilkinson's life was a full one crowded with successful work and good deeds. One could never imagine him growing old. He has died as he would have wished without any premonitory change in his mental and physical powers.

#### A. W. NEILL, M.D.

Dr Alexander William Neill, whose death occurred on May 2 at Oxford at the age of 58, had been physician superintendent of the Warneford Mental Hospital, Oxford, since 1914. Dr Neill was educated at George Watson's College, Edinburgh, and Edinburgh University. He graduated M.B. Ch.B. in 1903 and proceeded to the degree of M.D. in 1911. After holding resident posts in the Royal Infirmary, Edinburgh, Woodburn Sanatorium and West Bromwich Hospital, he became senior assistant physician at the Royal Asylum, Edinburgh. He was an ex-president of the Royal Medical Society of Edinburgh. Dr Neill was a member of the British Medical Association for nearly twenty years. He was secretary of the Oxford Division in 1922-3 and chairman in the following year. When the Association met at Oxford in 1936 he was responsible for the local arrangements in connexion with the Reception Room and Exhibition. In 1932 he served as president of the Oxford Caledonian Society. Dr Neill

in his younger days took part in many forms of sport, being especially proficient at hockey and curling. He leaves a widow and two sons, the elder of whom is studying medicine.

Mr J F Robinson, FRCS, writes

In the passing of Dr Alexander Neill the profession in Oxford has lost a loyal and helpful colleague, and the Warneford Mental Hospital a very capable and just administrator. Besides his purely professional work at the hospital and his consultative work in the neighbourhood, he had a real genius for organization. The committee of the Warneford Hospital must be grateful for his wise direction and co-operation in the numerous schemes which he initiated to put the hospital on a sound foundation for the future. But it is not his achievements in this direction that I wish to emphasize. I leave that for others more fitted to describe and appreciate. To me the death of Neill is a personal loss. I knew him soon after he came to Oxford, and have been intimate with him ever since. His hospitality was lavish, and many medical men in this district will remember the jolly evenings we had at the Warneford right up to the time of his illness. He will be missed at the Medical Club (as distinct from the Oxford Medical Society), where his contributions to the discussions often brought us down from the unsubstantial clouds to solid earth. His kindness, loyalty, and common sense were his outstanding characteristics. I have often been to him for advice on divers occasions, and his broad view of things and man-of-the-world (in the best sense) outlook were of great value to me. He certainly had his share of trouble during recent years, but he was very reticent, and few would know what he suffered. His long recent illness was borne with the cheerful courage that was expected of him.

Dr CYRIL PATRICK ANDREW STRANAGHAN who practised for several years at Folkestone and Bournemouth, died on April 19. He retired from general practice nearly two years ago. A graduate of Edinburgh University, where he was an enthusiastic Rugby football player, he was later appointed house-physician at the Royal Infirmary, Sunderland. During the great war he served in France with distinction. He was a man of great personal charm and wide human sympathy which, apart from his sound professional skill, endeared him to colleagues and patients alike. His brief period of retirement only helped to strengthen the deep affection in which he was universally held.

EVAN WILLIAMS RICHARDS M B Ed, Ch B, DPH Glasg, died at his home in Newtown, Montgomeryshire, on February 23. He was for eleven years medical officer of health and schools medical officer for Montgomeryshire, and previously held a similar appointment for the borough of Port Talbot in Glamorgan. He had been a member of the Shropshire and Mid-Wales Branch of the British Medical Association for the past twenty-five years. Dr Ivor J Davies, physician to the Cardiff Royal Infirmary, writes: Dr Richards took his degrees at Edinburgh in 1910 and acted as house-surgeon at the Cardiff Royal Infirmary for twelve months, and afterwards was in colliery practice at Abertridwr for three years, where he was much esteemed for his skill and lovable personality. He was one of the first of a brave band of general practitioners to assist in the rescue work at Senghennydd, where the worst explosion in the history of the coal industry occurred in 1913. I can well remember Richards's fine bearing just as he was about to descend the mine with a rescue brigade. He served throughout the war at the 3rd Western General Hospital, RAMC (T), from the time of its establishment on the outbreak of war in 1914 to its closure in 1919. He was one of the best house-men

the Royal Infirmary has ever had, and his war work was characterized by the same thoroughness and devotion to duty. Owing to an old disability Richards was unable to serve abroad, but he never spared himself in the work of a large territorial hospital, and was always ready to undertake extra work for a colleague. He will best be remembered for his fine temperament and sterling gifts of character, and was such as we would all wish to be: gentle in manner, patient in all his dealings yet unbending in what he believed to be right and true, and steadfast in faith. Those of us who were privileged to be his friends will always be inspired by the nobility of his character.

The death of Dr KEPPEL BARRETT on April 21 has caused sincere grief in many homes in Kensington, where he practised for over forty years. Born at Grimstone in Norfolk, Alfred Keppel Barrett was the eldest son of the late Dr A E Barrett and grandson of the late Rev the Hon Thomas Robert Keppel. He was a student of St Mary's Hospital, Paddington, and qualified MRCS L R C P in 1891, a few years later succeeding to his father's practice. Dr Barrett served on numerous committees and was a member of many societies, including the West London Medico-Chirurgical Society, the Society of Apothecaries, and was a Fellow of the Hunterian Society and secretary of the Kensington Branch of the Royal Medical Benevolent Fund. For many years he was a member of the Executive Committee of the Kensington Division of the British Medical Association and of the London Panel Committee. He was also treasurer of the Society of Members of the Royal College of Surgeons of England. He leaves a widow and five daughters, to whom the sincere sympathy of their numerous friends is extended. His loss will be greatly felt in Kensington, where his devotion to duty and genuine kindness to all in trouble endeared him to a large circle of friends and patients who will not easily forget him. The funeral service took place at St Mary Abbots Church, which was very full, the congregation including a large number of medical men.

SIR MAURICE ABBOT-ANDERSON died at his home at Bath on May 3 after a short illness. The son of Major General Abbot-Anderson, he was born in 1861 and studied medicine at University College, London, and at Newcastle-on-Tyne, graduating MB, BS of Durham University in 1886 and taking the MRCS a year later. He was then in turn house-physician at University College Hospital and house surgeon at the Salop Infirmary. Settling in general practice he was appointed many years ago physician to the late Princess Royal (Duchess of Fife) and her household. When she and her husband were shipwrecked in the liner *Delhi* in 1911 Abbot-Anderson went to Egypt to attend them, but the Duke of Fife died before his arrival. Abbot-Anderson was for some years honorary surgeon to the Farringdon General Dispensary and Lying-in Hospital and honorary medical officer to the Housing Association for Officers' Families. For his services to the Duchess of Fife he was made MVO in 1908 and received a knighthood in 1912; he was advanced to CVO in 1921. At retirement he devoted much attention to organizations concerned with the preservation of the countryside and ancient national possessions in England, Scotland, and Wales. He was a member of the National Trust, and founded Flora's League for the protection of wild flowers, ferns, and trees.

Dr FREDERIC JAY COTTON, orthopaedic surgeon and founder and regent of the board of governors of the American College of Surgeons, died of a heart attack in Boston on April 14, aged 68.

Dr WILLIAM FRANKLIN ELGIN, associate of the late Major Walter Reed at the old Marine Hospital, Washington, and pioneer in vaccine development, died in Philadelphia on April 18 aged 76.

## Universities and Colleges

## UNIVERSITY OF LONDON

The following appointments to the Senate for the period 1953-54 are announced: Faculty of Medicine: Mr W. Gurling, Ball F.R.C.S., and Dr A. M. H. Gray (reappointed); General Medical Schools: Professor I. S. Dudgeon (reappointed).

A course of three lectures on 'Variation in the Response to Analgesic Drugs' will be given at the Wellcome Institute for Medical Research, Euston Road, N.W. by Dr J. W. Trevin on May 23, 24 and 25 at 5.30 p.m. At the first lecture the chair will be taken by Sir Henry Dale, F.R.S.

Two special University lectures in anthropology entitled *Sinanthropus Pekinensis* and his Significance for the Problem of Human Evolution and *Sinanthropus Pekinensis* in Comparison with Other Fossil Hominids will be given at University College Gower Street W.C. by Dr. I. Weidenreich, Visiting Professor of Anatomy, Peking Union Medical College and Director of the Cenozoic Research Laboratory, Peking, on May 20 and June 1 at 5.15 pm.

All the above lectures which will be illustrated with lantern slides are addressed to students of the University and to others interested in the subject. Admission is free without ticket.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

At the meeting of the College held on April 28 licenses to practise physic were conferred upon the following 194 candidates (including sixteen women) who had passed the final examination in Medicine, Surgery and Midwifery of the Conjoint Board and have complied with the necessary by laws.

J C G Abraham H W Aderev R S V Andler H G A  
 Almond H A'stead J Arnott C S A Howell P A G M  
 Assmann A H Bacon K P Ball J L Barker A H Barnes  
 J P Berley A E Byron R D Blackford Janet L Bottomley  
 H W Bradford J T Brooks R W Brown W G Brown  
 C N Burnham Sippel F J Cahill C Charkutavany A A G  
 Charac P Colen R P Col'drev G B Collier R Cox E Cronin  
 A G Cunningham A H Cutting J R G D-muel H W D Arc  
 T T Davies C H C Dent L J D Souza A P D  
 Nancy K Dick A E Drost W J Drummond D M Dunn  
 D F Eastcott J E B Elliott E L Ellis G H Ellis  
 Winfred M Emmet R L Evans C G Jac F E Falckor  
 D B Feather D W Fell B S Fihman D Foskett G P Fox  
 A L Frazier M J G Furnell D Gar e T C N Gibbens  
 G N L Godber W Goulstone A C Greene W S Haxon  
 R B Halford A S Hall J M Hall W G L Hall R G  
 Harcourt J B Hargreaves S W G Hargrave M H Harmer  
 J Harris Violet E N Harris L T Harrison W A Harvey  
 J L Henderson Rosa Hertz C J C G Hodson S J Hopkins  
 Mary C Hopper E P Houghton G N Hunt Myrtle M  
 Hutchins C W Iliffe M A Imray H H W Jackson K V  
 Jackson H M James Ursula James J G Jamieson T H  
 Jenkins R C Jenkinson P H Jobson B M Joffe G B  
 Jones G M Jones H M R Knight H Knowles Henry E  
 Komerup C C Lack J Lauchlin S C Layne H W D  
 Lawton G B Leyton M A Linnell G M Little B G B  
 Lucas R L McKernan R J H McMahon B Maddison  
 D W Mahon R H C Mansfield C W S Marri A G D  
 Marshall R A Mathews C M Miller W G Mills Agnes M D  
 Milne L E Milton G W Minkin P L Mollison H E  
 Moody J Morone D Morris D S Morris D D Muir  
 G M Muller M Murray J L Newton R T Norman J P J  
 O'keefe Eileen B Palmer G F Pantan R L Parkinson  
 S M Paw J G Peacock H G Percy R Piper S S F Pooley  
 A S Porter K R D Porter Dorothy M Pritchard R H  
 Roberts Hilda M Robertshaw L F W Salmon C R Savage  
 I R Seal J D Sellars J N Sen Gupta W M H Shaw  
 M Shepherd J E Simpson M A Sles J H Smart D J N  
 Smith J W Smith P M Smythe S G Solomon M S C  
 Stephens C J Stewart F E Stock S D Stone W P B  
 Stonehouse B D Stutter J E Symondson J Mcd Tea dale  
 A M Thomas D C Tomlins P Tomlinson R A R Toppin  
 Vasant H Trivedi P E R B Unwin J R M Vance F H  
 Vayla O M Vyas A P B Wand A C R Wakeman A J  
 Walker Betty Walker J O Walters A J Walton J W Warnick  
 J R F Watson B G Wells R J Whiting E G Wilbraham  
 D S P Wilkie T G Williams D S Wilson G A Wilson  
 M McC Wilson J W Wood Ursula W Wood P J Wormuld  
 C F Wright

### Diplomas

The following diplomas were granted jointly with the Royal College of Surgeons of England to the following candidates

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE—W J Alkan  
L G Backhurst N D Bhattacharya E A Best J Bennet R S

Born M S David P L Dehmukh E P N M Early P N  
A V Gufre W E Hadden R F Hand I M Hill  
Andu Karm Kandalla E N C McAmmond I W Mack char  
J G Mar J S Minit S K M McFarjee V R Naidu Sparda S  
N du L Nandokkar R M Nons S Ram V D Seevartaram  
D K Slah H B Spookhoff W M Toone  
Di omos of Asatistics—G M Ben on H Berdowiz R J  
Clue A A Dwar E N H Gandia Florence M Huhes  
S Hartin on A G Mestod H H Markham O L C Sibe  
J Sibe

Diplomas in Child Health were granted jointly with the Royal College of Surgeons of England to the twenty-three candidates whose names were printed in the report of the meeting of the Council of the Royal College of Surgeons of England in the *Journal* of April 23 (p. 929).

## Medical Notes in Parliament

The House of Commons this week discussed the Air Estimates and the increase of British air armaments. Progress was made with the Housing (Rural Workers) Amendment Bill, the Administration of Justice (Miscellaneous Provisions) Bill, and other measures.

### Progress of Bills

In the House of Lords on May 10 the Prevention and Treatment of Blindness (Scotland) Bill and the Hire Purchase Bill were brought from the Commons and read a first time. The Increase of Rent and Mortgage Interest (Restrictions) Bill passed through committee.

The Earl of Onslow presided at a meeting of the Joint Committee of both Houses of Parliament on the Food and Drugs Bill in the House of Lords on May 10. Among the clauses considered were those dealing with the sale of our food and the control and licensing of laundries. The Committee adjourned until May 11. Sir Francis Fremantle is a member of this Joint Committee.

The Bakehouses Bill was reported with amendments from a Standing Committee of the House of Commons on May 2. Its title has been changed to the Baking Industry (Hours of Work) Bill.

The Hire Purchase Bill was read a third time in the House of Commons on May 6.

The Eire (Confirmation of Agreements) Bill was read a second time in the House of Commons on May 3.

In the House of Commons on May 10 Mr Foot presented the Local Authorities and Local Government Officers (Joint Council) Bill which makes provision for the constitution of joint councils of representatives of local authorities and officers and servants of such authorities.

### Cost of School Health Services

On May 2 Mr T. MORRIS asked the Parliamentary Secretary to the Board of Education the total of the grants paid by the Board to local education authorities and voluntary institutions in respect of health services for school children. Mr KENNETH LINDSAY said the special services for elementary school children included medical inspection and treatment, special schools, organization of physical training, play centres, nursery schools and provision of meals. On the basis of the provisional figures for 1936-7 forwarded by local education authorities the grant payable to these for that year—50 per cent of their expenditure—was approximately £2,668,000 in respect of these special services. Grants to voluntary bodies for special schools, play centres and nursery schools in 1936-7 amounted to £55,136.

## Extension of Medical Benefits

On May 3 Mr D ADAMS asked whether the Government was considering measures financial or administrative to extend the scope of medical benefits to include consultant specialist and pathological services so that a more fundamental attack on health problems might be made. Mr BERNAYS said that important matters of finance and administration were involved.

and the Minister could not undertake to make any pronouncement on the subject which would have to be considered at the proper time in relation to the general financial resources of the country.

Mr ADAMS asked whether in view of the admitted necessity for further action on the lines of the question, the Parliamentary Secretary intended to give it further consideration. Mr BERNAYS said that the question was largely concerned with insured persons and was largely a matter of accommodation in hospitals set up for special diagnosis and treatment of disease under the Local Government Act, 1929. The number of those hospitals was steadily increasing.

#### Rheumatism Facilities for Treatment

On May 3 Mr D ADAMS asked what State facilities were provided for the treatment of rheumatism, and what extensions of these facilities were being considered. Mr BERNAYS replied that facilities for the treatment of this group of diseases were provided by most general hospitals and by a number of specialized voluntary institutions. Local authorities were increasingly making provision for the treatment of acute rheumatism in children. The medical advisers of the Ministry of Health were in close co-operation with the bodies concerned with combating and with research into rheumatic diseases. Mr DE LA BERE asked if the Minister had ever heard of the Droitwich Spa treatment.

#### Hospital Trust Deeds and Taxation

When Budget resolutions were debated on report on May 4 the House of Commons agreed without debate to the resolution increasing the standard rate of income tax to 5s 6d in the £. Subsequent resolutions were discussed and approved. In a discussion on the provisions of the Budget as regards settlements Mr BENSON said scarcely an institution which depended on public subscriptions but printed seven-year trust documents and distributed them broadcast. If a surtax payer giving a full rate made an annual donation of £100 to some institution under one of these seven-year trusts it cost the Government £70 a year and the donor £30. Why should the Chancellor of the Exchequer be compelled to subscribe to any particular institution or charity?

Sir TERENCE O'CONNOR, the Solicitor General, said Mr BENSON's suggestion would spread alarm and despondency among charitable institutions in this country. The root of the present law was that charities were treated as an exception and were exempted from the ordinary provisions of the Income Tax Acts. They were entitled to ask that taxes which had been paid on such incomes should be paid back. Anything which would vary that position would not be acceptable. Sir Terence said Mr BENSON had complained that he could not understand why a man should be entitled to make a settlement under which he undertook to pay to a particular hospital a sum of money over a series of years and why the hospital should be entitled to claim back the income tax which had been deducted. Sir Terence contended that it would be disastrous to charities if Parliament now altered the favoured position which they enjoyed.

The House approved the resolution dealing with settlements. An amendment tabled by Mr BENSON which specified hospitals was not called. Other resolutions were also approved, and the Finance Bill based upon the Budget resolutions, was brought in and read a first time.

#### Prevention and Treatment of Blindness in Scotland

The Prevention and Treatment of Blindness (Scotland) Bill passed through report and third reading in the House of Commons on May 6. During the report stage an amendment was inserted to ensure that any scheme prepared by a local authority under the Bill must be subject to the sanction of the Department of Health for Scotland. Mr ALLAN CHAPMAN and Mr GARRO JONES, in moving and seconding this amendment explained that it was to limit the provision of the Bill entitling local authorities to take such measures as they thought would assist in the prevention of blindness. Mr Garro Jones said some local authorities acting in advance of the Statute, had

interpreted the provisions of this Bill as much wider than were intended, and had invested themselves with power to bring pressure upon blind persons to prevent their marriage, if the medical officer of health thought that such a marriage would be undesirable.

#### Rural Housing Improvements

In the House of Commons on May 9 Sir KINGSLEY WOOD moved the second reading of the Housing (Rural Workers) Amendment Bill, which, he said, extended the operation of the original Acts for four years, up to September 30, 1942. Experience gained in administering the Acts showed that houses of good quality were being provided. In communicating with the local authorities he would ask district councils to ascertain themselves what cottages needed reconditioning and where the owners were unwilling to do the work, to consider exercising their powers to buy the cottages and themselves recondition them. Where the county council was the authority lists of cottages requiring reconditioning would be sent to it.

Mr GREENWOOD urged that there should be guarantees for the improvement of administration. Something should be done to establish proper standards of accommodation and amenities.

Sir FRANCIS FREMANTLE said that the Bill was a small measure but should not be belittled for that reason. It meant everything to the tenants of the houses concerned. There was a danger that local authorities, not understanding their responsibilities, might make grants for keeping alive and reconditioning houses which were not worthy to be reconditioned. He spoke very strongly on that point as an old county medical officer of health. Rural housing was one of the subjects on which medical officers of health were very keen. The county medical officers of health through their association, were very much in favour of the rural housing Acts and of the Bill but they were anxious that much more control should be exercised. The medical officer of health for Devon had given the association a good account of the working of the Acts in his county, and the association would like to see this state of affairs spread to other counties. There were many good houses built in the middle of the last century which were quite capable of being improved.

The Bill was read a second time.

#### The BMA and the Matrimonial Causes Act

In the House of Commons on May 9 Sir DONALD SOMERVILLE moved the second reading of the Administration of Justice (Miscellaneous Provisions) Bill, which has passed the House of Lords. During the discussion Mr A. P. HERBERT mentioned two points arising under the administration of the Matrimonial Causes Act, which Parliament passed last year and in regard to which people, he said, complained that certain respects the intentions of Parliament were not being carried out. The first point was with regard to the provision which gave a right to sue for a dissolution of marriage when the co-respondent had been of unsound mind for five years. During the debates on the Act last year a great deal was heard from doctors about the possibility or doubtfulness of a doctor being able to say in every case that a person was incurably insane, but now the British Medical Association, in a recent report, had raised two new points. The *British Medical Journal* stated:

The Council has considered the ethical position of a medical man in charge of an insane patient when approached for an opinion by a prospective petitioner and the position of the medical man in the event of a patient recovering. The Council is advised that any opinion given by the medical practitioner as to the patient being of unsound mind would not be covered by the protection given by the Mental Treatment Act or the Lunacy Act. The Council would be for the practitioner to decline to express an opinion save by the direction of the court, but that he should place his records of the case at the disposal of an independent medical expert nominated by the petitioner. As to the ethical aspect of the problem the Council considered that the medical man responsible for the care of the patient was



be justified in giving an opinion except at the express direction of the court. The adoption of this attitude would however make the Act unworkable and the Council feels that the most satisfactory way out of the difficulty would be the introduction of an enabling legislation.

He (Mr Herbert) would not go further into the matter. He was not trying to raise any controversial point. He was merely suggesting, that it might be that the intentions of the Act were not being carried out and if there was any way by which this matter could be put right he would be glad.

The other point was that there were many cases in which the husband or wife had been deserted and when the case came before the court they found that through the fault of the magistrate some years ago—not through any fault of Parliament—who quite unnecessarily and wrongly introduced in the separation order what was called a non-cohabitation clause, they were not entitled to divorce. He suggested that the Law Officers should consider the question.

The Bill was read a second time.

**Birmingham Merit Home Inmate Attacks 1.**—Mr RHYNS DAVIES asked on May 5 whether the attention of the Minister of Health had been drawn to the case of a Birmingham mental home in which two drunken attendants were hired for attacking and beating an inmate while a third stood by and encouraged them, and whether he would call for a report on the conduct of that institution. Sir KINGSLEY WOOD replied that his attention had been drawn to this case and the prosecution was instituted at the instance of the Board of Control, the person in question having previously been instantly dismissed. He had before him a report made by two Commissioners of the Board who inspected the institution on March 23 and 24. They reported favourably upon its administration and upon the care and treatment of the patients.

**British Spas and Publicity.**—In an answer on May 5 to Mr Ivor Guest Sir KINGSLEY WOOD said opportunity had been taken in the annual report of the Chief Medical Officer of the Department for the year 1935 to draw attention to the excellent work of British spa hospitals and to the value of British spas. The British Spas Federation working in co-operation with the Travel and Industrial Development Association of Great Britain and Ireland which had been approved by him under the Local Authorities (Publicity) Act 1931 was making every effort to popularize British spas at home and abroad.

**Diphtheria Mortality.**—On May 5 Sir KINGSLEY WOOD furnished Sir Arnold Wilson with the following figures of the deaths from diphtheria of children under 15 in England and Wales in 1933 there were 2,487 deaths, 1934 3,826, 1935 3,256 and 1936 2,884.

#### Notes in Brief

Sir Samuel Hoare hopes immediately before or after the Whitsuntide recess to introduce legislation to cover young persons employed in unregulated occupations.

In 1937 the Stoke Panel of the Silicosis Medical Board granted on applications from the pottery industry (practically all from North Staffordshire) 42 death certificates and refused 6. It granted in the same year 38 disablement certificates and refused 47. For the year 1936 the comparable figures were 42, 6, 38, 47.

When an opportunity occurs for amending legislation Sir Samuel Hoare will consider whether the period of one year after a worker has ceased to be employed in a lead process should be extended to five years as that within which a claim for compensation can be made.

The Interdepartmental Committee on Nursing Services has in mind that it may be desirable to issue an interim report.

No cases of small pox have been reported recently amongst British troops in Hong Kong.

The English-speaking medical unit in China has set up its headquarters at Changsha and is working in close contact with the Chinese Government health administration.

## Medical News

The King has approved the recommendation of the Home Secretary that from June 1 Dr J. C. W. Methven be appointed one of H.M. Commissioners of Prisons in the place of Dr W. Norwood East who will retire on that date.

Dr Percy Stocks will read a paper on 'The Effects of Occupation and of its Accompanying Environment on Mortality' before the Royal Statistical Society at the Royal Society of Art, John Street, Adelphi W.C. on Tuesday May 17 at 5.15 p.m.

A meeting of the Medico-Legal Society will be held at 26 Portland Place W. on Thursday May 26 at 8.30 p.m. when an address will be given by Dr L. A. Weatherly on 'Debatable Medico-Legal Episodes in my Days Before Yesterday'.

The next quarterly meeting of the Royal Medico-Psychological Association will be held at 11 Chandos Street W. on Friday May 20 at 2.0 p.m. when papers will be read on 'The Alleged Inadequacy in Numbers of Medical Officers in Mental Hospital'. A discussion will follow.

The thirty-ninth annual meeting of the Lebanon Hospital for Mental Diseases will be held at the Cornhill Upper Woburn Place W.C. on Tuesday May 17 at 4 p.m. The speakers include the President (Dr Percy Smith), Sir Hubert Bond M.D. Senior Commissioner of the Board of Control and Dr Serin (Paris).

On Thursday May 19 at 7.30 p.m. a conference will be held at the Caxton Hall S.W.1 to inaugurate the work of the Marriage Guidance Committee. This is a voluntary body which has been established for the purpose of providing practical help and advice on problems connected with marriage and the family. The conference will be attended by representatives of different professions and medical practitioners who are interested in the subject or preparation for marriage are invited to be present. The secretary of the committee is Mrs M. C. Hume, 13 Wildwood Road N.W.11.

The Swiss Society of Surgery will hold its twenty-fifth annual meeting from May 20 to 22 at Berne under the presidency of Professor Q. Jentzer of Geneva. The chief subject for discussion will be neurosurgery. Further information can be obtained from Professor F. Merke, Medizinische Facultät Basle.

We are informed that the clinical meeting of the Society of Radiotherapists which was to have been held at the rooms of the Medical Society of London is now to be held at the Middlesex Hospital. There is no change in the date (Friday May 20 at 5 p.m.).

The Medical Research Council has appointed Dr Karl Stern to the Kathleen Schlesinger Research Fellowship for the year 1938-9. The Fellowship is provided from a fund established by the late Mr Eugen M. Schlesinger and Mrs Schlesinger in memory of their daughter. It is given for investigations of cysts of the brain or allied conditions and is ordinarily tenable at the National Hospital for Diseases of the Nervous System, Queen Square, London.

Queen Mary opened the new out-patient department of the Midway Mission Hospital, Bethnal Green E. on May 6 and afterwards inspected the hospital.

A bronze bust of the late Sir Gratton Elliot Smith by Mr A. H. Gerrard was unveiled on May 4 in the Thane Library in the medical science building at University College, London.

On April 24 the seventieth anniversary of her birth, a monument to Mme Curie was unveiled in Roosevelt Park, Raritan Township, New Jersey, U.S.A.

A tour will be organized at Whitsuntide by the Societe Medicaire du Littoral Mediterranee from June 2 to 10 visiting Nice, Cannes, Peiracava, Roquebrune, Ajaccio, Bastia and Turin. Scientific meetings and demonstrations will be held in various places. Full details may be obtained from the Secretary of the Society, Rue Verdi 24, Nice.



## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended April 30, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths and of Deaths recorded under each infectious disease, are for (a) The 126 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(1)	(2)
Cerebrospinal fever Deaths	32	6 1	10 1	2	1	30	3 1	14 2	1	1		
Diphtheria Deaths	1,055 26	130 2	213 3	38 3	27 1	1,019 30	148 3	183 2	11 2	26 1	997	167
Dysentery Deaths	37	12	36	—	—	14	2	16	—	—		
Encephalitis lethargica, acute Deaths	7	1 —	— 3	—	—	5	1 1	1 —	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	20 —	1 —	7 —	4 —	1 —	26 —	3 —	2 —	10 —	2 —	27	—
Erysipelas Deaths		3	73 1	5	5		—	65 2	7	6		
Infective enteritis or diarrhoea under 2 years Deaths	37	10	7	4	2	48	12	9	7	5		
Measles Deaths	35	7	656 27	1	22* 1	18	—	211 3	—	2 —		
Ophthalmia neonatorum Deaths	121	17	27	—	—	102	10	29	—	2		
Pneumonia, influenzal ‡ Deaths (from Influenza)	1,270 63	72 8	9 2	1 1	8 —	856 33	66 3	12 6	5 2	8 2	949	83
Pneumonia, primary Deaths		19	275	3 22	13		21	170	11 19	12		
Polio encephalitis acute Deaths	1	—	—	—	—	1	—	—	—	—		
Poliomylitis acute Deaths	5	—	—	—	—	2	—	—	—	—		
Puerperal fever Deaths	1†	1 —	10	3	—	38	5 —	23	1	2		
Puerperal pyrexia Deaths	181	20	19	—	3	98	14	29	—	3		
Relapsing fever Deaths	—	—	—	—	—	—	—	—	—	—		
Scarlet fever Deaths	1,936 4	178 2	353 1	75 2	79 —	1,628 3	155 —	325 —	83 1	32 —	1,702	267
Small pox Deaths	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping cough Deaths	12	2	89 2	1	17 2	18	4	393 18	—	10 —		
Deaths (0-1 year) Infant mortality rate (per 1 000 live births)	338 56	47 39	81	28	28	377 62	80 66	90	34	25		
Deaths (excluding stillbirths) Annual death rate (per 1 000 persons living)	4,874 12.0	884 11.1	637 13.0	180 12.2	164 14.5	4,499 11.2	921 11.5	620 12.7	230 15.7	174 16.7		
Live births Annual rate per 1 000 persons living	7,333 18.0	1,284 16.2	1,061 21.7	348 23.5	284 25.2	6,598 16.4	1,240 15.4	1,006 20.6	409 27.9	237 22.7		
Stillbirths Rate per 1 000 total births (including stillborn)	300 3.9	40 3.0				284 4.1	46 3.6					

† As reported last year.  
\* For Oct. 1-1937 puerperal fever was made notifiable only in the administrative county of London.

‡ Includes primary form in figures for England and Wales (administrative county) and Northern Ireland.

## EPIDEMIOLOGICAL NOTES

## Enteric Fever

Notifications of enteric fever in England and Wales have dropped from 21 in the previous week to 20 in the week under review of these there was 1 case in the county of London. During the week under review 1 case of paratyphoid fever was reported at Cardiff and the outbreak appears to be under control. Of the 7 cases notified in Scotland 4 were of typhoid fever in Glasgow and 1 in Perth and Kinross county the remaining 2 cases notified were 1 of paratyphoid fever in Ross and Cromarty belonging to the outbreak reported in these columns last week and 1 of paratyphoid fever notified in Roxburgh county but it has since been shown that this case notified as paratyphoid was in fact the first case of an outbreak of typhoid fever involving 75 cases at the time of going to press—53 in Hawick and the remaining 2 (1 each from Riccarton and Newcastleton) in the southern part of the county. The case at Newcastleton is a boy of 13 years who goes to school at Hawick. So far the source of the infection has not been ascertained.

## Diphtheria and Scarlet Fever

The notifications of diphtheria remained about the same as in the previous week in England and Wales and Northern Ireland while they showed an increase in Scotland and a decrease in Eire. In London a decided drop was observed. Compared with the median value for the corresponding week in the last nine years there was a marked decrease in the figures for London while for England and Wales there has been an increase. Notifications of scarlet fever for England and Wales showed an increase over those of the previous week and both are considerably in excess of the median value for the last nine years. A slight increase has been noted in London but the figures remain well below the median value. In Scotland and Eire decreases were noted while in Northern Ireland there was a slight increase.

## Primary and Influenzal Pneumonia

During the two previous weeks and the week under review the deaths from influenza in England and Wales have been 52, 56, and 63 respectively and the figures in London 4, 6 and 8 respectively. A considerable increase in the notifications of primary and influenzal pneumonia has been observed in England and Wales the figures for the last three weeks being 847, 1,212, 1,270 (week under review) respectively while in London the numbers have remained almost stationary—70, 79 and 72 respectively. As the Registrar General's returns do not differentiate between primary and influenzal pneumonia it is not possible to state which is responsible for the increase. The rise in the number of deaths from influenza suggests that it is on the increase and we are informed that there has been a rise in the incidence of primary pneumonia, particularly in Yorkshire. The increase in England and Wales is due mainly to local outbreaks in the Midlands and the West Riding (Yorks). During the week under review there were 115 notifications of pneumonia in Warwickshire of which 91 were in Birmingham and in the West Riding there were 165 notifications of which 56 were in Sheffield and 35 in Leeds. In Scotland there has been no increase in influenzal pneumonia, but a pronounced rise in the notifications of primary pneumonia the figures for the last three weeks being 191, 213 and 275 (week under review) respectively.

## Measles

In the 126 Great Towns in England and Wales there were 35 deaths from measles, compared with 40 in the previous week of these 7 (4) occurred in London 3 (4) in Kingston upon Hull and 2 each in Croydon (0) Leyton

(0) Sheffield (0) and Plymouth (2). The figures in parentheses refer to the numbers in the previous week. Although the epidemic of measles in London continues to show a large increase in cases was reported from the LCC elementary schools—1,825 compared with 996 in the week ended April 16. The average daily admissions to the LCC fever hospitals were 60 the same as in the previous week while the number of cases under treatment in these hospitals on April 29 was 1,975 compared with 2,125 on April 22 and 2,220 on April 15. On the same day there were under treatment in the LCC fever hospitals 1112 (1140) cases of diphtheria, 775 (802) of scarlet fever and 287 (279) of whooping cough. The figures in parentheses refer to the numbers recorded in the previous week. Notifications in the eleven metropolitan boroughs in which measles is notified were for the week ended April 30 581 (719) distributed as follows: Battersea 69 (87) Bermondsey 57 (58) Finsbury 24 (23) Fulham 25 (25) Greenwich 121 (103) Hampstead 20 (22) Lambeth 56 (128) St Pancras 55 (74) Shoreditch 29 (32) Southwark 20 (63) Stepney 39 (44). In Scotland 676 cases of measles were recorded compared with 798 and 724 respectively in the two preceding weeks the figures for Glasgow were 304 (175) Dundee 126 (295) Aberdeen 94 (190) Edinburgh 67 (74) Falkirk 11 (39). The figures in parentheses refer to the numbers in the previous week. During the week under review there were 27 deaths from measles in the 16 principal towns in Scotland compared with 24 and 33 respectively in the two previous weeks. Of the 27 deaths 11 occurred in Glasgow 6 in Dundee 4 in Aberdeen 2 in Paisley and 1 each in Edinburgh, Motherwell, Coatbridge and Kilmarnock. In Northern Ireland there were 22 cases of measles—18 in Belfast and 4 in Portrush—and 1 death in Portadown. During the week there was 1 death from measles in Eire (in Dublin).

## Typhus

The epidemic of typhus in Algeria appears to be abating there being 35 cases in the week ended April 16 compared with 56 reported for the previous week and 82 in the week ended April 2. Of the 35 cases there were 6 at Oran and 4 at Algiers. In the week ended April 23 198 cases of typhus were reported in Morocco and 16 deaths compared with 243 cases and 19 deaths in the previous week. Of the 198 cases there were 64 at Meknes 34 at Chaouia and 20 at Rabat. During the same week in Egypt there were 149 cases with 22 deaths compared with 150 cases and 11 deaths in the previous week. The largest number occurred at Qena where 40 cases were reported. Beheira 22 cases Giza 16 cases and Minutiva 15 cases. During the same week there were 25 cases of typhus in Tunisia compared with 32 in the previous week 16 in Bizerta 2 each at Suk-el Arba, Tunis and Susa and 1 each at Le Ker Gabes and Military Hospital.

## Yellow Fever in Nigeria

The diagnosis in a suspected fatal case of yellow fever (notified on April 23) at Keta in a European has since been confirmed.

During 1937 notifications were received of 19 cases of yellow fever in Nigeria. The following table gives an analysis of the cases.

	Total Cases	Dead	Recovered	Probable	Not proved
African	5	4	1	5	—
European	10	6	4	—	2
American (white)	4	2	2	4	—
Total	19	12	7	13	2

\* Prov. d. p. thology - or by post-mortem exam.

## Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL BMA HOUSE TAVISTOCK SQUARE WC1

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### QUERIES AND ANSWERS

#### Alopecia

R J C writes. A male patient aged 40 in excellent general health and without any relevant disease of the scalp is suffering from falling of the hair (defluvium capillorum). A year ago he had a luxuriant growth of hair. Is any treatment known that will prevent the remaining hair from falling and promote renewed growth of the hair that has already fallen?

#### An Internal Sanitary Pad

Q Y writes. In these days of general interest in the National Physical Fitness Campaign I feel that many of us would welcome an expert gynaecological criticism of the much-advertised internal sanitary tampon. As a woman general practitioner I am frequently asked about this method of sanitary protection and, as in the case of your other correspondents hesitate to recommend it. It seems to me that the advantages are more than outweighed by the disadvantages. Apart from the obvious objection, both psychological and mechanical to its use in the virgin, and its insufficiency in cases other than those of oligomenorrhoea, surely it is reasonable to suppose that the resultant obstruction to free drainage may lead to infection. Less likely but nevertheless worthy of note is the possibility of rectal stricture and partial urethral obstruction from pressure. I would be grateful for other opinions on this method which appears to me contrary to all we have been taught about the hygiene of menstruation.

#### Painful Uraturia

Dr I P MYERS (Brighton) writes. A patient of mine, a male aged 36 and unmarried was suddenly seized with violent pain in the left loin which was referred to the abdomen and down the left ureter and associated with vomiting. His temperature was 99 F. In the next six hours the pain increased in intensity but the urine was clear and there was no haematuria. His abdomen became very distended and the vomiting persisted. He was removed to a nursing home where investigation revealed no abnormality in the bladder, ureter or kidneys. As the patient still had severe pain and distension exploratory laparotomy was undertaken. At operation in acute condition of the pancreas was found with evidence of old standing pancreatic fibrosis. The pancreatic tract was drained through the gall bladder and after three weeks he made an apparently good recovery. The patient was a stout man and very active. He did not lose much weight and went on very well for one year. The urine was normal containing no sugar, albumin, or casts. He has since had two similar attacks, which are so

severe as to require the administration of morphine. Each attack is associated with the passing of large quantities of urates. An attack ends dramatically, one specimen of urine being loaded with urates while the next is clear and normal in every way. Dietetic treatment and total abstinence from alcohol do not seem to modify the condition in any way. I have tried diuretin (Knoll) two tablets every four hours during the attack, and I imagined that an attack was aborted by this means, but similar treatment in the last two attacks has failed to give relief. I would welcome any advice or suggestion.

#### Income Tax

##### *Income from Abroad*

'G S' says that his wife has some Indian shares and Indian income tax is deducted from the dividends. He is assessed to United Kingdom income tax also. Is this correct?

\*\* Yes—income tax is payable in both countries but "Dominion Income Tax Relief" is allowable from the tax assessed in this country. 'G S' should inform the inspector of taxes that he claims that relief and should forward the dividend counterfoils as certificates of payment of the Indian tax.

### LETTERS, NOTES, ETC.

#### Vitamin Therapy and Uterine Function

Dr ERIC KENDERDINE (Coventry) writes. It may be of interest to record the contrast between two very dissimilar labours of the same patient. The first terminated at seven months in a labour lasting twenty-two hours. The baby weighed 5 lb and did not survive, the pains were severe throughout. In the second pregnancy vitamin E was administered to avoid another early termination, and at the eighth month calcium and vitamins A and D were also given. The second labour was heralded by a loss of clear mucus at 3 p.m. and pink-stained mucus at 6 p.m. there being no information as to when the membranes ruptured. The first recognizable pains came on at 7.40 p.m., when the patient went to bed. An 8 lb baby was born naturally under an anaesthetic at 9.20 p.m. This case would seem to show the beneficial effects of the vitamins concerned in improving uterine function, both placentas and both presentations were normal.

#### Treatment of Bacillary Dysentery

Dr F G CAWSTON (Durban, S. Africa) writes. For speedy relief and an early return to normal it would be difficult to find a better treatment for bacillary dysentery than sodium sulphate in 15 grain doses two hourly, just flavoured with peppermint. I was glad to have the opportunity of treating a colleague's wife in this way recently thus averting the frequent purges to which Dr Frank McCay refers (*Journal* February 26, p. 488). This method proved useful in dealing with cases among the troops at the Rhodesia Heights cantonments in 1917.

#### Injectors—A Protest

"X Y Z" (London, W) writes. It is time that we protested against the prevailing fashion of injecting which could just as well be given by the mouth. I know one man who seldom gives a drug by the mouth but he uses a needle. Even for an ordinary cold or influenza he goes the needle. A patient of my own fell into the hands of one of these injectors. There was no improvement in her condition but several injections made her a sadder but a wiser patient. In one case death from septicaemia followed a hypodermic injection into the thigh. Again, why should sulphamides act so well when given by mouth be so often given hypodermically, intramuscularly, or intravenously?

We have received from Messrs F J Smith and Sons Limited, the eighth edition of *Elastoplast* and also the fourth edition of *Cellon*. These small volumes are well illustrated and contain on application to Smith and Nephew, Limited, Hull.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 391 Gold Therapy and Blood Sedimentation

J. M. M. STEVEN (*Tubercle* February 1938 p. 211) in the controversy regarding the influence of gold therapy on the blood sedimentation rate agrees with those authors who declare that it has no immediate direct specific effect. After forty-three injections of sodium aurothioglucose a rise was noted after thirty-two a fall and after three no change in the sedimentation rate. In 10 per cent of cases a sudden drop was noted but the author was unable to accept this as a favourable sign—he regarded it as being due rather to some error in technique. Steven found that the rise or fall of the sedimentation rate in the course of gold therapy was small—namely 3 mm. Gold is stated to have a two-fold action: (1) a tuberculin-like action increased capillary permeability around the tuberculous focus permitting the absorption of toxins; (2) a metallic action similar to that produced by any heavy metal. The author believes either that this theory is erroneous or that the amount of tuberculin absorbed from the focus after each injection is so small as to be without influence on the sedimentation rate. He thinks that it should the latter view prove to be correct gold will cease to be used therapeutically in tuberculosis. Steven is of the opinion that the blood sedimentation rate might well be used as a reliable criterion in the study of the therapeutic value of gold in pulmonary tuberculosis.

### 392 Gastritis and Silicosis

B. NARDONE (*Polichinico Sez. Prat.* March 14 1938 p. 469) who records two illustrative cases in men aged 38 and 40 respectively states that in the course of pneumoconiosis it is not unusual to find some degree of gastroenteritis which is due to the toxic action of the small quantities of dust swallowed. This condition is a recent discovery and has been confirmed by gastroscopy and x-ray examination. It is important in that the occurrence of a syndrome consisting of anorexia vomiting abdominal pain and intestinal disturbances together with a certain degree of asthenia loss of weight and tracheobronchitis in the course of pneumoconiosis may suggest a diagnosis of tuberculosis and lead to the patient being sent to a sanatorium where he may readily become infected. Prophylaxis consists in good ventilation of the workrooms the wearing of protective masks and washing out the mouth before meals. As regards treatment the best results are obtained by gastric lavage three or four hours after the last evening meal small meals at frequent intervals and the administration of bismuth dilute hydrochloric acid and sedative expectorants.

### 393 Endocarditis Lenta

L. BELTRAMETTI (*Omnia Med.* November-December 1937 p. 567) reviews at length the present knowledge of the aetiology symptomatology diagnosis and treatment of endocarditis lenta due to *Str. viridans*. He describes two cases in which the symptoms were atypical but the diagnosis was established by the isolation of the organism from the blood and urine. The first patient was treated by intravenous injections of rivanol by blood transfusions and by an autogenous vaccine but died. The second gave a history of rheumatism and on examination was found to have signs of mitral and aortic insufficiency and a daily afternoon pyrexia. *Str. viridans* was found in the blood. She was first treated by an autogenous vaccine which produced no improvement and was then given several blood transfusions after which the general condition improved and the fever disappeared. She returned home but after eight months was readmitted to hospital with a recrudescence of symptoms. The organism was

still present in the blood and urine. She was given arsenic benzol intravenously in doses of 0.2 gramme over a period of seven months the total amount injected being 3.5 grammes. Simultaneously during a period of five months she had twenty-one blood transfusions each of 200 c.c.m. After the third month of treatment the blood culture became negative for *Str. viridans* and the pyrexia disappeared. The patient put on weight and felt well. Unfortunately towards the end of the sixth month in hospital her temperature rose again and she had a haemoptysis. Tubercle bacilli were found in the sputum and radiological examination revealed the presence of an active pulmonary tuberculosis. She is at present in a sanatorium and is improving.

## Surgery

### 394 Carcinoma of the Colon

D. ADAMS (*New Engl. J. Med.* January 27 1938 p. 160) has studied seventy cases of carcinoma of the colon treated over a period of eleven years. There were two cases in the second decade of life and a maximum of thirty cases in the sixth decade. Cases have been recorded in the newborn and in infants and the possibility of this condition being present should not be overlooked at any age. In the series reviewed there were forty-five females to twenty-five males but this ratio has been reversed in other series of cases. It is considered that 15 per cent of all cancers affect the large bowel the figures for carcinoma of the colon and for carcinoma of the rectum being equal. The areas of the colon affected in order of frequency are the sigmoid the transverse colon and the splenic flexure. There is a higher proportion of cases with left-sided involvement in this and in other series reported. The aetiology of the disease is unknown although chronic irritation from hard faeces or from colitis or amoebic dysentery have been suggested as contributory factors. Pain which was the most common symptom in Adams's patients varied from a dull gnawing sensation usually near the region affected to the generalized paroxysmal type of pain caused by obstruction. In 85 per cent of cases there was constipation while nausea vomiting bleeding from the bowel weakness and diarrhoea were other symptoms complained of. Of the seventy cases reviewed sixty received operative treatment of various kinds. The largest group of twenty-seven was treated by resection of the affected part of the colon with bowel decompression in some cases. The mortality in this group was 50 per cent. Adenocarcinoma was reported in all cases and metastases were found to extend locally to regional lymph nodes and to distant parts. The importance of early diagnosis and treatment is stressed. The average duration of life for the thirteen patients who died after discharge from hospital after bowel resection was two years, there are seven patients in the whole series who are still alive and well.

### 395 Renal Function after Trauma

H. DOMRICH (*Z. Urol.* 1938 32 2 78) points out that measurement of the urine secreted after injury to a kidney gives little precise information concerning the extent or severity of the trauma for true oliguria is indistinguishable from perirenal infiltration—a definite delay in methylene-blue excretion is not constant. The general clinical signs are often disproportionate to the damage done. Retrograde pyelography has given useful information and shown that considerable infiltration into the renal parenchyma or perirenal tissues is not inconsistent with excellent results from conservative treatment such treatment may however, be technically difficult and certainly increases the

danger of secondary infection. Excretion urography has been tried in a few cases, but whether cessation of renal function soon after injury justifies operation has not yet been decided. Domrich has followed, by skiagrams taken after the intravenous injection of perabrodil, the changes in excretion after experimental injury to the kidney in rabbits. He finds that if the crushing has not been too severe urinary secretion continues, but during the ensuing two weeks the secretion from both the injured and the normal organ becomes less. It is concluded that intravenous pyelography may be useful directly after the trauma as determining the side and to some extent the severity of the injury, and that (in view of the poor remote results of conservative treatment) absence of a renal contrast shadow directly after injury justifies operative inspection and treatment of the kidney.

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## Subdeltoid Bursitis

R. L. PATTERSON and W. DARRACH (*J. Bone Jt. Surg.* October, 1937, p. 993) have treated sixty-three cases of acute subdeltoid bursitis by irrigation. The diagnosis should be made chiefly from clinical findings. There is severe acute shoulder pain, often with localized tenderness over the bursa and limitation of external rotation and abduction, flexion and extension are free. Too much reliance must not be placed on the x-ray appearances, as the typical calcium shadows may occasionally be absent in an otherwise characteristic case. The technique of irrigation is simple. Under local anaesthesia two needles are introduced into the bursa. One enters the skin 1 inch lateral to the coracoid process, the other is introduced posterior to the greater tuberosity of the humerus. Saline is used as the irrigating fluid, and from 30 to 60 ccm are sufficient. The fluid is injected through one needle and flows out through the other. Subsequently the arm is put in a sling for a few days. Often no after-treatment—usually in the form of physiotherapy—is required. The average disability period after this procedure was well under one week in the authors' cases, and this compares very favourably with the two to six weeks' disability after operative procedures. This treatment is particularly suitable for the very acute type of case, in which pain and tenderness are well localized. It may be tried in subacute cases when physical methods have failed to give relief. Should a radiograph reveal hard dense, calcified masses lying in the bursa, however, open operation is indicated. It is important that films should be taken with the shoulder in internal and external rotation, as the deposit may be visible in only one of these positions. Similar treatment has been tried for bursitis in other regions of the body with equally good results. Recurrences have not been seen and in no case was the condition made worse by irrigation.

## Therapeutics

397

## Intestinal Infections

A. CASTELLANOS (*Bull. Soc. Pediat. Cub.* January, 1938, p. 23) who records six illustrative cases in infants aged from 15 days to 9 months states that the method of bleeding followed by blood transfusion recommended by Robertson Brown and Boyd is theoretically the best for the treatment of severe intestinal infection in infants. Its technique however is complicated and requires absolute immobility on the part of the child and a highly trained staff. The child's blood must be withdrawn through the longitudinal sinus from this site relatively large quantities of blood can be withdrawn without much difficulty and in infants it is not easy to find any vein of which the same might be said. Any superficial vein will serve for the injection of the donor's blood. The amount of blood to be withdrawn varies from 60 to 100 ccm according to the age and weight of the infant,

and then a larger quantity of blood should be injected. In Castellanos's cases this method was employed in association with the subcutaneous injection of normal saline. Five of the six infants died, and Castellanos comes to the conclusion that in severe intestinal infections in infants bleeding followed by transfusion possesses no advantages over transfusion without bleeding.

398

## Sulphanilamide in Cerebrospinal Fever

L. J. WILLIEN (*J. Amer. med. Ass.* February 26, 1938, p. 630) records five cases of meningococcal meningitis in patients aged from 18 months to 26 years, treated with sulphanilamide as follows: (1) An initial subcutaneous injection of a large dose of a saturated solution was given in amounts of about 0.05 gramme per kilogramme of body weight. (2) The drug was also given by mouth every four hours day and night. (3) The dosage was graduated from an upper limit of 15 grammes every four hours according to the size and age of the patient and the severity of the attack. (4) Reduced doses were continued for about ten days after the normal condition had been reached. (5) Sodium bicarbonate was given grain for grain with the sulphanilamide to combat acidosis. The results were satisfactory even when the drug was given by mouth only.

## Diseases of Children

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## Vitamin C in Childhood

FRANCIS M. MESSERLI and FRANZ HEIMANN (*Rev. Allerg.* January, 1938, p. 20) have carried out 4911 analyses of the urinary content of vitamin C in a series of Lausanne children. They consider that repeated estimation of the vitamin C content of the urine is a satisfactory means of determining the presence of hypovitaminosis and forms a useful adjunct to other methods of gauging nutrition. Almost 90 per cent of the children eliminated very small amounts of vitamin C throughout the year, showing a deficiency present in all classes of the community.

400 G. MEYER HORSTE (*Med. Klinik* January 25, 1938, p. 105) discusses the importance of vitamin C in childhood. He advocates the supply of adequate quantities of this vitamin to growing children. The results of lack of vitamin C are first manifest in the teeth at a time when the other organs still show no pathological changes. The teeth show a degeneration of the odontoblasts which leads to the formation of new connective tissue in the teeth. These changes may regress under the influence of large doses of vitamin C but the ordinary people's diet is poor in this vitamin. This accounts for the high proportion of bad teeth found among military recruits.

401

## Mortality in First Ten Days of Life

COURTOIS and LECOQ (*Gynecol.* December 1937, p. 704) have studied the causes of death in 3460 newborn infants in the first ten days of life. They found there was a mortality of 8.5 per cent. The causes were subdivided into (1) those directly due to foetal primary mortality—and (2) those due to other circumstances—secondary mortality. The causes of the primary mortality, they state, are asphyxia, meningitis, and cranial fractures. Actiological factors of secondary mortality include severe uterine contractions, separation of the placenta, pressure on the foetus, maternal asphyxia. Treatment should be directed towards clearance of the respiratory passages, and intravenous injections of adrenaline should be given in some cases. Meningeal haemorrhage is responsible for 0.6 per cent of foetal deaths at term and of 6.4 per cent of deaths in the first ten days of life. Term lumbar or ventricular puncture establishes the diagnosis in all cases. Treatment consists of the following:

tion of coagulants injection of hypertonic saline by lumbar puncture intravenous injection of glucose and incision of the inferior fontanelle and duramater. Cranial fractures may require reduction. Haematomata should be sought for. The causes of the secondary morbidities include prematurity meningeal haemorrhage congenital malformations, and infection. Prophylactic treatment of the premature infants to avoid nec of birth trauma infections of all kinds changes in temperature and alimentary disturbances. The main congenital malformations producing neonatal death include those of the heart mus rectum alimentary canal and urothra. The authors state that the majority of cardiac malformations are due to syphilis. Of neonatal infections syphilis is the most important for it is the cause of 45 per cent of all deaths in the newborn. The authors strongly recommend low Clostridium section in all cases in which regular and strong punishment to advance labour from four to twelve hours after rupture of the membranes. The operation is said to reduce by 75 per cent deaths due to asphyxia by 55 per cent those due to trauma and by 40 per cent those due to debility and syphilis.

## 402

## Cardiac Changes in Nephritis

M. I. RUBIN and M. RAPAPORT (*Am J Dis Child* February 1938 p 244) examined fifty-five children with acute haemorrhagic nephritis and found varying degrees of cardiac involvement in fourteen. They noted dyspnoea cardiac enlargement muffled heart sounds tachycardia systolic murmurs gallop rhythm enlargement and tenderness of the liver pulmonary and peripheral oedema and electrocardiographic changes. The writers emphasize the importance of hypertension which was found in all the fourteen cases as a cause of cardiac decompensation. The intramuscular injection of magnesium sulphate was found to be valuable both as a prophylactic and as a therapeutic agent. The giving of unlimited fluids which has been recommended with the idea of diluting toxins and producing diuresis is deprecated is likely to produce a further rise in blood pressure and precipitate a cardiac catastrophe.

## 403

## Brucella melitensis Meningitis

R. A. BLACK (*Arch Pediat* December 1937 p 702) records the case of an infant who died from this rare infection. The infant had all the symptoms of a severe meningitis and the agglutination test was positive with *Brucella abortus*. Similar agglutinations were found in the mother and father. Lumbar puncture showed that the cerebrospinal fluid pressure was slightly increased the fluid was clear there were 3 cells per cmm and no organisms were seen. Repeated examinations of the urine were negative throughout the illness. At necropsy it was found that there was an increase in the pressure of the cerebrospinal fluid and the subarachnoid space was filled with a yellow white fibrous exudate. On microscopic examination this exudate contained strands of fibrin and numerous cells. All the vessels were injected and the cortex of the brain was soft and oedematous. Two methods of transmission of brucella infection to man are recognized (1) by the ingestion of infected dairy products such as raw milk cream and butter (2) by the handling of infected uncooked meats. Children however appear to possess a relative immunity.

## 404

## Infantile Erythroblastic Anaemia

J. CAMINOLETROS (*Ann de Med* January 1938 p 27) describes his work on infantile erythroblastic anaemia among the inhabitants of the Eastern Mediterranean littoral. The disease begins in the first few months of life and is characterized by enlargement of the liver and spleen marked pallor and recurrent attacks of intermittent pyrexia. Until the second year of life diagnosis depends on (1) the presence of large numbers of erythro-

blasts in the blood and (2) increased resistance of the red blood cells to hypotonic saline. Later changes in the skull are seen and a Mongol like facies develops. The author discusses the cases described by Cooley and the difficulty of differentiating this disease from acholuric jaundice and von Jaksch's anaemia. Forty-two cases of infantile erythroblastic anaemia were examined between 1927 and 1934 and thirty-four cases since then. A large number showed the Mongol like facies and retarded growth with genital hypoplasia was noted in the older infants. Enlargement of the liver and spleen was an early and constant feature. Unlike acholuric jaundice there was no enlargement of the spleen during the pre-reveal periods but the number of erythroblasts and the bilirubin content of the serum showed marked fluctuations. There was a marked polymorphonuclear leucocytosis a characteristic feature being the presence of young cells with bilobed nuclei. In both the splenic pulp and the marrow of the sternum large numbers of immature red cells and immature leucocytes of the myeloid type were found. Lowered fragility of the red cells was constantly present. Radiological examination of the skull pelvis shoulders hands and feet showed osteoporosis. In the long bones the outstanding feature was enlargement of the medullary cavity. The author distinguishes two new forms of erythroblastic anaemia (1) the anaemia of earth eaters which occurs in older infants and is associated with slight bone changes and (2) erythroblastic anaemia with crescent-shaped red cells. Eleven cases fell into the former group and one into the latter. In this case the change in the red cells was incomplete. Of the whole group the great majority were dead two years after the initial examination.

## 405

## Niemann Pick's Disease

F. R. B. ATKINSON (*Arch Dis Childh* October-December 1937 p 241) gives a short summary of the recorded cases. Niemann Pick's disease is congenital and familial and affects chiefly the Jewish race. It is confined to children. There is enlargement of the liver and spleen with a brownish pigmentation of the skin and often a Mongolian appearance. In some cases it has been associated with Tay Sachs's disease. The symptoms usually begin quite early in life with vomiting and gradual weakness death nearly always takes place within two years. Other characteristics are anaemia an increase of the lipoids in the blood and attacks of fever. Mental retardation is common. The liver and spleen are always enlarged and have deposits of round or polygonal cells with increased lipoids. The brain is markedly changed and the optic disks often show cherry red spots similar to those found in Tay Sachs's disease. The cholesterol phosphatides and neutral fats are all much increased in the blood. No treatment is of value except that x-rays may cause a temporary improvement.

## 406

## Anterior Poliomyelitis and Varicella

HERBERT STUX (*Le Nourrisson* January 1938 p 31) describes an interesting case arising during the early stage of an epidemic of anterior poliomyelitis of a girl aged 1 year and 5 months who had been in contact with a case of measles and was given 40 ccm of adult serum. Five days later she developed a febrile illness on the eleventh day of which there suddenly appeared a flaccid paralysis of the right arm. The pyrexia continued for three weeks but there was no eruption. After three months the paresis had almost completely recovered. Four months after the original illness she had a mild attack of varicella which was complicated on the fourth day by a sudden flaccid paralysis of the right hand. Four months later only a slight atrophy of the muscles of the hand remained. The author discusses the relation between anterior poliomyelitis and varicella. He considers the paresis to be a true anterior poliomyelitis rather than a varicellar poliomyelitis. The long prodromal period

and the persistent pyrexia are unusual features in the case described. A neurotropic virus latent in the body, through the agency of an intercurrent infection, either by increased virulence of the virus or by lowered immunity in the host may give rise to the disease. Herpes in pneumonia, encephalitis following the exanthemata, and the relation of chicken-pox to herpes zoster are also examples. Such biotropism occurs especially when the virus has a neurotropic character. A satisfactory explanation of these facts has not yet been given.

437

## Erysipelas in Infancy

U AVELLONE (*Pediatrics* Naples, February 1, 1938, p 114) discusses 102 cases of erysipelas in infants and children with particular regard to the age, sex, and seasonal incidence and the mortality. The mortality rates at different ages were: under 1 month, 25 per cent; 1 to 6 months, 14.8 per cent; 6 to 12 months, 7.1 per cent; over 12 months, 5.1 per cent. Avellone suggests that these relatively favourable results may be due not so much to the treatment given (vaccines, haemotherapy, prontosil, ichthyol paste, etc.) as to various climatic and other factors.

## Obstetrics and Gynaecology

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## Antutrin S Test

A SHARMAN (*J Obstet Gynaec Brit Emp* February, 1938, p 82) has investigated the antutrin S test for the diagnosis of pregnancy in 400 cases, using the technique of Gilfillan and Gregg (*Amer J Obstet Gynec*, 1936, 32, 498). Of his cases 196 were pregnant and 204 non-pregnant women. A positive pregnancy reaction was obtained in 204 cases, of which 177 were proved pregnant and twenty-seven non-pregnant, the error being 13.2 per cent. A negative pregnancy reaction was obtained in 122 cases of which 116 were not pregnant and six were pregnant, the error in this group being 4.9 per cent. In seventy-four cases the reaction was doubtful, thirteen of these patients were pregnant and sixty-one were not. Sharmman concludes that the test in its present form is not dependable and is not so accurate as the Aschheim-Zondek reaction. This is unfortunate, as the test is simple and inexpensive. It has interesting possibilities and should be further studied. Employing the same technique, but using adrenaline in thirty-four cases and pituitrin (posterior substance) in fifteen cases the author failed to obtain uniform results in either pregnant or non-pregnant women.

409

## Pneumothorax in Pregnancy

A LONGO (*Riv Patol Clin Tuberc* February 28 1938, p 100) describes six cases of pregnant women suffering from pulmonary tuberculosis which was treated by the induction of an artificial pneumothorax. Their ages varied from 19 to 35 and the duration of their illness before admission to the sanatorium from a few days to four years. In some of the cases the onset was insidious in others very rapid. One patient gave birth to twins spontaneously at the eighth month in all other cases a normal delivery occurred at term. Low forceps were applied in one instance for uterine inertia. In all six cases the puerperium was uneventful. Five patients were greatly benefited by the collapse therapy. The one unfavourable case was that of a woman of 35 who after progressing remarkably well as a result of a bilateral initial pneumothorax decided to return home at the seventh month and did not attend for refills. She had rapidly worse after delivery and her pulmonary condition grew later. This seems to illustrate the author's view that the chief danger in pregnancy associated with pulmonary

tuberculosis lies in the hyperventilation of the lungs which occurs after delivery, when the diaphragm is free to resume its full excursion, thus giving rise to "homogeneous aspiration of tuberculous material." He therefore advocates a fairly large refill as soon as possible after delivery in order to compensate for the increased diaphragmatic movements. Conversely, he appears to agree with those authors who consider that pregnancy may exercise a favourable effect on pulmonary tuberculosis by limiting the excursion of the diaphragm. Longo concludes by urging that pregnant women suffering from pulmonary tuberculosis should be admitted to suitable institutions as early as possible, so that collapse therapy may be instituted at the most favourable moment as he sees in this method of treatment a means of avoiding the necessity for interrupting the pregnancy.

## Pathology

410

## Vaccination against Typhus Fever

P RADLO (*Arch Inst Pasteur Tunis*, 1937, 26, 667) reports on the vaccination of 13,980 persons against typhus fever in Poland during the years 1933 to 1936. Weigl's method was used, consisting in the injection of infected louse intestine ground up and suspended in 0.5 per cent phenolized saline. Originally Weigl used the intestines of 250 lice for the vaccination of a single subject. Owing to the expense involved this was subsequently reduced to 100 and then to 90. The present author has worked with even smaller numbers. Thus in thirty-five localities a quarter of the 13,980 vaccinated persons received only one to ten lice intestines per person, half received ten to twenty, and the remaining quarter twenty to thirty. Judging from the results obtained the degree of active immunity produced by the smaller doses did not differ noticeably from that produced by the larger ones. Altogether sixty cases of typhus were observed among the vaccinated subjects during the four years. In fifty-five of these the illness began during or immediately after vaccination. Only five persons contracted typhus fever more than five months after vaccination. One of these had received one louse intestine, two had received four or five intestines, and two had received ninety intestines. In all the vaccinated subjects the fever pursued a benign course.

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## Cold and Influenza Vaccines

E C ROSENOW and F R HEILMAN (*Amer J Clin Pathol* January, 1938, p 17) report studies on the protection against colds and influenza given by vaccines prepared from streptococci that had been preserved for not more than a year in dense suspensions in a mixture of water and 25 per cent sodium chloride solution. Vaccines were prepared as needed by dilution of the dense suspension with sodium chloride solution followed by heating at 56°C for use by injection or with a syrup when it was required for oral administration. Used prophylactically on 7,000 persons, the vaccines effected a reduction in incidence of colds and influenza in 91 per cent of cases. The incidence of colds or influenza in vaccinated persons was reduced to one third or one half of that in non-vaccinated persons living under comparable conditions. In treating over 5,000 patients with colds, influenza, pneumonia, chronic bronchitis or chronic sinusitis benefit from the vaccines was found in about 90 per cent of all cases in each disease. The findings in human subjects were supported by the results of experiments on mice and subcutaneous vaccination of mice. In other experiments rats and mice immunized orally by vaccines prepared from old strains of streptococci and pneumococci were protected against recently isolated strains of these cocci and pneumococci.

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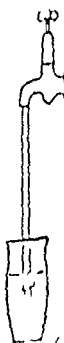
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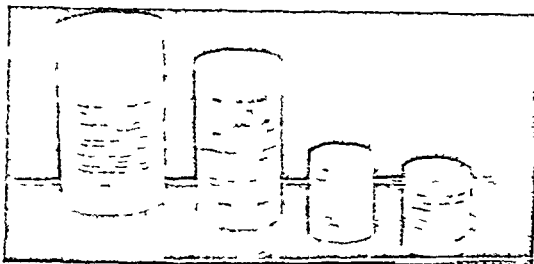
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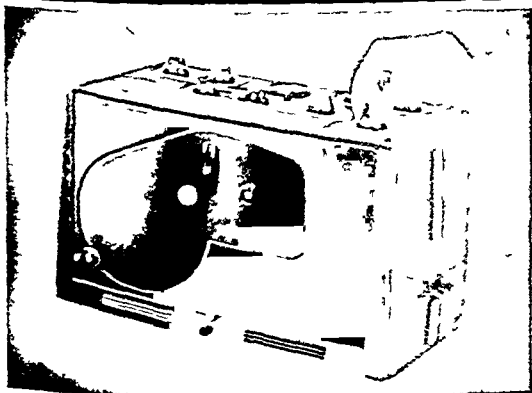
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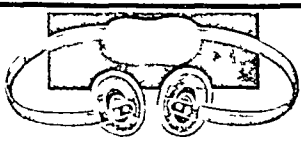


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For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton) who can be seen in London by appointment.

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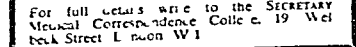
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Candidates below the age of 28 years are preferred and they must be registered under the Medical Acts. No examination in professional subjects will be held but candidates will be required to attend for interview by a Selection Board.

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty.

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000.

At the end of five years Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax).

Full opportunities exist for transfer to the permanent list, and periods of unemployment or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances.

Opportunities are available for officers on the permanent list for post graduate study, to specialise, to take higher examinations and to obtain further qualifications.

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers.

Copies of the regulations for entry and conditions of Service, including rates of pay, allowances and retired pay may be obtained from the Medical Director General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidate, must be received not later than 31st May, 1938

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Applications are invited for the post of Medical Officer CLASS II in the Prison Service. Commencing salary £3 per annum with annual increments of £1 per annum with an initial house allowance of £100 per annum. The post is permanent.

Candidates must be fully qualified and preferred will be given to those who have held the post. It is desirable that candidates should have had experience in medical duties and in medical practice and are between the ages of 24 and 35 years. The Commission is for three years from the date of appointment.

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Forms of application can be obtained from the Secretary (Prison) Prison Commission, 11, Old Bailey, London E.C.4.

## WEST SUFFOLK COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above positions. The post is permanent. The salary is £3 per annum with annual increments of £1 per annum. The post is permanent.

Applications must be received before May 15th 1938. The salary is £3 per annum with annual increments of £1 per annum. The post is permanent.

Applications may be obtained from the undersigned by whom applications accompanied by copies of not more than three recent testimonials must be received not later than May 15th 1938.

Can assist in any form direct or indirect will be equally.

L. G. H. MUNSEY

Clerk of the County Council

St. Hill, Bury St. Edmunds

May 14 1938

## BOLTON EDUCATION COMMITTEE

APPOINTMENT OF ASSISTANT (WOMAN) MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

The Bolton Education Committee invite applications for the post of a WOMAN ASSISTANT MEDICAL OFFICER OF HEALTH and ASSISTANT SCHOOL MEDICAL OFFICER.

The person appointed will be required to assist in the medical examination and treatment of school children and to be prepared to be called upon to attend to the medical needs of the community.

Preferential consideration will be given to those who have held the post of Assistant Medical Officer of Health or Assistant School Medical Officer.

It is desirable that the candidate should have a Diploma in Public Health or an equivalent qualification.

Terms of appointment will be as determined by the Local Government and the Officers' Salary Scale. The post is permanent.

The salary will be at the rate of £200 per annum with annual increments of £25 to a maximum of £300 per annum.

Applications should be sent to the School Medical Officer, Bolton, for consideration and to the Education Committee, Bolton, for appointment.

JOHN A. COX, Director of Education, Bolton.

## BOROUGH OF BARKING

ASSISTANT MEDICAL OFFICER

Applications are invited before May 15th 1938 from qualified medical practitioners for the post of Assistant Medical Officer of Health and Assistant School Medical Officer.

The salary is £200-£250 plus £50 per annum. The post is permanent.

Particulars of duties and appointment form may be obtained from the undersigned.

S. A. JEWERS, Town Clerk, Barking.

## COUNTY BOROUGH OF SUNDERLAND

ASSISTANT MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE

Applications are invited for the post of Assistant Medical Officer for Maternity and Child Welfare. The post is permanent.

It is desirable that the candidate should have a Diploma in Public Health or an equivalent qualification.

Terms of appointment will be as determined by the Local Government and the Officers' Salary Scale. The post is permanent.

The salary will be at the rate of £200 per annum with annual increments of £25 to a maximum of £300 per annum.

Applications should be sent to the School Medical Officer, Sunderland, for consideration and to the Education Committee, Sunderland, for appointment.

JOHN A. COX, Director of Education, Sunderland.

G. S. MCINTIRE, Town Clerk, Sunderland.

Town Hall, Sunderland, May 14 1938

## CITY OF BATH

DEPUTY MEDICAL OFFICER OF HEALTH AND DEPUTY SCHOOL MEDICAL OFFICER

Applications are invited for the post of Deputy Medical Officer of Health and Deputy School Medical Officer. The post is permanent.

It is desirable that the candidate should have a Diploma in Public Health or an equivalent qualification.

Terms of appointment will be as determined by the Local Government and the Officers' Salary Scale. The post is permanent.

The salary will be at the rate of £200 per annum with annual increments of £25 to a maximum of £300 per annum.

Applications should be sent to the School Medical Officer, Bath, for consideration and to the Education Committee, Bath, for appointment.

J. BASIL OGDEN, Town Clerk, Bath.

## THE UNIVERSITY OF MANCHESTER DEPARTMENT OF PATHOLOGY

Applications are invited for the post of ASSISTANT LECTURER IN CHEMICAL PATHOLOGY. The appointment is normally made for a period of three years. Stipend £400 per annum. Duties to begin not later than September 29th 1938. Last date for application May 21st. Further particulars may be obtained on application to the Registrar the University Manchester 13.

## BOROUGH OF HESTON AND ISLEWORTH

### APPOINTMENT OF WOMAN ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified medical women with at least three years experience and also holding a Public Health qualification for the above mentioned post. The successful candidate will work under the supervision of the Medical Officer of Health.

The work will include medical inspection of school children, bacteriological work, Maternity (Ante Natal) and Child Welfare work and such other duties as may be allotted. The candidate appointed may also be required to act as Medical Supervisor of Midwives and it is desirable that applicants shall hold qualifications in accordance with the Midwives (Qualifications of Supervisors) Regulations, 1937 particulars of which will be furnished with the application form.

The person appointed will be required to devote her whole time to the duties and will not be allowed to engage in private practice. The salary will be at the rate of £500 per annum rising by annual increments of £25 to £700 per annum.

The post will be a designated post for the purposes of the Local Government and Other Officers Superannuation Act 1922 and the appointment will be subject to the passing of a medical examination in connection therewith.

The appointment will be terminable by one month's notice on either side. The person appointed must live within the Borough of Heston and Isleworth.

Form of application and terms of appointment can be obtained from the Medical Officer of Health 947 Bath Road Hounslow.

Applications accompanied by copies of not more than three recent testimonials must reach the undersigned not later than noon on Wednesday May 15th 1935.

Council House, Hounslow, April 1935.  
HAROLD SWANN, Town Clerk

## GLOUCESTERSHIRE COUNTY COUNCIL TWO ASSISTANT COUNTY MEDICAL OFFICERS OF HEALTH

Gloucestershire County Council invite applications for the appointments of two Assistant County Medical Officers of Health (M.O.H.).

The salary in each case will be on the scale £600 p.a. plus £25 to £700 p.a. and past local government service will be counted in assessing the commencing salary. Travelling and subsistence allowances will be paid in accordance with the Council's scale.

The posts are designated for the purposes of the Local Government and Other Officers Superannuation Act 1922 and the successful candidates will be required to pass a medical examination by the Council's medical adviser. Applicants must be registered medical practitioners and should hold a Diploma in Public Health. Previous experience in various branches of public health and school medical work is desirable.

Forms of application with particulars of the duties and conditions of appointment may be obtained from the County Medical Officer of Health Shire Hall Gloucester to whom completed application with copies of three recent testimonials should be sent not later than May 10th 1935.

Candidates directly or indirectly will disqualify themselves if they are not registered medical practitioners. RICHARD L. MOON, Clerk of the County Council.

## BOROUGH OF WORTHING ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly registered medical practitioners possessing a diploma in Sanitary Science, Public Health or State Medicine for the appointment of Assistant Medical Officer of Health.

Salary £400 per annum rising subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 to £700 per annum. Commencing salary will be £400 per annum. Commencing salary will be £400 per annum. Commencing salary will be £400 per annum.

Applications should be sent to the undersigned not later than May 15th 1935. Further particulars may be obtained on application to the undersigned.

J. K. NEDDY ALLESTON, Town Clerk, May 1935.

## LONDON COUNTY COUNCIL CONSULTANT AND SPECIALIST SERVICES

Applications invited for appointment as PART-TIME EAR, NOSE AND THROAT SPECIALIST for a total of two sessions a week for duty at St James Hospital Ouseley Road Balham SW 12.

Salary £200 a year (£150 a year if already employed as a part-time consultant or specialist in the Hospitals Service) and additional remuneration at the rate of £2 12s 6d a visit for emergency visits made in excess of the number of routine sessions.

Application forms containing full particulars obtainable (stamped addressed foolscap envelope necessary) from the Medical Officer of Health (Staff Division 6) County Hall Westminster Bridge SE 1 returnable by May 21st. Women eligible. Convincing disqualifies.

## LONDON COUNTY COUNCIL

### ASSISTANT DISTRICT MEDICAL OFFICERS REQUIRED FOR THE FOLLOWING DISTRICTS

(1) Area IV District J (South East St Pancras) Provisional salary £125 (inclusive of payment for use of doctor's surgery for Council's patients).

(2) Area X District I (part North Woolwich) Provisional salary £260.

Persons appointed required to reside in or near district.

Application form with further particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2 (B) County Hall SE 1 returnable by May 21st.

Convincing disqualifies.

## LONDON COUNTY COUNCIL

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing to under-mentioned position. Experience in a resident appointment in a general hospital for at least six months desirable. Married quarters not available.

ASSISTANT MEDICAL OFFICER (GRADE D) Salary £350-£25 £425 with board lodging and washing.

Grove Park Hospital Lee SE 12. Experience in pulmonary tuberculosis essential and in non-pulmonary desirable.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2, County Hall SE 1 returnable by May 23rd.

Convincing disqualifies.

## HULL CORPORATION HEALTH DEPARTMENT

### HULL CITY HOSPITAL

#### RESIDENT MEDICAL OFFICER

Applications are invited from registered medical practitioners of either sex for the appointment of RESIDENT MEDICAL OFFICER at the Hull City Hospital for Infectious Diseases, Cottingham.

Candidates must be single not more than 40 years of age and have had experience in a general hospital.

The appointment is in the first instance for a period of one year and the salary is £350 per annum together with usual residential emoluments. The appointment may be extended for more than one year in which case the salary subject to satisfactory service will be increased by annual increments of £25 to a maximum of £450 per annum.

Applications on forms to be obtained from the undersigned are returnable not later than 10 a.m. on Saturday May 21st 1935.

NICOLAS GEBBIE M.D. Medical Officer of Health

Health Department, Guildhall Hull, May 1935.

## COUNTY BOROUGH OF WEST BROMWICH

### HALLAM HOSPITAL (472 Beds)

#### HOUSE PHYSICIAN

Applications are invited from duly qualified Male Registered Practitioners for the above mentioned post on the medical staff.

The appointment is for six months with eligibility for a further six months. Either party may give six weeks' notice terminating the appointment. There is a visiting staff of eight physicians and surgeons, one resident surgical officer and three resident medical officers.

Salary £140 per annum and board residence. All fees received by the person appointed will be paid into the funds of the Council.

Application stating age, experience and qualifications, together with copies of three recent testimonials must be forwarded to the Medical Officer of Health 2 Lodge Road West Bromwich so as to arrive not later than by first post on Wednesday May 15th 1935.

G. F. DARLOW, Town Clerk, Town Hall West Bromwich, May 1935.

## CITY OF BIRMINGHAM

### MENTAL HOSPITAL DEPARTMENT

#### RUBERY HILL AND HOLLYMOOR DIVISION

The Committee of Visitors invite applications from duly qualified medical men for the post of Junior Male Assistant Medical Officer in successful candidate will be required to work in the Hospital.

The commencing salary will be £150 per annum plus the usual residential emoluments of board, lodging, laundry and attendance. An additional £50 will be granted on completion of 12 months satisfactory service and the officer will be paid £25 per annum up to a maximum of £450 per annum. An additional £50 per annum will be paid to a holder of the D.P.M. award or to a person obtaining the D.P.M. after 5 years' service. All fees received in connection with work will be required to be paid into the Hospital Funds but for making insurance repayments on compensation claims and Coroners' fees the fees can be retained.

A person who has held for at least 5 years a medical or surgical residential post in a mental hospital will be regarded as having the necessary qualification. Previous mental hospital experience is not essential but experience in the administration of anaesthetics is desired.

The candidate appointed will be required to pass a medical examination and will be paid the permanent staff after one year's satisfactory service, when he will be required to continue under the Asylum Officers Superannuation Act 1909. He will be required to serve in the institution belonging to the Mental Hospital Committee as they may from time to time direct. The appointment is subject to one month's notice on either side.

Applications stating full particulars of qualifications, experience and appointment, accompanied by copies of three recent testimonials must be addressed to the undersigned and must be received not later than May 15th 1935.

H. C. WILTSCHILL, Clerk to the Committee of Visitors, Town Clerk's Office, Council House Birmingham 1.

## CITY OF BIRMINGHAM

### ASSISTANT MEDICAL OFFICER

Applications are invited from qualified registered medical practitioners for the post of ASSISTANT MEDICAL OFFICER for the City of Birmingham and child welfare. Applicants must have at least three years' postgraduate experience including experience in general medicine, surgery and special experience in child welfare, ante-natal work and in the treatment of infectious diseases and disease of women. Preference will be given to candidates possessing the D.P.M. Under the present grading scheme of the City of Birmingham the post is at £150 per annum and the maximum salary £450 per annum with increments of £25 subject to satisfactory service and the first increment will take effect on the completion of twelve months' service.

The Council may at its discretion take account previous experience in a similar post in determining the amount of the commencing salary.

The person appointed will be required to pass a medical examination and to continue in the superannuation fund established under the Local Government and Other Officers Superannuation Act 1922. The appointment will be terminable by one month's notice on either side.

Form of application and particulars of duties of the appointment may be obtained from the undersigned.

Applications endorsed "Medical Officer of Health" together with copies of three recent testimonials must be delivered to the Health Department, 17 Market Street, Birmingham, not later than 10 a.m. on Wednesday May 24th 1935.

Convincing in any form either directly or indirectly will be a disqualification. J. JOHNSTONE, Medical Officer of Health.

Applications should be sent to the undersigned not later than May 15th 1935.

JOHNSTONE, Medical Officer of Health.

## KENT COUNTY COUNCIL

### RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified medical practitioners for the post of Resident Assistant Medical Officer at the Chatham (60 Beds) Hospital for the treatment of infectious diseases.

The salary for the post is £150 per annum with residential emoluments of board, lodging, laundry and attendance.

The appointment is for a period of one year with eligibility for a further year.

Forms of application with particulars of duties and conditions of appointment, together with copies of three recent testimonials, must be forwarded to the Medical Officer of Health 2 Lodge Road West Bromwich so as to arrive not later than by first post on Wednesday May 15th 1935.

G. F. DARLOW, Town Clerk, Town Hall West Bromwich, May 1935.

SENIOR HOUSE, May 5th 1935.

[illegible]

## COUNTY BOROUGH OF IPSWICH

### APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER OF HEALTH ASSISTANT SCHOOL MEDICAL OFFICER AND RESIDENT MEDICAL OFFICER ISOLATION HOSPITAL

The Council invite applications for a whole time Assistant Medical Officer of Health Assistant School Medical Officer and Resident Medical Officer Ipswich Isolation Hospital Applicants may be of either sex but must be fully qualified medical practitioners possessing a Diploma in Public Health and under 40 years of age.

The salary will be at the rate of £450 per annum rising subject to satisfactory service by annual increments of £25 to a maximum of £550 and in addition the person appointed will enjoy the usual residential emoluments valued at £150 per annum. A car allowance of £36 will be paid for the use of the officer's own motor car.

The successful candidate will be required to live at the Ipswich Isolation Hospital and to pass a medical examination.

The officer will work under the direction of the Medical Officer of Health who is also School Medical Officer.

The officer will be required to contribute to the Superannuation Scheme with effect from April 1st 1939.

Forms of application may be obtained from the Medical Officer of Health Public Health Department Elm Street Ipswich and applications with copies of not more than three recent testimonials must be delivered to the undersigned not later than June 1st 1938 in an envelope marked Appointment of Assistant Medical Officer of Health.

Canvassing directly or indirectly will be a disqualification.

Town Hall  
Ipswich  
May 10th 1938

A. MOFFAT  
Town Clerk

## MIDDLESEX COUNTY COUNCIL

### JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

North Middlesex County Hospital Silver Street Edmonton N 18

Applications are invited for the above appointment. Candidates must be registered medical practitioners who have held resident appointments in a general hospital.

The officer appointed will be required to work under the control of the Medical Superintendent and to devote his or her whole time to official duties.

Salary £50 per annum with board lodging and laundry.

The appointment (which is subject to medical examination but does not at present carry any superannuation rights) is for a period of six months in the first instance and may be extended for an additional six months. It is terminable by one month notice on either side.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 28th 1938. Application forms are not provided. Relationship to any member or officer of the County Council must be disclosed in the application. Envelopes must be endorsed Junior Assistant Medical Officer.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE  
Middlesex Guildhall Clerk of the County  
Westminster S.W.1 Council  
May 3rd 1938

## LONDON COUNTY COUNCIL

FIRST ASSISTANT MEDICAL OFFICER (man or woman) (age under 40) required at Maudsley Hospital Denmark Hill S.E.5 (for Neuroses and curable mental disorders).

Candidates must be registered to practice both in medicine and surgery in England have held residential position in general hospital for six months or have had comparable general experience and must hold diploma or degree in psychological medicine.

Salary £400 rising to £450. No emoluments. Charitable and Industrial (at present 25% discount) on Maudsley Hospital service in London.

Application form returnable by May 20th and stamped addressed footslop envelope to Chief Officer (London Mental Hospitals Dept Strand W.C.2).

Canvassing directly or indirectly will be a disqualification.

## INVERNESS DISTRICT ASYLUM

JUNIOR ASSISTANT MEDICAL OFFICER

Candidates must be registered to practice with some qualification in medicine or surgery and have held residential position in general hospital for six months or have had comparable general experience and must hold diploma or degree in psychological medicine. Salary £400 rising to £450. No emoluments. Charitable and Industrial (at present 25% discount) on Maudsley Hospital service in London. Application form returnable by May 20th and stamped addressed footslop envelope to Chief Officer (London Mental Hospitals Dept Strand W.C.2).

## BOROUGH OF HESTON AND ISLEWORTH

### Appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Council invite applications from duly qualified Medical Practitioners registered in the Medical Register as holders of a Diploma in Sanitary Science Public Health or State Medicine and who are not over 45 years of age for the appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER of the Borough. The appointment is subject to the approval of the Minister of Health and to the provisions of the Local Government Act 1933 the Sanitary Officers (Outside London) Regulations 1935 and the Local Government and Other Officers Superannuation Act 1922.

The person appointed will be required to undertake in addition to the duties of Medical Officer of Health the administration of the school medical service and maternity and child welfare service and will also be required to carry out such other duties as the Council may with the consent of the Minister of Health (where necessary) from time to time direct.

The person appointed must reside within the Borough and will not be allowed to engage in private practice or to hold any other appointment without the consent of the Council.

The commencing salary will be £1000 per annum rising by annual increments of £50 to £1300 per annum. Travelling expenses will be paid by the Council.

Further particulars and form of application will be supplied on application to the undersigned.

Applications on the prescribed form accompanied by copies of not more than three recent testimonials and endorsed Appointment of Medical Officer of Health must be delivered to the undersigned not later than May 28th 1938.

Canvassing either directly or indirectly will be deemed a disqualification.

HAROLD SWANN

Council House  
Ircaty Road Hounslow  
Town Clerk

## CITY OF COVENTRY

### ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

The Coventry City Council invite applications from Registered Medical Practitioners under 40 years of age for the post of Assistant School Medical Officer (male) in connexion with the medical inspection etc. of schoolchildren. When not engaged in school work the officer will be required to assist in the general work of the Public Health Department.

Applicants must possess a Diploma in Public Health and preference will be given to those with appropriate previous experience.

The salary will be £500 rising by annual increments of £25 to a maximum of £700 per annum.

The post is designated under the Local Government and Other Officers Superannuation Act 1922 as amended in regard to annuities to widows by the Coventry Corporation Act 1936 and the successful applicant will be required to pass a medical examination as to fitness and to contribute to the superannuation fund. The successful applicant will also be required to contribute to the Coventry Staff Widows and Orphans Pension Fund.

Applications together with copies of three recent testimonials must be made on the prescribed form (which may be obtained from the undersigned) and must be delivered not later than May 25th 1938.

FREDERICK SMITH Town Clerk

The Council House Coventry  
May 10th 1938

## DERBYSHIRE COUNTY COUNCIL

### WALTON SANATORIUM Near Chesterfield

#### JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the post of JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER at the DERBYSHIRE COUNTY SANATORIUM.

Candidates with previous institutional experience of tuberculosis will be preferred and practical experience of artificial pneumothorax work will be considered an additional qualification. Candidates must be single.

Salary at the rate of £350 per annum rising by annual increments of £25 to £450 per annum together with board lodging etc.

The successful candidate will devote the whole of his time to the duties of the office.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the person appointed will be required to pass a medical examination.

Application forms may be obtained from the undersigned to whom they must be returned together with copies of not more than three recent testimonials on or before May 19th 1938.

W. M. ASH

New County Office Derby  
April 24th 1938

## COUNTY BOROUGH OF BLACKBURN

### LADY ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified women practitioners for the appointment of Lady Assistant Medical Officer of Health and Assistant School Medical Officer to act under the direction and supervision of the Medical Officer of Health who is also School Medical Officer.

The maximum salary will be £800 per annum. The commencing salary will not be less than £600 per annum and will be fixed according to qualifications and experience of the successful applicant and will rise by annual increments of £25 to the maximum of £800.

The person appointed must have had at least three years' postgraduate experience in the practice of her profession and special experience of midwifery and antenatal work. Specific graduate experience in the treatment of venereal diseases and of diseases of children is a possession of a registrable degree or diploma in Public Health will be deemed additional qualifications.

Applications to be made on forms to be obtained from the Medical Officer of Health Victoria Street Blackburn and returned to him not later than Saturday May 21st 1938 endorsed Assistant Medical Officer of Health.

Canvassing directly or indirectly will be a disqualification.

Town Hall  
Blackburn  
March 7th 1938

CHAS S. ROBINSON  
Town Clerk

## COUNTY BOROUGH OF BLACKBURN

### PUBLIC ASSISTANCE DEPARTMENT

#### RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited from Medical Practitioners (male) for the appointment of a Resident Junior Assistant Medical Officer at Queens Park Hospital and Institution.

The Staff consists of a Resident Medical Officer a Resident Assistant Medical Officer a Clinical Surgeon a Laboratory Assistant and an X-ray Attendant.

There is a separate Infirmary a separate Medical Block and a separate Hospital for children and there is opportunity for experience in all departments including Medical Surgical and Medical cases. An X-ray apparatus is installed.

The person appointed will be required to devote his whole time to the duties and also to act as may be directed by the Resident Medical Officer. The appointment will be limited to a term not exceeding one year.

Salary at the rate of £200 per annum together with board apartments and attendance.

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials must be sent to the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn.

Town Hall  
Blackburn  
April 30th 1938

CHAS S. ROBINSON  
Town Clerk

## CITY OF SALFORD

### PUBLIC HEALTH DEPARTMENT

Applications are invited from fully qualified Medical Practitioners for the post of Assistant Medical Officer (whole time) in the Salford District Diseases Treatment Centre at which 1000 cases of venereal diseases are treated annually and 2000 respectively. The salary will be £400 rising by annual increments of £25 to £450 per annum. Applicants must have had previous experience in the treatment of Venereal Diseases and must possess a certificate of attendance as specified in the Local Government (Venereal Diseases) Regulations 1936.

Forms of application etc. may be obtained from the Medical Officer of Health, 5 Lanes, Salford Road Salford 5. Lanes to whom applications must be returned accompanied by copies of not more than three recent testimonials not later than May 28th 1938.

H. H. TOMSON Town Clerk

## COUNTY BOROUGH OF SOUTHAMPTON

### ASSISTANT RESIDENT MEDICAL OFFICER SOUTHAMPTON BOROUGH GENERAL HOSPITAL

The Council invite applications from duly qualified medical practitioners for the appointment of an Assistant Resident Medical Officer at a salary of £350 per annum rising by annual increments of £25 to £400 per annum.

The person appointed will be required to pass a medical examination.

Form of application etc. may be obtained from the Medical Officer of Health, 10, The Arcade, Southampton. Applications must be returned to him not later than May 21st 1938.

R. RONALD H. HEGG  
Civil Centre Southampton

HOSPITAL OF ST. CROSS RUDEBY  
(10 Beds)

[illegible]

## HULL ROYAL INFIRMARY

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## LINCOLN COUNTY HOSPITAL

[illegible]HOLLOWAY SANATORIUM (HOSPITAL  
FOR MENTAL DISEASES)

**JUNIOR ASSISTANT MEDICAL OFFICER**

KING EDWARD VII HOSPITAL WINDSOR  
(210 Beds)

**CASUALTY OFFICER** required immediately. Applicant must be fully qualified in the above mentioned and unmarried.  
Salary at the rate of £150 per annum to either with board or without board and laundry.  
An military training of equal value and experience accompanied by testimonials would be sent to the undersigned not later than May 1st.

A. E. CHURCHER  
Secretary

GRAVESEND AND NORTH KENT HOSPITAL  
Gravesend Sec 1 (1-0 1176)

Applications are invited from fully qualified persons for the post of JUNIOR HOUSE SURGEON.  
Duties commence June 1st 1955.  
Salary at the rate of £10 p.w. with full board, washing etc. and certain fees a perquisite.  
Applicants should be sent in at once and should be addressed to the undersigned.  
C. E. CHAPMAN  
Secretary, Sussex Hospital.

FREE EYE HOSPITAL SOUTHAMPTON

The Committee require the services of a duly qualified HOUSE SURGEON for a period of six months from June 1st 1938. Salary £140 per annum with board residence and laundry. Post graduate experience in Ophthalmology is desirable. Applications with three recent testimonials to reach the Secretary by May 1st 1938.

## ALINA DEAN HOSPITAL FOR CHILDREN WITH THE DISEASE

THE FIRST SECOND DEPT MEDICAL  
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## MANCHESTER ROYAL INFIRMARY

[illegible]

ROYAL SOUTH HAMPSHIRE AND  
SOUTHAMPTON HOSPITAL

ONE HOUSE PHYSICIAN  
TWO HOUSE SURGEONS  
ONE RESIDENT ANESTHETIST  
ONE CASUALTY OFFICER who shall also  
be the emergency room resident  
First shift beginning on July 1st 1961  
each day for the first six months with leave  
and duty.  
Appointments are made by the medical staff  
three months ahead be sent to the hospital  
board at least ten days before.

W. BARNES

House Officer and Student

NOTTINGHAM GENERAL DISPENSARY  
10, QUEEN STREET, NOTTINGHAM.

Wanted RESIDENT MEDICAL OFFICER  
 (m or fem) to work at the Medical  
 Department of the University of  
 Chicago. Salary \$6000 per year  
 plus benefits. Must have M.D. and  
 be a resident of Chicago. The  
 position is full time. The  
 University of Chicago is an  
 equal opportunity institution.  
 For consideration, send resume  
 and references to the Department  
 of Medical Education, University  
 of Chicago, 5841 S. Maryland  
 Avenue, Chicago, IL 60637.  
 R H WILLARD  
 Secretary

**NILNEATON GENERAL HOSPITAL.**

Applications are invited from duly qualified medical workers for the post of HOUSE SURGEON to the Nurection General Hospital (100 bed). The appointment is for six months in the first instance and is salaried at the rate of £10 per annum to the staff with board lodging, laundry and certain other emoluments. The vacancy will arise on 1 June 1962 and applications should be sent to the Secretary of the Medical Board, Nurection General Hospital as soon as possible. Two copies of the application may be enclosed with the applications.

ROYAL LANCASTER INFIRMARY  
Lancaster (140 Beds)

Applications are invited for the post of HOUSE SURGEON. Salary £10 per annum with Board residence and laundry. The appointment is for six months. Applications stating age, qualifications, experience and nationality together with copies of three recent testimonials to be sent to the undersigned.

FRANK A. MILNES  
Superintendent Secretary

THE CHILDREN'S HOSPITAL  
(King Edward VII Memorial)

BIMBAH 16

**ASSISTANT ORTHOPAEDIC SURGEON**

A meeting of the Committee of Election will be held on Monday June 18th 1954 at 11.45 a.m. for the purpose of electing a new Assistant Orthopaedic Surgeon. Applications should be received by the Registrar of Surgeons not later than Friday June 11th 1954.

It is requested that all candidates should be Fellows of the Royal College of Surgeons in England and that they should also be eligible for election to the Council of the College. Candidates should also be qualified to practise as Surgeons in the United Kingdom.

The successful candidate will be appointed for a term of five years and will be eligible for re-election. The successful candidate will be appointed to the post of Assistant Orthopaedic Surgeon in the Department of Orthopaedics, St. Mary's Hospital, London, W.2.

The Assistant Orthopaedic Surgeon will be responsible to the Council of the College and to the Committee of Election. He will be responsible for the medical and surgical treatment of patients in the Department of Orthopaedics, St. Mary's Hospital, London, W.2.

It is the duty of the Assistant Orthopaedic Surgeon to be fully conversant with the principles and practice of orthopaedic surgery and to be able to perform all the operations which may be required in the treatment of patients in the Department of Orthopaedics, St. Mary's Hospital, London, W.2.

Applications should be sent to the Registrar of Surgeons, 1, St. Andrew's Place, London, W.2.

HAROLD F. SHRIMP

May 21 1954      House, Gloucester

THE BOLTON ROYAL INFIRMARY  
(31 BOLTON 17 FEB 1933 BY H 10123)

[illegible]

THE ROYAL HOSPITAL

(In accordance with Chapter 1  
( ) Bad)

Applications are invited for the position of  
RESIDENT ASSISTANT PATHOLOGIST to  
RESIDENT MEDICAL OFFICER. Salary  
range of \$10,000 to \$12,000 per annum. The holder of  
the position will be expected to act as a  
Bad Transfer Officer to the Hospital this  
post will win a future promotion of \$20,000  
per annum.

Applications with copies of testimonials to be  
forwarded to the undersigned.

W. H. HARPER  
Hulse, Governor

Wolfehampton  
April 10th 1933

THE WEST NORFOLK AND KINGS LYNN  
GENERAL HOSPITAL, Kings Lynn

THIRD RESIDENT MEDICAL OFFICER

The Governor's Board in its application for the above post has stated that the holder of the post should be a qualified Medical Officer, should be a resident of the Colony, should be a member of the General Medical Council and should be a member of the Royal College of Physicians.

Salary £10 per annum. The appointment is for 12 months in the first instance.

Applicants should be a \* nationally qualified person and be a member by examination and reach the standard set out in the 1st 1/2th

JOSEPH E. SEARJEANT F.C.C.S.  
House Governor and Secretary



**ROYAL HALIFAX INFIRMARY**  
(250 Beds)

Hospital recognized by the Royal College of Surgeons (England)

WANTED a SECOND HOUSE SURGEON for Eye Ear Nose and Throat and Medical Departments (male unmarried). Candidates must be duly qualified and registered. The appointment will be for a period ending October 31st 1938 followed by probable promotion if satisfactory. Salary including all services required in connexion with resident board and laundry. The Resident Staff consists of Resident Surgical Officer and three House Surgeons. The Hospital contains Maternity Paying Patients Blocks also a Pathological Department a large Eye Ear Nose and Throat Department Radiological Department and Radium Clinic.

Particulars of the duties may be obtained from the undersigned to whom applications stating age and nationality together with copy testimonials should be sent

May 2nd 1938 A MIDGLEY Secretary

**BARROWMORE TUBERCULOSIS SANATORIUM and SETTLEMENT**  
Gt Barrow near Chester

Male JUNIOR ASSISTANT MEDICAL OFFICER required

Salary £200 per annum with board residence and laundry. The appointment will be made in the first instance for a period of six months renewable for a further six months not renewable afterwards.

The Institution deals with all stages of Pulmonary Tuberculosis and comprises Hospital accommodation extensive workshops for graduated work and a Settlement.

Special treatment Sanocrysin and Artificial Pneumothorax given.

Applications marked Junior Assistant Medical Officer with copies of three testimonials should be sent to the Medical Director at the above address.

**NOTTINGHAM GENERAL HOSPITAL**  
(389 Beds)

A HOUSE PHYSICIAN (male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry.

Applications stating age, qualifications and experience together with copies of testimonials to be sent to the undersigned not later than May 26th.

Duties to commence on July 1st 1938  
P M MacCOLL  
House Governor and Secretary

**ROYAL SUSSEX COUNTY HOSPITAL**  
Brighton (272 Beds)

HOUSE PHYSICIAN (male) required July 1st 1938. Charge of beds. Salary £150 per annum with board residence and laundry. Candidates must hold a Medical and Surgical qualification of the British Empire and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications with copies of testimonials should be sent to the undersigned as soon as possible.

L L W LANCASTER GAYE  
Secretary Superintendent

**ROYAL VICTORIA AND WEST HANTS HOSPITAL BOURNEMOUTH**

The Board of Management invites applications for the appointment of an HONORARY ASSISTANT SURGEON.

Applicants must be Fellow of a Royal College of Surgeons.

Applications stating age, qualifications and experience should be sent to the undersigned by June 14th. Canvassing personally or otherwise will disqualify.

May 9th 1938 GORDON M SAUL Secretary

**SAMARITAN HOSPITAL FOR WOMEN**  
Belfast

There is a vacancy for the post of HOUSE SURGEON. Period of appointment six months with possible extension for a further period of six months.

Salary at the rate of £60 per annum with board and laundry. Apply immediately with copies of three recent testimonials to

The SECRETARY

**LIVERPOOL HEART HOSPITAL**  
34 Oxford Street Liverpool 7

HOUSE PHYSICIAN required (male or female) July 1st for six months. Facilities for research and for M.D. thesis. Salary at rate of £150 per annum with board residence and laundry. Apply to Secretary.

**THE GULST HOSPITAL DUDLEY**  
(General Hospital 139 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications are invited from registered Medical Practitioners for the post of RESIDENT SURGICAL OFFICER (male). Duties to commence May 22nd 1938. Salary at the rate of £250 £300 per annum according to experience with furnished apartments board and laundry. Candidates must have had experience in emergency surgery and preference will be given to those holding the qualification of F.R.C.S. or M.S.

Applications stating age, qualifications and experience accompanied by copies of testimonials to be sent to the undersigned.

H RAYMOND HURST  
House Governor and Secretary  
May 5th 1938

**ANCOATS HOSPITAL MANCHESTER 4**  
ORTHOPAEDIC REGISTRAR

Applications are invited from duly qualified Medical Practitioners. Duties to assist the Hon. Orthopaedic Surgeon in the Out Patient Clinics on Tuesday afternoons at 2 and on Thursday morning at 9. Honorarium £50 per annum. Appointment for twelve months renewable on January 1st of each year.

Applications stating age, qualifications, experience and full particulars to be forwarded immediately together with copies of three recent testimonials.

By Order of the Board  
HERBERT J DAFFORNE  
Gen Supt and Secretary

**THE ROYAL INFIRMARY SHEFFIELD**  
(500 Beds)

Applications are invited for the post of CLINICAL ASSISTANT to the Ophthalmic Department (male or female). The Ophthalmic Department contains 65 Beds and an Out Patient Department which is open daily.

Salary £300 per annum.

The appointment will be for one year subject to two months notice and the officer elected will be eligible for reappointment. Letters stating age and giving full qualifications, previous hospital experience, etc. to be forwarded to the General Superintendent and Secretary not later than May 30th 1938.

May 2nd 1938

**THE ROYAL INFIRMARY SHEFFIELD**

The Board of Management invite applications for the post of OPHTHALMIC HOUSE SURGEON.

The salary attached to the post is £120 per annum with board and residence.

This appointment will be tenable for the period of six months commencing May 1st 1938.

The Ophthalmic Department contains 69 beds and an Out Patient Department which is open daily.

Applications with copies of testimonials to be sent to the General Superintendent and Secretary April 20th 1938.

**SOUTHEND ON SEA GENERAL HOSPITAL**  
235 Beds—8 Residents

Hon Specialist Staff of 20 members

Applications are invited for the post of CASUALTY OFFICER (male).

(with duties in Orthopaedic Department and Fracture Clinic). Salary £100 per annum with board residence and laundry. The appointment is for six months from June 1st 1938.

Applications with copies of two recent testimonials should be sent to the undersigned not later than May 18th.

P H CONSTABLE  
Secretary

**THE RADCLIFFE INFIRMARY OXFORD**

Applications are invited for the post of HONORARY PHYSICIAN to the DEPARTMENT OF PHYSICAL MEDICINE in the above Hospital. Twenty five copies of applications and testimonials which will be forwarded to members of the Electing Committee must be sent to the undersigned from whom further particulars may be obtained not later than Saturday June 4th 1938.

A G E SANCTUARY  
Administrator

**THE GENERAL HOSPITAL BIRMINGHAM**

Applications are invited from qualified medical practitioners for the post of RESIDENT SURGICAL REGISTRAR to the Gynaecological Department for twelve months in the first instance. Salary £100-£150 per annum.

Applications must reach the undersigned not later than Tuesday May 24th.

A H LEANEY  
House Governor

**THE LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST**  
Mount Pleasant Liverpool 3

The Board of Management of the Liverpool Hospital for Consumption and Diseases of the Chest desire with suit

MEDICAL

Sanatorium

number of beds 150 (90 men and 60 women).

Preference will be given to applicants aged to 40 who have administrative experience and a knowledge of modern methods of Sanatorium treatment and X-ray Work.

The position is vacant as from July 1st 1938 commencing salary is at the rate of £300 per annum and an excellent bursary is provided adjacent to the Sanatorium.

Applications stating qualifications should be sent to the Secretary, Hospital for Consumption and Diseases of the Chest, Mount Pleasant Liverpool 3 by May 20th 1938.

**YORK DISPENSARY**

Applications are invited for the post of RESIDENT MEDICAL OFFICER (female) to commence duties July 1st. As there are two vacancies applications from doctors knowing either would be welcomed.

The resident staff consists of two medical officers whose duties are to visit and attend the sick poor in their own homes and to assist the honorary staff.

Candidates must be duly qualified registered and unmarried. Experience in the administration of anaesthetics is essential.

Salary £175 per annum with board lodging and attendance with an allowance towards expenses and for laundry.

Applications with testimonials to be sent on or before May 21st to

JOHN C PETERS  
Secretary  
4 New Street York

**THE PRINCE OF WALES HOSPITAL**  
Greenbank Road Plymouth  
(Formerly South Devon and East Cornwall Hospital) 264 Beds

Applications are invited for the post of RESIDENT SURGICAL OFFICER (male). Salary £225 per annum with board residence and laundry.

Appointment tenable for six months and subject to renewal. Duties to commence July 1st.

Candidates must be registered under the Medical Acts and it is desirable they should possess the F.R.C.S. England or Edinburgh.

Applications stating age and qualifications together with copies of three recent testimonials to reach the undersigned forthwith.

ARTHUR R CASH  
Gen Supt and Secretary

May 9th 1938

**THE ROBERT JONES AND AGNES HUNT ORTHOPAEDIC HOSPITAL**  
Oswestry

(Beds Adults 240 Children 10)

HOUSE SURGEON (male) required 1st July. Appointment for six months with possibility of extension.

Salary at the rate of £200 per annum with board residence and laundry. Two weeks holiday for each six months service.

Applications stating age, qualifications and experience with copies of three recent testimonials to be addressed to the Secretary Superintendent and to reach him not later than May 15th 1938.

**WEST KENT GENERAL HOSPITAL**  
(Incorporated)  
Maidstone  
(135 Beds)

Applications are invited for the post of HOUSE SURGEON who must be a male of British nationality.

Salary at the rate of £175 per annum with board apartments and laundry.

Candidates must possess registered qualifications. Applications stating qualification and experience together with copies of testimonials should be sent to the undersigned on or before May 15th 1938.

EDWARD J GREGG  
House Governor and Secretary

**YORK COUNTY HOSPITAL**  
(204 Beds)

HOUSE SURGEON required for the post of HOUSE SURGEON. Salary £150 per annum with board residence and laundry.

Applications stating age and previous experience together with copies of testimonials should be sent to the undersigned on or before May 15th 1938.

J R MACKRILL Secretary

Fitzhugh's Venice SW 1/4 Sec 36

## WEST LONDON HOSPITAL

Hammersmith Road W 6 (239 Beds)

Applications are invited for the post of CHIEF ASSISTANT TO THE DEPARTMENT FOR CHRONIC RHEUMATIC DISEASES for a period of one year eligible for re-election. An honorarium at the rate of £100 a year is attached to the post. The duties will include attendance in the Out Patient Department on two half days a week.

Candidates must be registered under the Medical Act and preference will be given to those possessing an MRCP or FRCS qualification. Previous experience in the treatment of rheumatism is an advantage.

Applications with copies only of testimonials should reach me not later than first post on Thursday May 12th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a meeting of the Medical Council at 4.30 p.m. on Friday May 20th and the House Committee Meeting at 5 p.m. the same day when the appointment will be made.

H A MADGE  
Secretary

## WEST LONDON HOSPITAL HAMMER SMITH W 6 (239 Beds)

An additional HONORARY REGISTRAR is required for the Throat, Nose and Ear Department. The appointment is for one year and subject to annual re-election may be extended for a period of not longer than 3 years.

Applicants must be duly qualified registered Medical Practitioners with previous experience in oto-laryngology.

Applications accompanied by copies of testimonials must reach me not later than Thursday May 19th. Candidates must attend a Meeting of the Medical Council at 4.30 p.m. on Friday May 20th and prior to that date call upon and send copies of their applications and testimonials to each member thereof. They must not canvass members of the Board but nevertheless must send copies of their application and testimonials to each member thereof and if so notified be in attendance at a Meeting of the Board at 5 p.m. on Tuesday May 21st when the appointment will be made.

H A MADGE  
Secretary

## WEST END HOSPITAL FOR NERVOUS DISEASES

In Patient Department  
Gloucester Gate Regent's Park NW 1

The Committee of Management invites applications for the post of RESIDENT HOUSE PHYSICIAN (male). Duties to commence June 1st 1938. Salary at the rate of £125 per annum with board residence and laundry.

Preference will be given to candidates who have held a resident appointment in a General Hospital. Applications with copies of three recent testimonials must be received by the undersigned not later than Wednesday May 25th 1938.

J P WEINHALL  
Secretary and House Governor

73 Welbeck Street W 1

## LONDON JEWISH HOSPITAL

Stepney Green E 1  
General Hospital (109 Beds)

Candidates (male) for the following Resident appointments which are for a period of six months commencing June 1st next may obtain forms of application from the Secretary to whom applications with copies of three recent testimonials must be sent on or before May 20th 1938.

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum.

HOUSE SURGEON Salary at the rate of £100 per annum.

CASUALTY OFFICER Salary at the rate of £100 per annum.

## THE INFANTS HOSPITAL

Vincent Square Westminster

The Committee of Management invite applications for the post of HONORARY SURGEON. Candidates must be Fellows of the Royal College of Surgeons in England. Particulars of the appointment and information as to the submission of testimonials etc may be obtained from the undersigned to whom applications must be delivered not later than May 31st.

ALFRED J SMALL  
Secretary

## THE INFANTS HOSPITAL

Vincent Square Westminster

Applications are invited from qualified Medical Practitioners for appointment as CLINICAL ASSISTANTS (Honorary and for DCH candidates) in the Out Patient Department.

Applications stating previous experience must be delivered not later than May 31st to the Secretary from whom further information may be obtained.

## QUEEN MARY'S HOSPITAL FOR THE EAST END

Stratford L 15

Applications are invited from fully qualified and registered medical men (only) for the following posts:

	Salary	Period
House Surgeon No 1	£120 p.a.	6 mths
House Surgeon No 2	£120 p.a.	6 mths
House Physician	£120 p.a.	6 mths
Res. Anaesthetist and House Physician	£120 p.a.	6 mths
Casualty and Out patient Officer No 1	£150 p.a.	6 mths
Casualty and Out patient Officer No 2	£150 p.a.	6 mths
Obstetric House Surgeon	£120 p.a.	6 mths

The Hospital contains 219 beds including 50 for maternity patients.

The appointments will date from July 1st 1938 and will be for six months. In the case of the Obstetric House Surgeon the appointment will be for three months as Junior at £110 per annum and three months as Senior at £130 per annum six months in all.

Candidates who must be single and who should previously have held hospital appointments should send applications accompanied by testimonials to the undersigned not later than Friday May 20th 1938.

RAPHAEL JACKSON Major  
Secretary

## ALL SAINTS HOSPITAL (FOR GENITO URINARY DISEASES)

Austral Street West Square SE 11

RESIDENT HOUSE SURGEON (male) required on July 1st 1938 for six months being three months as Junior House Surgeon with salary at £100 per annum followed by three months as Senior House Surgeon with salary at £150 per annum.

Applications giving particulars of age, experience, qualifications and enclosing copies of three recent testimonials should reach me not later than May 28th.

D H LADE  
Secretary

## ST GEORGES HOSPITAL SW 1

Applications are invited for the post of RESIDENT ANAESTHETIST. Remuneration at the rate of £100 per annum with board and residence.

Applicants should have some experience of administration of Anaesthetics. Applications accompanied by copies of not more than two recent testimonials should be sent to the Dean of the Medical School on or before June 1st. The appointment commences on July 1st 1938 for four months.

JAMES M CHURCHFIELD  
Secretary

## WILLESDEN GENERAL HOSPITAL

Harlesden Road NW 10

Applications are invited for the appointment of BIOCHEMIST (part time). Candidates must have either a registered medical qualification or a University Science Degree. The successful candidate will be expected to attend at the Hospital on two half days each week. Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than Monday May 23rd 1938.

## COUNTY BOROUGH OF BURY

ASSISTANT MEDICAL OFFICER OF HEALTH (male)

The Corporation of Bury invite applications for the post of whole time ASSISTANT MEDICAL OFFICER OF HEALTH.

Applicants who must be not more than 45 years of age must have had at least three years experience in their profession and particularly experience in the diagnosis and treatment of venereal diseases and they must also have had experience in maternity and child welfare work including the conduct of Infant Welfare and Anti-Natal Clinics.

The possession of a Diploma in Public Health is desirable.

The successful applicant must devote the whole of his time to the duties of his appointment. An opportunity will be given to acquire a knowledge of general Public Health work. The post is designated under the Local Government and Other Officers Superannuation Act 1922 and the officer appointed will be required to pass a medical examination.

The appointment will be terminable by three months notice on either side.

The salary will be £500 per annum rising by annual increments of £25 to a maximum of £700.

Applications endorsed Assistant Medical Officer of Health and accompanied by copies of three recent testimonials must be forwarded to the undersigned not later than Wednesday June 1st 1938.

Consisting in any form will disqualify.  
RICHARD MOORE Town Clerk  
Municipal Offices Bank Street Bury  
May 14th 1938

## NORFOLK COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER

Applications are invited from Medical Practitioners holding a Diploma in Public Health or similar qualification.

The salary will be £700 per annum with travelling expenses in accordance with the Council's scale. The post will be designated under the Local Government and Other Officers Superannuation Act 1922 and the salary will be subject to statutory deduction for this purpose. The successful applicant will be required to pass a medical examination.

The officer appointed will act under the County Medical Officer as Medical Officer to the County Isolation Hospital (non resident) as Assistant School Medical Officer Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him. He will be required to reside at East Dereham.

The appointment will be subject to three months notice by either side.

Applications must be made on the prescribed form which can be obtained from the County Medical Officer Public Health Department, 9 Thorpe Road Norwich to whom they should be returned accompanied by copies of three recent testimonials not later than May 21st 1938.

H C DAVIES  
Clerk of the County Council  
County Offices Thorpe Road Norwich

## COUNTY COUNCIL OF THE COUNTY OF LANARK

### ASSISTANT MEDICAL OFFICER OF HEALTH AND TUBERCULOSIS OFFICER

The County Council invite applications for the post of TEMPORARY ASSISTANT MEDICAL OFFICER OF HEALTH TUBERCULOSIS OFFICER AND CHILD WELFARE MEDICAL OFFICER. Applicants must be duly qualified registered Medical Practitioners and must possess the Diploma of Public Health.

The officer appointed must devote his whole time to the duties of the post. He will act under the supervision and control of the County Medical Officer of Health. Previous experience in an Infectious Diseases Hospital is essential and preference will be given to candidates with experience in general Public Health work.

The appointment will be limited to one year.

The salary will be at the rate of £600 per annum.

Candidates must not be more than 45 years of age.

Applications stating age, qualifications and previous experience together with copies of not more than three recent testimonials must be received by the undersigned not later than Monday May 23rd 1938.

ROBERT BRYCE WALKER  
County Clerk  
Lanarkshire House  
191 Ingram Street Glasgow C 1  
May 9th 1938

## COUNTY BOROUGH OF ROTHERHAM

Alma Road Hospital

### JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited by the Council for the post of JUNIOR ASSISTANT MEDICAL OFFICER (resident). The appointment will be for a period not exceeding twelve months determined by one month's notice on either side and is by one month's notice on either side and is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass a medical examination as to physical fitness.

The salary is at the rate of £180 per annum together with the usual emoluments.

The person appointed will be required to act under the general direction of the Medical Superintendent.

Forms on which application must be made may be obtained from the Medical Superintendent at Alma Road Hospital Rotherham and must be signed by the undersigned endorsed Junior Assistant Medical Officer not later than Wednesday May 26th 1938.

CHAS L des FORGES Town Clerk  
Municipal Offices Rotherham

## ROYAL MANCHESTER CHILDREN'S HOSPITAL

Pendlebury near Manchester (232 Beds)

### RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer £150 per annum.

The appointment is for a period of six months commencing July 1st 1938. Candidates must be unmarried and duly registered. Previous hospital experience essential.

Applications stating age and accompanied by copies of not more than three recent testimonials must be sent to the undersigned not later than Monday June 13th.

Consisting directly or indirectly may disqualify.  
By Order H HEARDMAN Secy

## APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association (B.M.A. House, Tavistock Square, W.C.1) in the case of Scottish appointments with the Scottish Secretary (7, Drumshough Gardens, Edinburgh).

### (1) British Islands

<p>CONTRACT PRACTICE</p> <p>VERTISSWE MEDICAL AID SOCIETY (M<sub>1</sub> = 0)</p> <p>ELLENWON MEDICAL SOCIETY (C<sub>1</sub> + M<sub>1</sub> = 0)</p> <p>CHURCH COCH CLAMORAN (H<sub>1</sub> + M<sub>1</sub> = 0)</p> <p>ELWYSSIA CLADACH VAL BENYRMO CLAMORAN (M<sub>1</sub> + M<sub>1</sub> = 0)</p>	<p>CONTRACT PRACTICE</p> <p>MID HUNDRA MEDICAL AID SOCIETY (M<sub>1</sub> = 0)</p> <p>SLATH AND DISTRICT (C<sub>1</sub> + M<sub>1</sub> = 0)</p> <p>CLOVE VALLEY CLAMORAN (M<sub>1</sub> = 0)</p> <p>OAKDALE MON (M<sub>1</sub> = 0)</p>	<p>PUBLIC HEALTH</p> <p>MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE (M<sub>1</sub> = 0)</p> <p>SALEP MENTAL HOSPITAL SITE VISITORS (M<sub>1</sub> = 0)</p> <p>SOUTH WEST YORKSHIRE DISTRICT FOR THE MENTALLY DEFECTIVE (M<sub>1</sub> = 0)</p> <p>DISPENSARY APPOINTMENTS</p> <p>LIME RICK CITY (M<sub>1</sub> = 0)</p>
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### (b) Overseas

Medical practitioners are requested **not to apply** for an appointment referred to in the following notice without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association B.M.A. House Limited, 5, St. Andrews Place, W.C.1.

NEW SOUTH WALES (C.I.F. cases) A. C. I. (C.I.F.)	QUEENSLAND (Brisbane) (C.I.F.) F. C. I. (C.I.F.) L. C. I. (C.I.F.)	VICTORIA (C.I.F.) M. C. I. (C.I.F.)	WESTERN AUSTRALIA (C.I.F.) L. C. I. (C.I.F.)
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May 11 1958

By Order of the Council

G C ANDERSON *Secretary*

LEICESTER, ROYAL INFIRMARY

## RESIDENT RADIOLOGIST

[illegible]

BOSTON GENERAL HOSPITAL  
( 0 Beds )

## RESIDENT MEDICAL OFFICER (r )

RESIDENT MEDICAL OFFICER (m) June 1st Salary \$10  
 per annum with board and maintenance  
 The appointment for six months and  
 renewable Applications last a qual  
 ification and previous experience either with a  
 clinical or laboratory should be sent to the  
 undersigned immediately

GORDON EASTO  
Secretary

MANCHESTER ROYAL EYE HOSPITAL.

OUTPATIENT MEDICAL OFFICES

OUTPATIENT MEDICAL OFFICER required  
at one Salary £100 per annum morning & evening  
Apparatus must be fully qualified Medical  
Practitioners and must also have a qualification in  
secretion work. Particulars of appointment  
can be obtained on request.  
Candidates with copies of recent test monographs  
to reach the undersigned as early as possible.  
H R NORTH  
Gen. Supt. and Secretary

**BIRMINGHAM AND MIDLAND EYE HOSPITAL**  
(114, BCL)

At the request of the House of Representatives,  
The Surgeon General has been directed to  
submit a report on the progress of the  
work done by the Surgeon General's Office  
in connection with the investigation of  
the cause of the epidemic of influenza  
which broke out in the United States  
in the winter of 1918-19.

J W PEARCE  
General Superintendent  
City of Birmingham

NORFOLK AND NORWICH HOSPITAL

Applicants are invited for the post of HOUSE PHYSICIAN. Salary £10 per annum with board, room and laundry. Candidates (ma) must be under 30 and must possess a first class qualification.

Application for a passport should be  
forwarded to the undersigned not later than  
Tuesday May 1st  
FRANK INCH  
Home Governor and Secretary  
May 6th 1938

THE TIVERTON AND DISTRICT HOSPITAL  
Dev n (46 Bed.)

Appt to be in t d f r the rest HOUSE  
SURGEON Salary £1.0 per annum th board  
f o r a d i u r a r y  
App to state nationality ad co t  
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t th under r d C H DEEKS

## LILL AND SCULCOATES DISPENSARY

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A RESIDENT MEDICAL OFFICER  
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By One I D MILLWRIGHT  
H n S...  
I P... Street Hul  
May and 192

KETTERING AND DISTRICT GENERAL HOSPITAL

Applications are in for the post of HOUS  
PHYSICIAN  
Salary £10 per annum with board and  
lodging Curricula vitae to be sent to  
and recommended  
Application stating name and address to be sent to the Secretary of the  
G W JACKSON  
Secretary

MANFIELD OPHTHOPEAEDIC HOSPITAL  
Northampton (19 Beds)

RES

DENT MEDICAL OFFICER      Surgery - J pa  
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H G LEWIS  
S. T. R. S. C. S. C. W. T.

(continued on inside cover)

## TO ADVERTISERS

The BRITISH MEDICAL JOURNAL has a larger circulation than that of all other British weekly medical periodicals combined

**CIRCULATION OF THIS ISSUE—11,000**

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Telephone EUSTON 2111

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**CIGARS (ENDCUT) ALL HAVANA**  
TOBACCO GOOD SMOKES at a low price quality guaranteed. Box of 50 for 25/- post free—Sole Manufacturers J. J. FREEMAN & CO. LTD. 90 Piccadilly London W.1 (GRO 1529)

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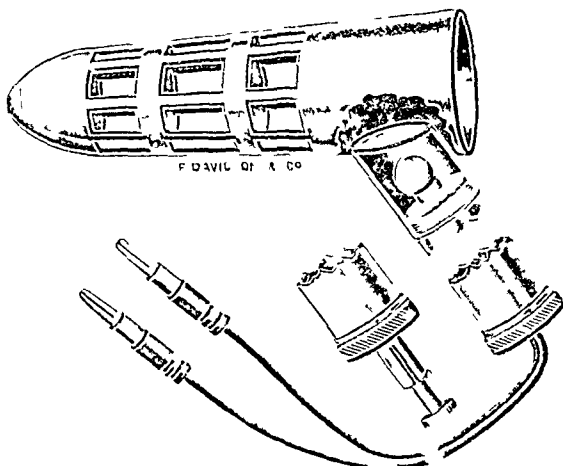
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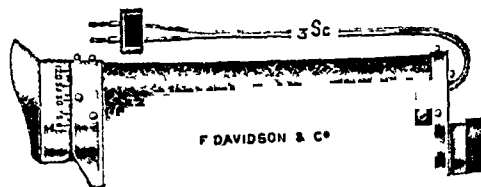
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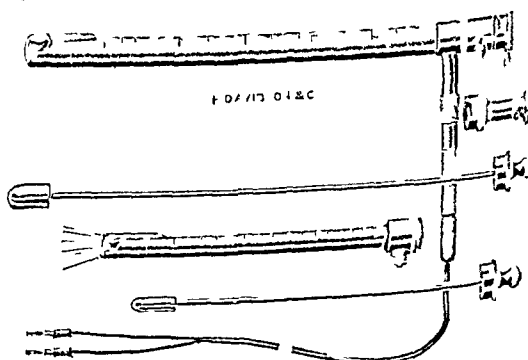
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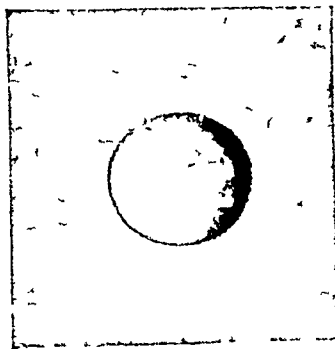
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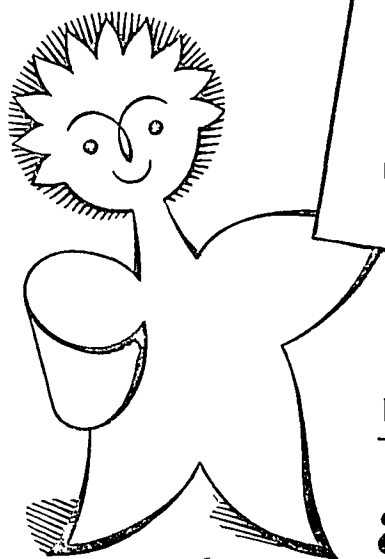
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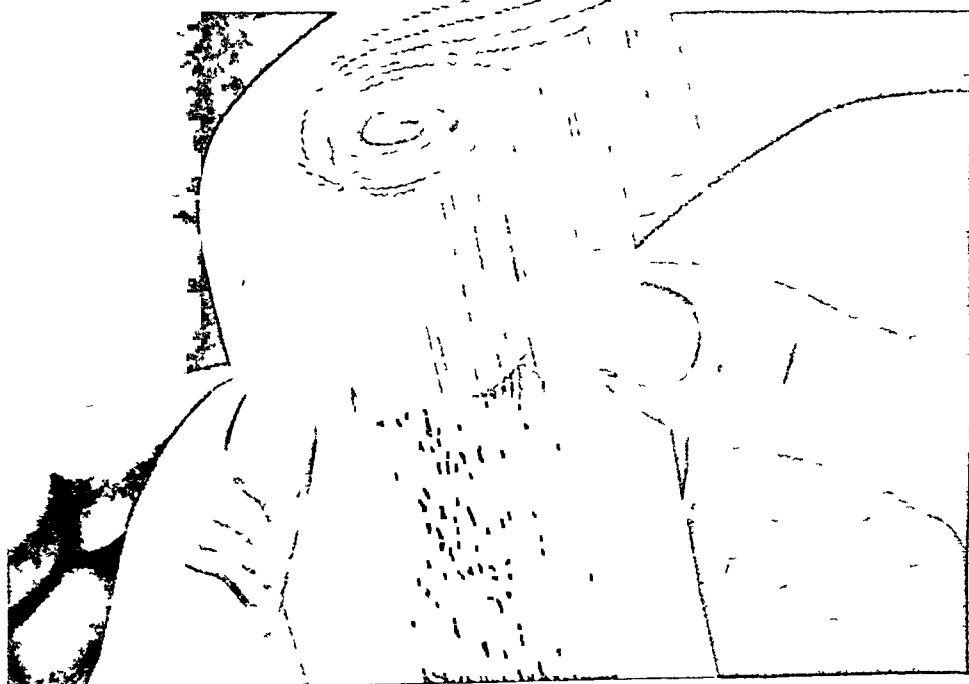
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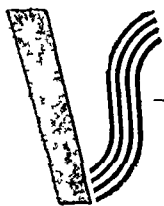
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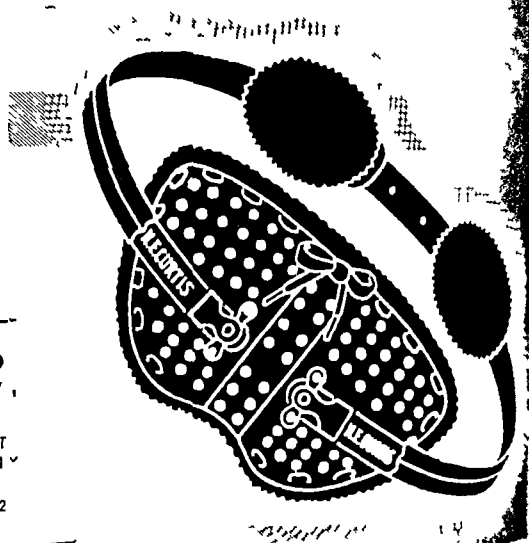
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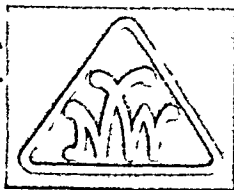
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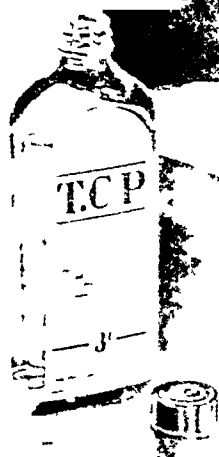
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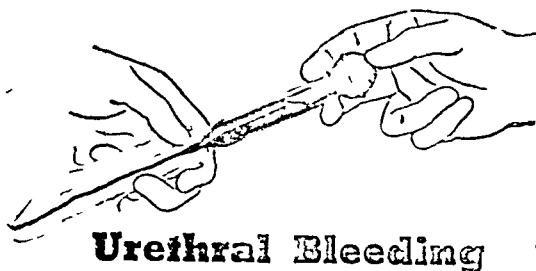
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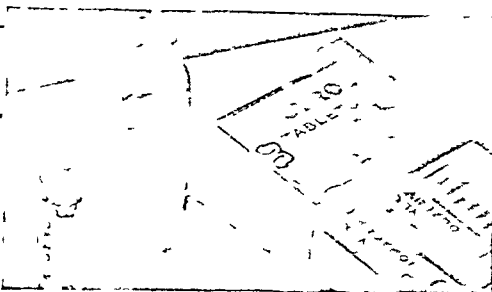
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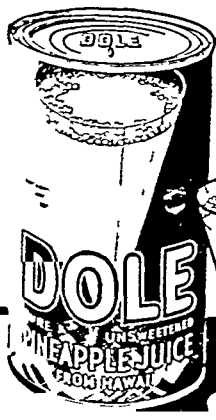
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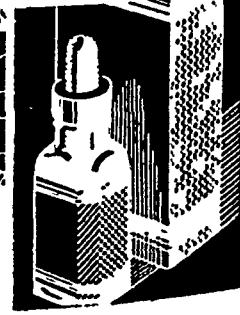
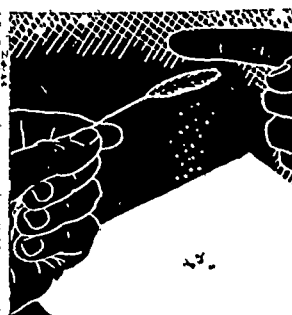
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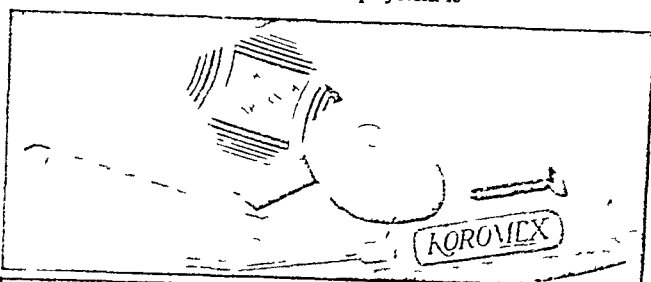
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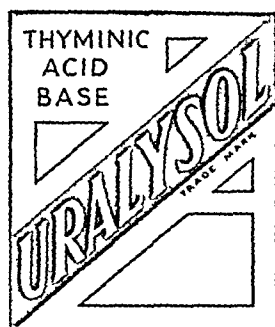
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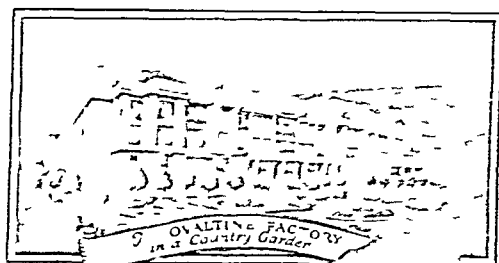
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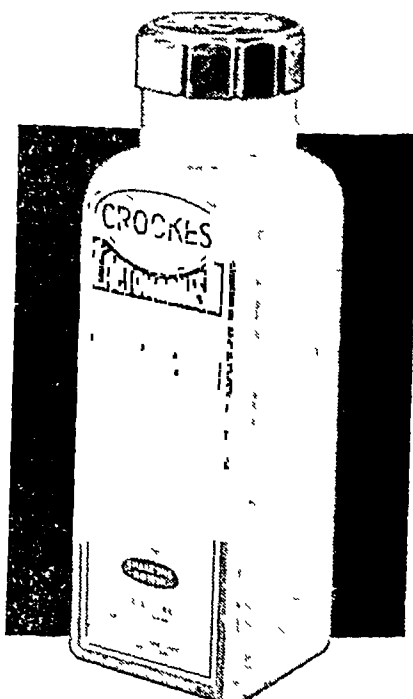


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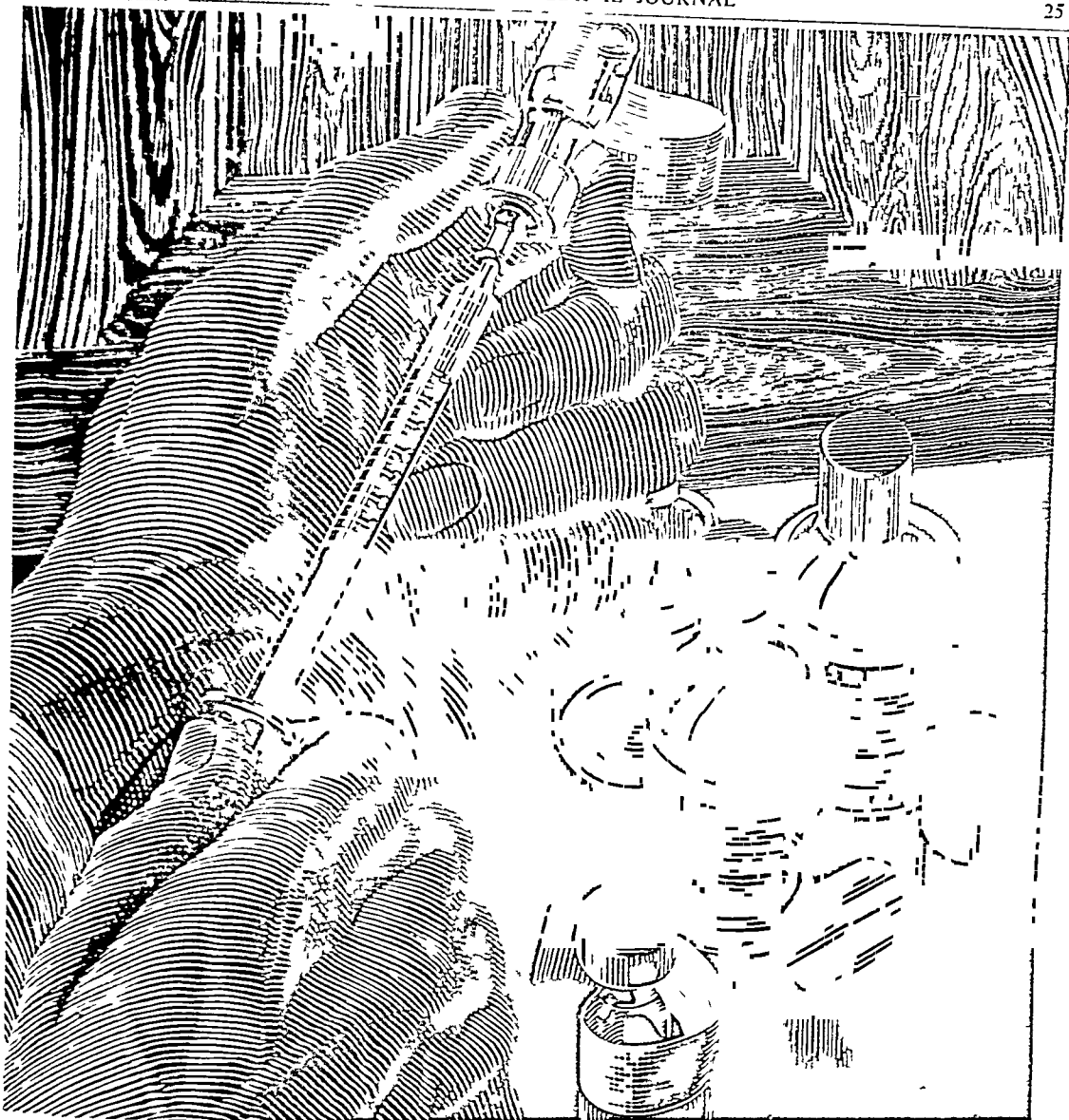
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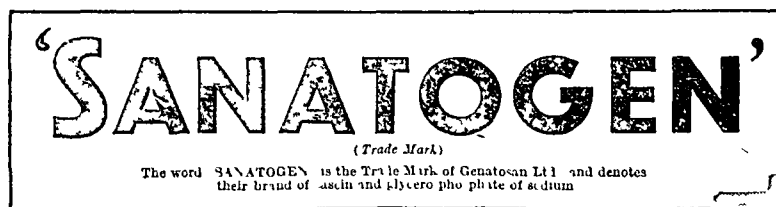
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(*Medical Press and Circular*)

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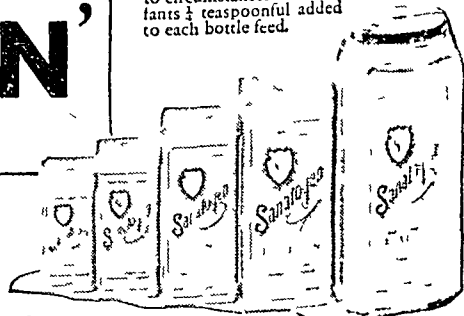
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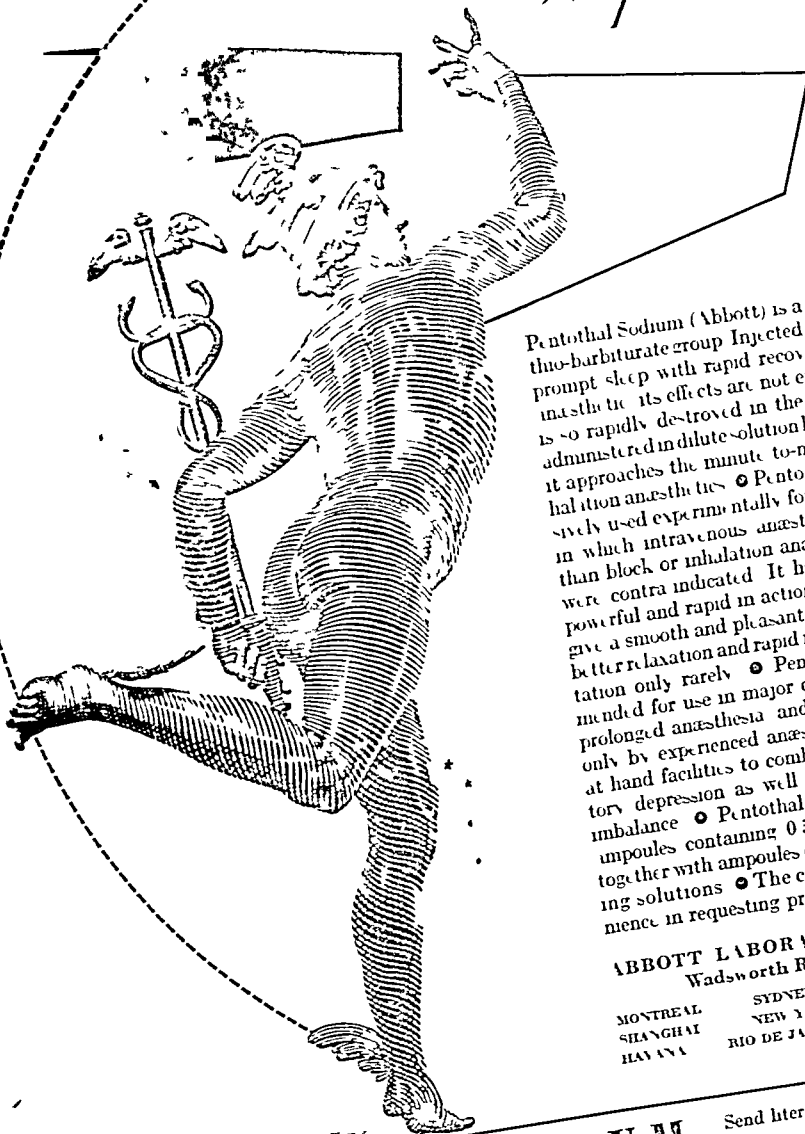
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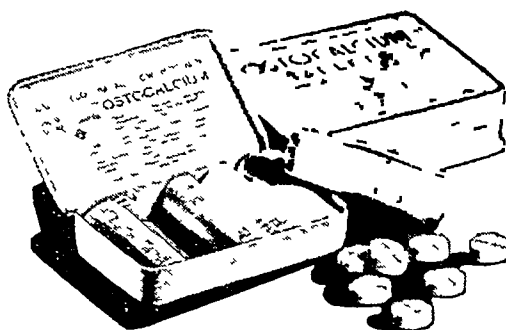
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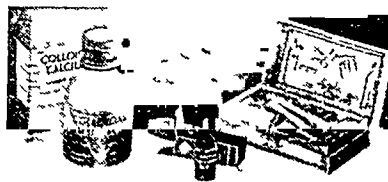
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# BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 21 1938

## TYPHOID FEVER ITS CLINICAL ASPECTS\*

BY

SIR WILLIAM WILLCOX, K.C.I.E., C.B., C.M.G., M.D., F.R.C.P.

Consulting Physician to St. Mary's Hospital Senior Physician, the London Fever Hospital

The recent outbreaks of typhoid fever notably in the Bournemouth district in 1936 and in the Croydon area in 1937 have aroused renewed interest in this disease which in recent years had become comparatively uncommon. The typhoid bacillus still breeds true and while the outbreaks may differ somewhat in the clinical syndrome of symptoms the specific organism maintains its virulence and the percentage mortality in the recent outbreaks remains high being about 10 per cent. The public who during recent years have grown accustomed to a freedom from outbreaks of a disease which thirty years ago was extremely common have not unnaturally displayed surprise and alarm.

The statistical figures of the Registrar General show a remarkable fall in the death rate (see Table I). In 1893

TABLE I—Enteric Fever Statistics Typhoid—Paratyphoid Fever Death Rate per Million England and Wales

Year	Rate	Year	Rate
1893	30	1931	6
1905	101	1932	6
1913	41	1933	5
1923	14	1934	4
1925	9	1935	4
1930	7	1936	6

this was 230 per million in 1903 it was 101 in 1913 it was 41 and since 1931 the annual death rate per million has not exceeded 6. The occurrence of outbreaks in spite of the great advances in sanitary science shows the necessity for a never ceasing vigilance to prevent the possibility of infection.

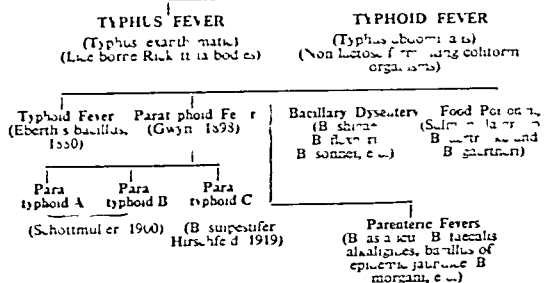
### Historical

Typhoid fever is so chameleon like in its clinical manifestations that in considering the diagnosis of a case of simple continued fever one should bear in mind the many varieties of disease which may give rise to this. The outlook of the physician should be as broad as possible and before arriving at a diagnosis of typhoid fever other possible causes must be excluded and the clinical diagnosis clinched by the results of appropriate laboratory investigations. A review of the differentiae of the simple continued fevers is of importance because all of these need remembrance when an undiagnosed case is first seen (see Table II).

Up to 1849 the simple continued fevers in this country consisted of typhus and typhoid fever and both were commonly called typhus fever. Sir William Jenner, A. P. Stewart and others differentiated typhoid fever clinically but it was not until 1880 that the specific bacillus was

discovered by Eberth. At that time many varieties of enteritis with continued fever were included under the term typhoid fever.

TABLE II  
TYPHUS FEVER  
(Simple continued fever of Great Britain up to 1849)



In 1898 paratyphoid fever was differentiated by Gwyn of the Johns Hopkins Hospital. In 1900 paratyphoid fever was differentiated into the two types A and B and in 1919 a further type paratyphoid C was described by Hirschfeld. This latter organism being identical with the *Bacillus supestifer* (hog cholera).

The non-lactose fermenting coliform organisms have during the last forty years been further differentiated into

(i) The parenteric group which includes the *Bacillus jaecalis albidus*, *B. asiaticus*, the bacillus of epidemic jaundice *Bacillus morganii* etc.

(ii) The dysentery group which includes Shiga's bacillus, Flexner's bacillus (five strains) and Sonne's bacillus etc.

(iii) The Salmonella group of which *B. aertrycke* and *B. enteritidis* of Gaertner are the two chief types.

All of these organisms may give rise to a continued fever the clinical symptoms of which may so closely resemble true typhoid fever as to be almost indistinguishable from it except by bacteriological and pathological tests.

In the Dardanelles campaign in the latter half of 1915 a great number of enteric cases were treated at Mudros which was the nearest hospital base. It seemed clear from the clinical features that the cases diagnosed as enteric were not all true typhoid fever. A careful investigation of these cases by Captain R. G. Archibald (now Colonel Sir Robert Archibald) and myself showed that of the cases diagnosed as enteric fever the majority were paratyphoid fever the latter being 6+ times as

\*Address to the Croydon Division of the British Medical Association March 22 1938



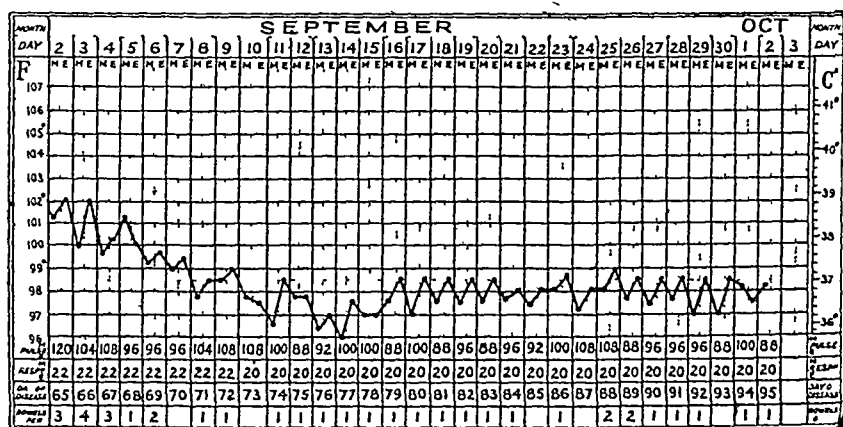
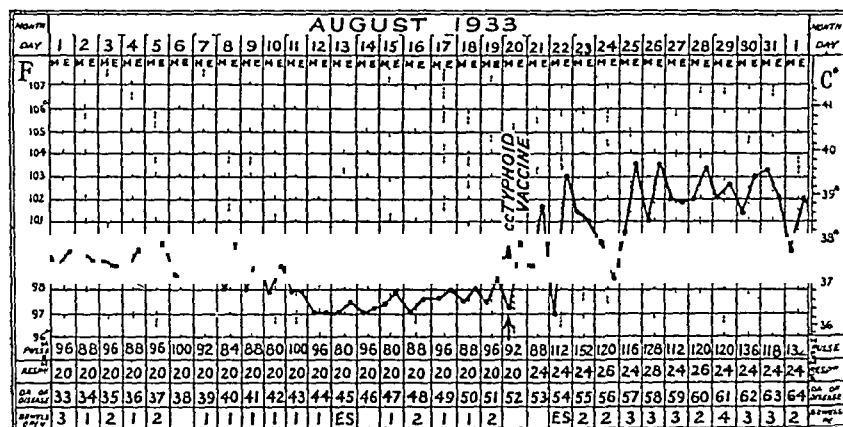
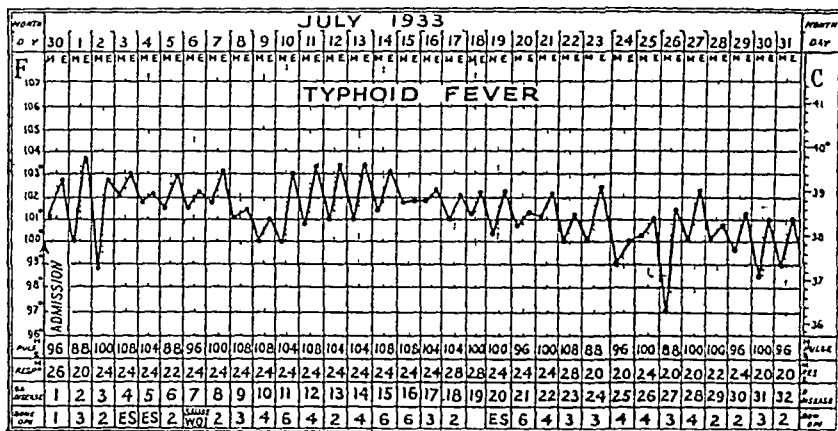


CHART A—Typhoid fever, severe relapse after inoculation with prophylactic vaccine (St Mary's case)

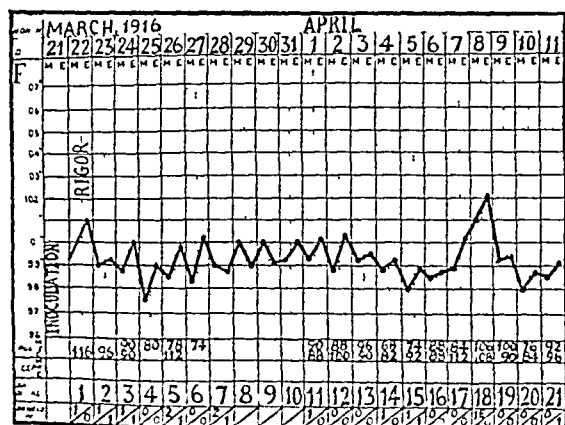


CHART D—Fever after inoculation, headache, rigor, enlarged spleen, etc (War case)

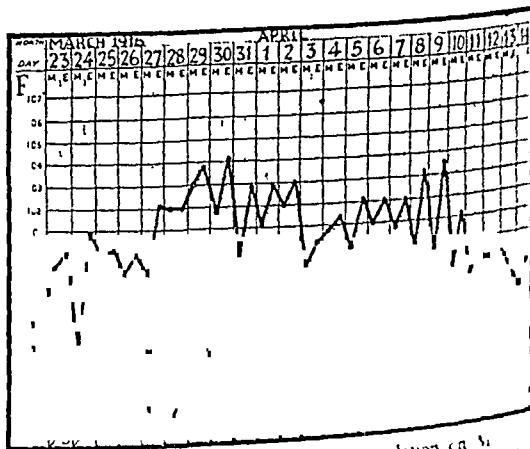


CHART E—Paratyphoid A after inoculation on March 16, headache and enlarged spleen on March 20, and death on March 22, 1916 (War case)

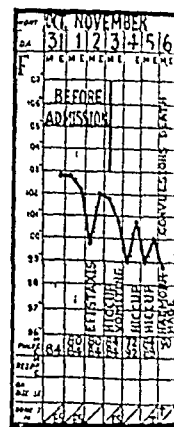


CHART B—Case 7 Typhoid fever severe and prolonged course following mild early symptoms death

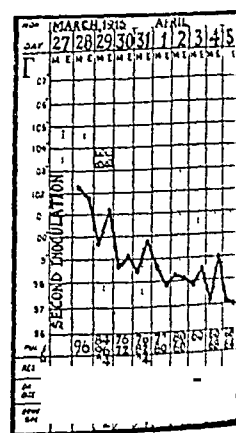


CHART C—Fever after second inoculation, enlarged spleen headache, etc, on March 23, 1916 (war case) BF = Blood film no para sites seen BC = blood culture sterile, 24 to 48 hours

temperature will immediately follow even a small dose of vaccine and the toxic symptoms are much increased. Chart A shows one example of such ill effect after the original attack of fever had subsided. It has been my experience not only with typhoid fever but in the case of infection with other of the non lactose fermenting organisms such as paratyphoid parenteric and food poisoning that very adverse results are obtained by the administration of vaccines in the acute stages of the illness.

### Serum Treatment

Serum from convalescent patients has been administered but the results have not been of notable benefit. The use of a foreign serum appears to be dangerous in that the immunity may be disturbed. In one case under my care the administration of a small dose of polyvalent anti streptococcal serum was followed by severe haemorrhages from the bowel and nose with fatal results.

Valuable research work is being carried out by Dr A Felix who has demonstrated the presence of the Vi and O antigens in *B. typhosus*. Antisera have been prepared from the horse and these have been shown to be of value in typhoid infections in animals (mice etc). At the present time the value of these antisera in human typhoid is still *sub judice* and there is no evidence that the mortality is reduced by their use. The danger of a prejudicial disturbance of the delicate mechanism of immunity in the human subject appears to outweigh the possibility of benefit.

## Blood Transfusion

This has been advocated on the Continent and in certain cases such as severe anaemia in which the acute phase of the toxæmia has subsided it may be of undoubted value. In the stage of acute toxæmia there is danger of the disturbance of the immunity balance and a simple transfusion with normal saline with or without glucose

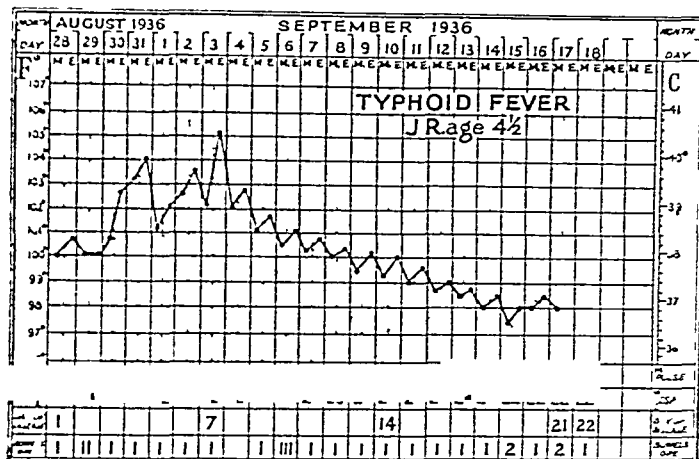


Chart F—Typhoid fever mild (Bournemouth 1914)

would appear to be safer. In one severe acute case (Case B) blood transfusion was followed by acute streptococcal toxæmia and a fatal result.

### Prophylactic Inoculation during an Epidemic

Prophylactic inoculation has become definitely established. The experience during the great war and in our army since the South African War has proved its undoubted value. It must be admitted however that where there is a probability that infection has already been incurred prophylactic inoculation may precipitate an attack of typhoid fever and in such cases would be best avoided.

Three cases came to my notice during the war (see Charts C D E) in which inoculation was immediately followed by an attack of enteric fever. In one instance where two young children had been together at Bourne-mouth one of whom developed a mild attack of typhoid fever (Chart F) the administration of T.A.B. vaccine to the other was followed immediately by a very severe attack of typhoid fever (Chart G). There appeared to be no doubt that the inoculation disturbed the immunity balance and precipitated an attack which might have been avoided (Charts F and G).

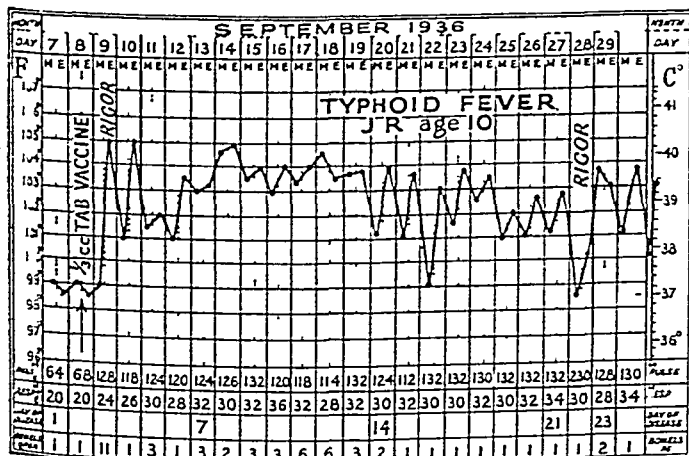


CHART G—Typhoid fever severe immediately after inoculation  
(Bournemouth case)

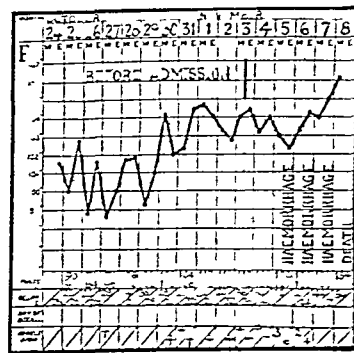


CHART H—Case 11 Typhoid fever  
profound toxemia death

During an epidemic where there is a probability that infection has actually occurred prophylactic inoculation would be best withheld until the incubation period has been passed, otherwise, generally speaking, prophylactic inoculation is advisable.

In conclusion there is no disease in which the motto "safety first" is more applicable than in the case of typhoid fever.

**Case 1** (E. H. S., a man aged 58)—Onset occurred on October 20, 1937, with malaise and abdominal discomfort. There was an irregular pyrexia of mild degree ( $98^{\circ}$ – $101^{\circ}$ ) up to November 9. Agglutination reaction 1/50 *B. typhosus* November 1. The patient was admitted to the London Fever Hospital November 9, 1937, temperature  $99.5^{\circ}$ , pulse 80. The temperature ranged between  $97^{\circ}$  and  $102.5^{\circ}$  up to November 20. It was normal from November 20 to December 18, then a relapse occurred, with a temperature of  $99^{\circ}$ – $102^{\circ}$  up to December 31. It was normal again from December 31, 1937 to January 9, 1938. From January 9 it ranged between  $101.5^{\circ}$  and  $96^{\circ}$ . Death occurred on January 24, 1938. This case was characterized by severe and persistent toxæmia with comparatively slight pyrexia and absence of delirium until the last five days of the illness. On December 30, 1937, a local slight perforation occurred in the right iliac region, the symptoms of which cleared up in five days with treatment. Pain in the left leg over the tibia occurred on December 20, due apparently to periostitis. On January 10, 1938, pus was found over the left tibia by exploration, and on January 11 a subcutaneous abscess over the left tibia was opened and drained. *B. typhosus* being found in the pus. Pyelitis occurred on December 18 *et seq.* the urine containing pus and albumin and *B. typhosus*. Myocarditis was present during the last three weeks of the illness. On three occasions there was a sudden drop in temperature, with rapid feeble pulse and cardiac collapse. Vomiting due to toxæmia occurred several times during the last three weeks. On January 11, 1938, the liver became enlarged, and toxic jaundice in mild but definite degree persisted till the end.

**Case 14** (P. T., a woman aged 43)—The patient was admitted to the London Fever Hospital on November 13, 1937, with a history of malaise and mild fever for the previous twelve days. Agglutination reaction +1/1000 *B. typhosus*. The temperature reached  $102.5^{\circ}$  on November 16, 17 and 18 and subsided to normal on November 24. A relapse occurred on November 25 with intermittent pyrexia up to January 24, 1938, after which date the temperature remained normal and the patient made a good recovery. Melaena occurred on December 3, 1937. On December 25, 1937, there was a rigor due to pyelitis. The urine contained pus and albumin and *B. typhosus*. A rigor with sudden fall of temperature from  $103^{\circ}$  to  $97^{\circ}$  occurred on December 26 and 28, and January 1, 2, and 6, after which date the temperature became intermittent and gradually subsided. Hexamine salicylate was given intravenously daily for twelve days with benefit; afterwards hexamine was administered by mouth.

**Case B** (a man aged 63)—Onset occurred on February 5, 1931 with typical symptoms. The temperature ranged up to  $103^{\circ}$  and gradually fell to normal on March 4. On February 15 *B. typhosus* was found in the stool. Agglutination reaction +1/1000. On February 18 acute distension of gall-bladder occurred with collapse. This cleared up quickly after atropine hypodermically. The temperature was normal from March 4 to March 15. During this period severe toxæmia with delirium occurred. On March 15 the temperature rose and became remittent in character. During the last five days it reached a height of  $105^{\circ}$ . On March 24 a blood transfusion was followed by some improvement. A second transfusion on March 25 was followed by a rigor and temperature rising to  $105.6^{\circ}$  on the following day. Streptococci were found on blood culture on March 25—probably a terminal auto-infection. Death occurred on March 27, 1931.

This case was characterized by a continuous acute toxæmia which persisted although the temperature was normal for the

eleven days previous to the relapse. During the period of the relapse the symptoms of toxæmia became greatly increased—due, no doubt, to a secondary streptococcal infection.

My thanks are due to Dr. G. Lewin of Croydon for kindly giving me notes of cases under his care, also to my colleagues Dr. C. E. Lakin for the use of his case notes.

I am greatly indebted to Dr. Richard Massingham, medical superintendent of the London Fever Hospital, for providing me with notes and charts of all the recent cases treated at that hospital, also to my son, Dr. Philip Wilcox, for help in the copying of charts.

[The blocks for Charts A, F and G have been kindly lent by the Medical Society of London.]

## PROPHYLACTIC USE OF ANTI-TYPHOID SERUM IN A LOCALIZED OUTBREAK

BY

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AND

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During October and November, 1937, there occurred in Kensington a small outbreak of typhoid fever involving five cases.

### History of the Outbreak

The first case was that of Mrs. S., who fell ill on October 9, 1937, and was sent to a general hospital on October 16, by a private practitioner, with a diagnosis of bronchitis. On October 26 she was transferred to a fever hospital as a suspected case of typhoid fever. This information was reported to the Public Health Department on October 27, and that day the rooms occupied by Mrs. S. and her family were disinfected. The family consisted of Mr. and Mrs. S. and six children, the eldest of whom was 14 years of age. Two other families also occupied rooms in the same house—the N family, consisting of Mr. and Mrs. N. and two daughters aged 14 and 12 years, and another family consisting of three persons. The house was of the three storied tenement type, there being two water closets, which were used indiscriminately by all the occupants.

On November 17 the same practitioner was called in by the N family, and he found both Mr. and Mrs. N. very ill. He diagnosed typhoid fever in the case of Mr. N., who was removed to a fever hospital, and died on Saturday, November 20. In the case of Mrs. N. he did not suspect typhoid fever, but recommended her transfer to a general hospital. This offer was refused.

On Thursday, November 18, the Public Health Department heard that Mr. N. had been removed to hospital suffering from typhoid fever, and when inquiries were made at the home it was learnt that Mrs. N. had died there during the night. A post mortem examination was arranged for the same day, and this was performed by Sir Bernard Spilsbury. The cause of death was peritonitis due to perforation of a typhoid ulcer. It was estimated from the condition of the organs, and from the history, that the case was then of about three weeks' duration. That day all the occupants of the house were examined by the deputy medical officer of health, one case

Mary N. aged 14 years was found to be suffering from typhoid fever and was transferred to a fever hospital. The duration of the disease in her case was estimated to be about twelve days.

All the home contacts and Mrs. B., a married daughter of Mrs. N. who lived in a house in the same street and who had also been in close contact with the N. family, were visited daily by the sanitary inspector, and were reported to be in good health. On November 21 the deputy medical officer of health visited all the contacts, including Mrs. B. and they reported well. A hint from another contact to the effect that Mrs. B. was not well led him to insist upon making a clinical examination. He found her to be suffering from typhoid fever of about fourteen days duration. Her reason for not admitting to any symptoms—which although mild she had nevertheless guessed were due to typhoid fever—was that she wanted to go to her mother's funeral.

Mrs. B. her husband a child aged 5 years and a baby aged 3 months lived in a house similar in type to that occupied by the other patients. There were two other families in the house numbering twelve persons. In both houses it was the common practice to pass food from one family to another and there were abundant opportunities for infection to have passed from the various patients to the contacts in other families both by means of their food supply and by means of the lavatories which were in common use.

The situation on November 21 1937 was that there had occurred in two houses five cases of typhoid fever, two of which had proved fatal. Twenty-six intimate contacts were involved in the two houses whilst a further family consisting of man, wife and three children were also involved, the wife—another married daughter of Mrs. N.—and her family having visited the Ns. house and had meals there during the previous week.

#### Prophylactic Dose of Serum for Contacts

The question now arose as to whether some form of immediate protection could be given to these thirty-one contacts. T.A.B. vaccine was considered but was rejected in view of the fact that some of the contacts might in fact be incubating the disease. The use of anti-typhoid serum as prepared at the serum department of the Lister Institute by Felix's method was then discussed. There was no record of the use of this serum for prophylaxis in the past but as the contacts were all known to the Public Health Department were localized and had all been in intimate contact with the patients and therefore subjected to grave risk of infection and might in fact be incubating the disease anti-typhoid serum was given in the belief that it would confer immediate protection. This was offered to and accepted by all contacts. The dose given was 10 ccm to each adult and 5 ccm to each child administered by the intramuscular route. The injections did not produce any symptoms of serum sickness or other unpleasant reactions.

No cases of typhoid fever occurred among these contacts. This fact is not in any way considered a proof that the serum did actually prevent the onset of typhoid fever in any of these persons; the present report of the outbreak is intended more to illustrate the type of circumstance in which inoculation with anti-typhoid serum is in our opinion the correct course to pursue—a course that might well be adopted in similar circumstances in the future.

## NOTE ON THE PREVIOUS COMMUNICATION

BY

A. FELIX, D.Sc.

*Member of the Scientific Staff, Lister Institute, London*

The administration of a prophylactic dose of anti-typhoid serum to the group of persons referred to in the communication by Fenton and Hay (see p. 1090) provided the opportunity for estimating the concentration of the circulating antibodies that had been passively transferred with the prophylactic serum. It was thought that some indication might be obtained in this way of the effective dose of anti-typhoid serum for prophylactic use. Such information would be helpful because doubts had arisen as to whether the dose recommended by the serum department of the Lister Institute was not too large. The prophylactic dose for an adult had been arbitrarily chosen as one third of that recommended for the treatment of typhoid patients—namely one dose of 35 ccm of serum injected intramuscularly, three doses of 35 ccm are recommended for the treatment of adult cases of moderate severity; the dosage for children is correspondingly smaller.

#### The Serum used in the Outbreak

The anti-typhoid serum used by Fenton and Hay was derived from two different batches. The titres of the various antibodies present in the serum from the two batches are shown in Table I.

TABLE I

Anti-typhoid Serum	Titre of Antibodies Estimated by Agglutination		
	H	O	Vi
Batch No. 11 (issued March 1936)	200,000	100,000	700
Batch No. 19 (issued September 1937)	20,000	100,000	3,000

When the serum was used for the inoculation of the group of contacts the difference in the concentration of the antibodies in the two batches was unknown to Fenton and Hay. The two sera were therefore given in equal quantities—namely 10 ccm to each adult and 5 ccm to each child under 14 years; the number of the batch from which the dose had been given was recorded in each instance. Two days after the administration of the anti-typhoid serum samples of blood were taken from nineteen persons out of a total of thirty-one contacts who had been inoculated. The No. 11 serum had been given to eight of these persons (three adults and five children) and the No. 19 serum to eleven persons (eight adults and three children). The antibody content of the blood serum from the nineteen contacts was estimated according to the same technique as that employed in the examination of the therapeutic horse serum and the result is shown in the following table.

TABLE II

Anti-typhoid Serum Injected	Average Titre of Antibodies present in the Serum from 17°C. 12 Hours after the Administration of the Prophylactic Dose			Average Calculated from
	H	O	Vi	
Batch No. 11	200	200	<5	3 observed titres
Batch No. 19	0	200	<5	11 observed titres

When the figures shown in Table II are compared with the corresponding figures recorded in Table I it is seen that the H titres of the sera from the contacts were 1,000 times lower and the O titres 500 times lower than the titres of the two therapeutic sera that had been used for the injections. If account is taken of the fact that the titre of the natural H antibody in normal human serum is extremely low, whereas the O titres for the sensitive typhoid strain 0901 often reach a dilution of 1 in 50 or 1 in 100, it may be concluded that the H titres give the correct measure of the degree of dilution of the passively transferred antibodies. Judging from the dilution factor, one could not expect to demonstrate the Vi antibody in the serum from the inoculated persons even in a dilution of 1 in 5, which, according to my experience, is the limit of the natural Vi agglutinin in human serum. Actually only two out of the nineteen sera tested produced marked Vi agglutination in a dilution of 1 in 5. One of the two persons who gave a positive Vi reaction was re-examined twelve days after the administration of the prophylactic dose. The Vi reaction was then negative in the dilution 1 in 5, and the H and O titres had fallen to less than half the values that had been established two days after the inoculation.

#### Comments

It is not suggested that these observations indicate that the prophylactic doses administered by Fenton and Hay were too small. The results of experiments in mice show clearly that the potency of the Vi antibody in protective action is very striking when contrasted with the comparatively low titre of its *in vitro* action in agglutination tests. It is quite conceivable that adequate protection may be afforded when the circulating Vi antibody is not demonstrable by agglutination even in the undiluted serum. However, in the absence of adequate data relating to the results of the prophylactic use of the serum in man it would appear to be inadvisable to reduce unduly the amount of the specific antibodies that are injected.

The titre of the Vi antibody in the concentrated anti-typhoid serum as issued at the present time is 1 in 3,000. Until serum with a considerably higher content of this antibody can be prepared the following recommendation seems to be justified for prophylactic use: one intramuscular dose should be given, and this should lie between the limits of one-sixth and one-third of the full curative dose, which is 99 ccm for an adult and proportionately less for a child. When deciding on the dose to be administered account should be taken of the degree of risk and of the length of exposure to the infection.

The Association of Special Libraries and Information Bureaux (31 Museum Street London, W.C.1) held a luncheon at the Cafe Royal on April 27 at which over eighty people were present. The president, Sir Harry Lindsay, Director of the Imperial Institute, spoke of the three stages of science: first scholasticism dominated by the great scientists; then the period of the authoritative textbooks; now the era of the individual specialist. The results of modern scholarship were scattered in innumerable technical journals, and in order to keep abreast search must be made over a very wide field. The same was no less true of other spheres of knowledge.

ASLIB was therefore formed to act as a guide to specialist sources of information. Sir Clement Hindley said that members of the Association were eager to facilitate the dissemination of knowledge, and Sir Ian MacAlister spoke of ASLIB as a valuable and essential part of the great movement to make the instruments of civilization work.

## OUTBREAK OF SONNE DYSENTERY DUE TO CONSUMPTION OF MILK

BY

G. K. BOWES, M.D., M.R.C.P.

Medical Officer of Health Bedford

The following account of an outbreak of Sonne dysentery due to milk may be of interest.

#### Course of Outbreak

On January 5, 1938, information was received in the Public Health Department, Bedford, to the effect that five persons employed in a neighbouring office, all of whom had drunk raw milk there on the morning of Tuesday, January 4, had been taken ill with diarrhoea and vomiting on the evening of the same day or early the following morning. Since all members of the office staff came from different homes, the milk drunk appeared to be the only food common to the individuals concerned. Moreover, all those who partook of the milk were affected, and none of the office staff who had not drunk it had had similar symptoms. The milk was delivered daily by a retailer who obtained all his supplies from a farm about seven miles away, the retailer's dairy being the only one in Bedford to receive this milk. It arrives in churns, and is distributed raw to the consumers, some in bottles and some "loose". The bottling is done by the retailer. No other persons but the retailer and his wife, who is employed mainly in the shop connected with the dairy, lived on the premises or worked in the business. The retailer was interviewed by a member of the sanitary staff on the morning of Wednesday, January 5, and stated that he had had no complaints from his customers of any illness caused by the milk. This statement seemed at first to throw some doubt upon milk as the source of the illness.

Samples were, however, obtained from milkings of the evening of January 5 and the morning of January 6 and sent to the County Medical Officer, Dr C. G. Welch, in whose area the farm is situated, with a suggestion that a veterinary inspection of the cows might also be made. This veterinary inspection was undertaken, with negative results. At the same time a physical examination of samples showed that the milk was "clean". The County Medical Officer had meanwhile ascertained that another customer in the town had suffered from similar symptoms. On January 7 he obtained a sample of milk as delivered and still sealed, at the house of this customer, and sent it to the Ministry of Health for examination.

On the same day, in a telephonic communication, D. Seymour of the Ministry of Health suggested that if information might be obtained by house to house inquiry among the customers of the milkman. A list of the names was accordingly secured. A preliminary inquiry in the evening of the same day showed that in four of the six houses then visited one or more persons had suffered from similar symptoms. As in the original cases, the symptoms occurred on the evening of Tuesday, January 4, and the morning of Wednesday, January 5. The original cases the milk supply had been stopped at the occurrence of symptoms, but in the households visited no suspicion attached to milk, and members continued to drink it. It therefore appeared likely from preliminary investigation that any infection of the town had been limited to one day—namely, Tuesday, January 4. Though this presumption was subsequently found to be erroneous it was at the time decided, on the evidence available, not to take steps to stop the milk supply.

On Saturday January 5 all households supplied with milk by the retailer were visited by the sanitary staff and inquiries made as to any illnesses with similar symptoms. In all 106 households were visited and it was found that in fifty-nine of them one or more members had suffered from the symptoms in question. The illness occurred alike among those who had had bottled and those who had had local milk. The date of onset of the earliest symptoms in the households is given in the following table.

Monday January 3	2
Tuesday 4	25
Wednesday 5	20
Thursday 6	7
Friday 7	5

Among an estimated number of 224 persons in the households investigated ninety-six or 43 per cent. suffered from symptoms. From the time distribution of the cases the opinion though erroneous appeared to be confirmed that any infection of the milk was limited to one day. Hence it was still decided to take no action to stop the supply.

Specimens of faeces had been obtained from the original sufferers on January 7 and subsequent days and sent to Dr Scott of the Ministry of Health pathological laboratory for examination. On January 10 a report was received from Dr Scott stating that two out of the five specimens showed the presence of dysentery bacilli of Sonne type and that the same bacillus had been isolated from the sample of milk taken on January 7. It appeared quite clear therefore that the outbreak was one of Sonne dysentery and was due to the consumption of infected milk. It also appeared that this milk was still infectious at least as late as the time when the sample was taken (January 7).

In view of this additional and positive information it was decided to stop the milk supply under the power given by the Milk and Dairies Order 1926 till an improvised pasteurizing plant could be installed. With the co-operation of the Bedford Gas Company working in conjunction with the sanitary inspectors such a plant was put into action on the evening of Monday January 10 and it was possible to resume the ordinary milk supply after pasteurization on the following morning. Pasteurization was made a condition of permission to continue the supply of milk until it should have been proved that it no longer contained discoverable dysentery bacilli and that all those handling it at any stage were free from dysentery bacilli and until the conditions at the farm were satisfactory from the point of view of possible milk infection.

In the endeavour to trace the source of the now definitely known infection inquiries were made as to the health of all those who came in contact with the milk. In the course of the preliminary inquiry on January 7 it had already been ascertained that neither the retailer nor his wife the only two persons concerned in handling the milk after delivery to the dairy in the borough had at that time had symptoms. Specimens of faeces were now obtained from both these individuals and sent to the Ministry of Health. At the same time Dr W. K. Parbury, medical officer of health for the Bedford Rural District in which area the farm is situated made inquiries as to the health of those persons handling the milk in the course of its production and transit and obtained specimens of faeces. He also made inquiries at some forty houses to which milk from the farm is delivered by the farm milk lorries before they come into the borough and found that no household had been affected with dysenteric symptoms (with the exception of one patient who had had diarrhoea accom-

panying a definite attack of pneumonia obviously unconnected with the milk). This distribution of cases seemed to make it reasonably clear that the milk had been infected in the town and not on the farm or in the course of conveyance to the town. Reports received from the Ministry of Health showed that the faeces were negative in the case of all persons handling the milk with one exception—namely that of the retailer. This fact however for reasons to be stated cannot be taken as confirming the view formed on other grounds that the milk was infected in the borough.

It has been mentioned that on Friday January 7 the retailer stated that he had not had the symptoms in question. After the receipt of the report on his faeces he was again interviewed and he then said that on January 9 he had suffered from toothache and had drunk milk largely in place of his ordinary food. On the same day he had an attack of diarrhoea. This fact renders it rather more probable that he was himself infected by drinking the milk than that he was the original source of the infection. In consequence of the report received the retailer was on January 15 the date of the receipt of the report prohibited under the provisions of the Milk and Dairies Order 1926 from handling milk or milk vessels till he should be proved free from dysentery bacilli.

The medical officer of health of the rural district carried out at the farm investigations into the water supply from which the cows drank and to which they had access. Normally the cows drank from a trough fed by rain water from the roof of the farm buildings but when this was exhausted they drank from a pond into which they were able actually to enter with the possibility of contamination of their udders. Samples for bacteriological examination were taken both from the trough and from the pond. The first reports on these samples stated. This water is very badly contaminated with intestinal organisms. The *Bacillus coli* are of the faecal type. Organisms of the dysentery group are present but I have been unable to determine which variety without agglutination tests employing specific sera for each form. Subsequent tests of samples of the water with a view to determining the nature of the dysentery bacilli failed to reveal their continued presence. Steps were taken to have the pond fenced off so as to prevent the cows from entering the water though they were allowed to drink from this when the rain water trough was exhausted.

Subsequent specimens of faeces from the retailer proved negative and after the third negative report on January 27 he was permitted to resume handling of milk and vessels. On the receipt of a report from the medical officer of the rural district to the effect that the suspected pond had been fenced off and other minor requirements carried out the retailer was released from the obligation to pasteurize.

No further cases of illness came to light among the customers of the retailer after the systematic inquiries on Saturday January 8. It will be seen that the source of infection of the milk remains obscure.

#### Symptoms

The symptoms in most cases were mild and consisted of abdominal pain, vomiting and diarrhoea for twelve to thirty-six hours. In only a very small proportion of cases was medical advice sought and in only a few cases was passage of blood and mucus in the faeces mentioned. In a few instances the diarrhoea persisted for some days and was accompanied and succeeded by a period of weak-

ness The period between consumption of milk and onset of symptoms was twelve to twenty-four hours in those cases where this could be determined

#### Additional Inquiries

On January 11, when the cause of the outbreak first became clear, all the medical practitioners in the town were informed of the facts and were asked for information as to any further cases which might come to their knowledge. Inquiries were also addressed to the larger local works.

Investigations as to the food and milk supply were undertaken in all cases reported—a comparatively small number—but it was not possible to determine that any further supply of milk or other article of food had been infected.

#### Precautionary Measures

In view of general statements from medical practitioners to the effect that a large number of sporadic cases with similar symptoms had occurred recently in the town, it was at first considered a possibility that other milk supplies might have become infected, and therefore consumers were advised through the Press to boil all their milk. When further investigation failed to reveal any common source of cases other than the one already known it was decided that this precaution might be discontinued.

#### Comments

Dysentery, as is well known, has been widely prevalent throughout the country in recent months, and this has generally been due to the Sonne bacillus. During the weeks ending January 8, 15, 22, and 29 the number of cases notified in England and Wales was 256, 256, 291, and 250, respectively. Dr A. A. Jubb of the Ministry of Health in a communication states as follows:

It is a reasonable conclusion that this outbreak was milk-borne although the mode of infection of the milk has eluded investigation. The detection of the Sonne bacillus in milk has not previously been reported, and the occurrence is therefore of importance for our records.

You will be interested to know that we have received several reports of very full and even laborious inquiries made by medical officers of health into the origins of outbreaks of dysentery during the recent prevalence, but so far nothing tangible has resulted, except that in two instances an article of food was found to be infected with Sonne bacilli. In a few institutional outbreaks, however, it has been possible, owing to the circumstances of a closed community, to trace with a fair degree of certainty the course of a Sonne infection through an article of food, but bacteriological confirmation has been lacking.

In reviewing the course of the outbreak it is easy to see that several mistakes were made. Some of these were perhaps inevitable at the early part of the investigations, when knowledge was incomplete, and some, with the experience gained, might be avoided in a future outbreak. In the first place, at the outset it would have been wiser to suspect an illness of human origin rather than some toxic condition of the milk as the result of possible illness of the cows, which was at the first in my mind. There was at the time, however, nothing to point specially to dysentery, nor did I realize that this illness had so short an incubation period. Secondly, the fact that nearly all the cases would have remained undiscovered if a house-to-house inquiry among all consumers had not been made shows that it is useless to rely upon a statement from the milkman as to any illness among his customers, even if

this had been widespread. In fact, had it not been for the chance information received from a neighbouring office the outbreak might have been undetected, though probably this would have made no difference to its course. Again, it is difficult to say whether it was sound judgment to determine not to stop the milk supply on the evidence available at the time and before definite infection of the milk was known. I should always hesitate to take this action unless there was good evidence that milk had caused, and was continuing to cause or to be likely to cause, serious illness among consumers. As it still appears probable that the retailer himself became infected after the onset of the outbreak, I am of the opinion that there was no reason to prohibit him from taking part in handling milk or vessels at an earlier stage than was in fact done.

#### Summary

- 1 An outbreak of Sonne dysentery due to drinking milk is described.
- 2 Fifty-nine out of 106 households, or ninety-six among 224 individuals (estimated), were affected.
- 3 The incubation period was usually twelve to twenty-four hours.
- 4 Symptoms as a rule lasted twelve to thirty-six hours.
- 5 Sonne dysentery bacilli were isolated from faeces of some of the patients and from the milk itself.
- 6 The actual source of infection of the milk remains untraced.

## THE GONADOTROPIC ACTIVITY OF THE ANTERIOR PITUITARY GLAND IN RELATION TO INCREASED INTRACRANIAL PRESSURE

BY

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It is known clinically that a considerable increase in the intracranial pressure, in cases of cerebral tumour, may lead to irregular and even complete cessation of menstruation. This effect is presumed to be due to mechanical compression of the pituitary gland. An investigation of a single case of increased intracranial pressure during pregnancy showed that there was a notable decrease in the hormone content of the placenta and urine (Henderson and Robson, 1936). This result led us to investigate the effect of increased pressure on the amount of gonadotropic hormone in the pituitary of men and non-pregnant women. The results obtained relative to increased pressure are inconclusive, but interesting observations have been made on the pituitaries from cases with normal intracranial pressure, which served as controls to the series.

#### Material and Methods

In all, 109 human pituitary glands were assayed for gonadotropic activity. Fifty-seven of the glands were from patients (twenty-eight men and twenty-nine women) with normal intracranial pressure who died at the St. Mary's Hospital, Queen Square, from a variety of non-neurological diseases other than acute infection.

remaining fifty two patients (twenty eight men and twenty four women) all died from the effects of cerebral tumours (without operation) which had produced an increased intracranial pressure of varying duration. The intracranial pressure in the majority of them as measured by lumbar puncture was 250 to 400 mm of water the normal pressure being 100 to 120 mm.

The pituitary gland was removed at necropsy and the anterior lobe dissected, weighed, desiccated in acetone for forty eight hours and subsequently dried in a current of hot air. No attempt was made to prepare a purified extract containing the gonadotropic hormone. For assay the acetone dried tissue was separated from the sheath of connective tissue ground to a fine powder and suspended in water made slightly alkaline with NaOH. Nearly all of the tissue goes into solution under these conditions. The extract was then adjusted to pH 7.5 and tested on immature rats. Groups of ten rats 40 to 50 grammes in body weight were injected subcutaneously once daily for five days and killed twenty four hours after the last injection. The ovaries and uterus were dissected, fixed in Bouin's fluid overnight and weighed afterwards from 70 per cent alcohol. In order to have a standard by reference to which the individual pituitaries could be compared a mixed sample of acetone desiccated anterior pituitary powder (AP 47) from nine men and five women whose ages ranged from 20 to 65 years was made. The dry powder from these fourteen glands had a total weight of 0.82 grammes.

A dose-response curve was then constructed for the capacity of this preparation to stimulate the ovaries of the immature rat. This curve is shown in Fig. 1 of the article by Boycott and Rowlands at page 1097 of this issue. From the response evoked by this mixed powder it was found that there was sufficient activity in most pituitaries to carry out individual assays using a group of five rats by the above method. There was not however enough material in the pituitary of very young children to assay each one separately, so a number of these glands were grouped according to age and assayed together. The amount of each pituitary required to give a significant response measured by ovary weight was then compared with the amount of the standard preparation necessary to give the same response. From this comparison the activity of each gland was expressed as a percentage of that of the standard.

#### Gonadotropic Activity of the Human Pituitary under Conditions of Normal Intracranial Pressure

The type of response produced in the ovary of the immature rat by human pituitary extract is qualitatively similar to that produced by extracts such as those from horse pituitary and pregnant mare serum which contain a highly effective gonadotropic complex. It contrasts strongly with that produced by extracts of human pregnancy urine and human pregnancy serum (Boycott and Rowlands page 1097 of this issue) which are capable of evoking only a limited response of the rat ovary. The gonadotropic activity of the normal adult human pituitary when tested on immature rats is also quantitatively much greater than that of any other species so far examined. Hill (1933) found a pronounced species difference in the gonadotropic activity of the pituitary tested by the production of ovulation in oestrous rabbits and extracts of horse pituitary proved to be the most active of the species which he examined. One human pituitary from a man aged 64 assayed by Hill showed much less activity than

the pituitary of most of the domestic animals used in experimental work. The activity of the pituitary of men of this age however when tested by the increase in weight of the ovary of the immature rat as in the experiments here recorded is about ten times as great as that of any other species so far examined.

From Fig. 1 it is seen that in both sexes the content of gonadotropic hormone in the pituitary increases with age. During early childhood the pituitary contains only small amounts of the hormone.

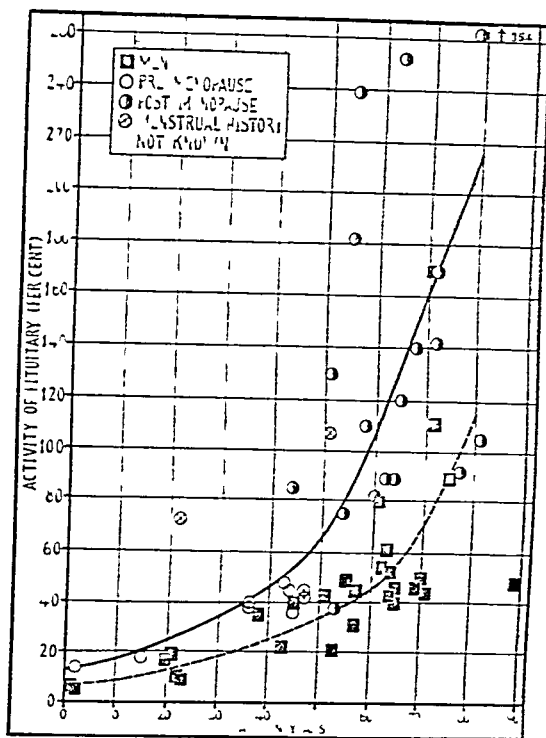


FIG. 1.—The gonadotropic activity of the pituitary of men and women with normal intracranial pressure. The women are classified with regard to the occurrence of menopause. Activity is expressed as a percentage of that of the standard preparation.

The activity of a group of seven pituitaries from female children up to 1 year was 14 per cent, or that of the material used as a basis of comparison, whereas that of a similar group of pituitaries from males of the same age was only 6 per cent and that of another group of pituitaries from males of 1 to 2 years was only 5 per cent. The data from this age to that of 20 years and again from the ages of 25 to 35 are unfortunately very scanty, but they indicate a gradual increase in the content of gonadotropic hormone in the pituitary, the amount being greater in women than in men. Up to the age of 30 years in both sexes with two exceptions the amount of gonadotropic hormone in the pituitary does not exceed 50 per cent or that in the standard material. One of the two exceptions a pituitary with an activity of 75 per cent was from a woman aged 22 years from whom no menstrual history could be obtained. The second a pituitary with an activity of 85 per cent was from a woman aged 44 years in whom menstruation had ceased about one year previously.



With the appearance of the menopause there is an abrupt increase in the gonadotropic activity of the female pituitary which persists throughout the remainder of life. All the pituitaries examined from women past the menopause showed a gonadotropic activity between 80 per cent and 354 per cent that of the standard, with the exception of a pituitary with an activity of only 38 per cent from a woman 53 years of age. There is therefore, after puberty an inverse relation between sexual activity, as indicated by the occurrence of menstruation, and the amount of gonadotropic hormone in the pituitary.

There does not seem to be the same rapid increase in the amount of gonadotropic hormone in the pituitary of the male after 50 years of age. The gradual increase that was observed up to 50 years is maintained, but not until an age of about 70 is there any evidence of a sharp rise in the content of gonadotropic hormone. Of the six pituitaries from men of 70 years of age or more that were examined, only two, at ages of 71 and 72 years respectively, showed a gonadotropic value greater than that of the standard preparation. One pituitary from a man of 89 years gave a value only 48 per cent of that of the standard.

#### Gonadotropic Activity of the Human Pituitary under Conditions of Increased Intracranial Pressure

The gonadotropic activity of the pituitary associated with normal and with increased intracranial pressure is shown in Figs 2 and 3, for the women and men respectively.

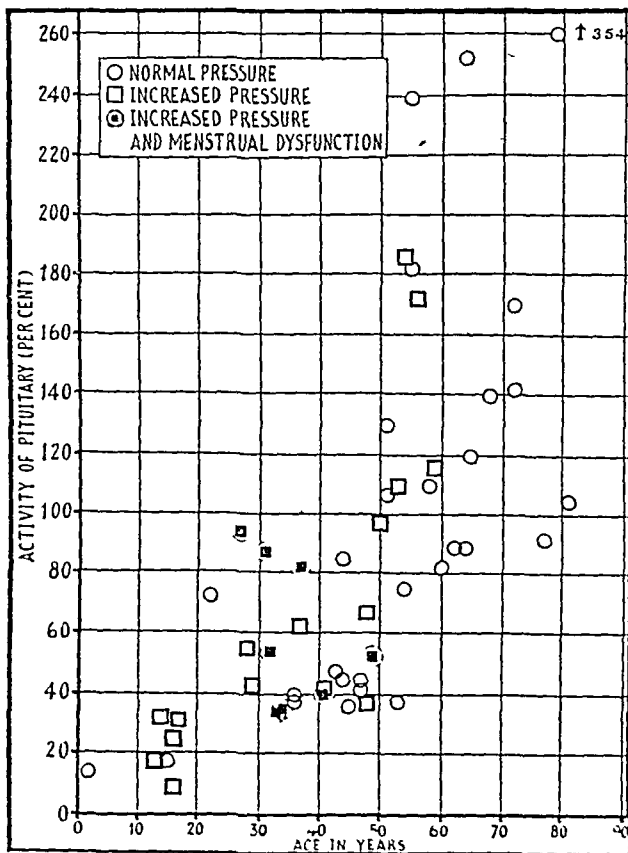


FIG. 2—The gonadotropic activity of the pituitary of women with normal and with increased intracranial pressure.

tively. Increased intracranial pressure, in either sex, does not appear to alter the amount of gonadotropic hormone in the pituitary although in both men and women with

high intracranial pressure the hormone content of the gland seems to be more variable than normally at the ages of 30 to 45 years. Since this variation might be due to loss of sexual function a comparison was made

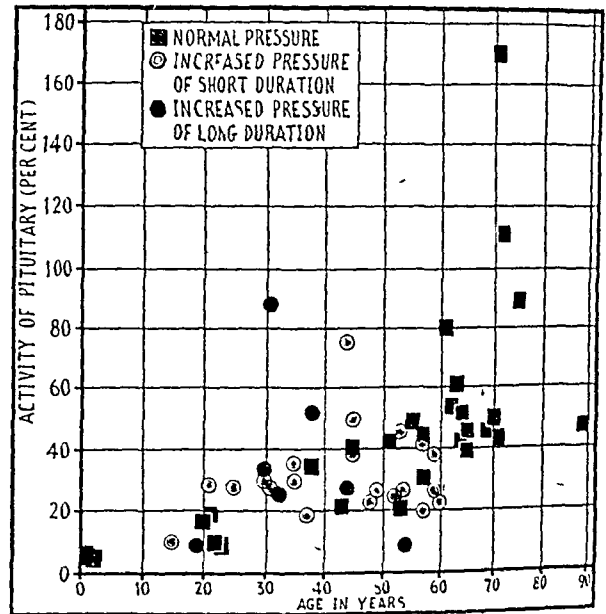


FIG. 3—The gonadotropic activity of the pituitary of men with normal and with increased intracranial pressure.

between the degree of activity of the pituitary of women and the occurrence of menstrual dysfunction, and it seems that in some cases of increased pressure there is a premature rise in gonadotropic activity, similar to that which occurs shortly after the menopause (Fig. 2). There is, however, no regular correlation of this nature.

The degree of activity of the pituitary was also considered in relation to the duration of the increased intracranial pressure. When the sella turcica is normal in size it is probable that the increased pressure is due to a rapidly growing tumour and has been of short duration, whereas an enlarged and atrophic sella the floor of which is partly or completely absorbed is indicative of chronic high pressure from a slowly growing tumour.

In Fig. 3 is shown the effect of increased intracranial pressure of long duration (up to six years) on the gonadotropic activity of the pituitary of men. In such cases it is seen that the activity of the gland is normal, except in one case with an unusually high and in another with an unusually low hormone content.

#### Discussion

From the results given above it is seen that in man a relationship occurs between the content of the gonadotropic hormone in the anterior pituitary gland and the functional activity of the reproductive organs. In both sexes, from birth to the decline of sexual function, there is a gradual increase in the hormone content of the gland. At the menopause, however, there is a great increase in the amount of gonadotropic hormone in the pituitary of women, but in men this increase does not occur before senility, when it is probably associated with the decline of testicular activity. The significance of this increase in the amount of hormone in the pituitary as gonadal activity declines is difficult to explain. It seems certain that lack of gonadotropic hormone is not the cause of the loss of ovarian and testicular function.

likely the decline of sexual function may be attributed to the gonads becoming insensitive to stimulation and the greater hormone content of the pituitary at this time may be due to increased secretion by the gland in response to the insensitivity of the gonad. It is unlikely that the increased activity of the pituitary is due to accumulation of the hormone in the gland through its failure to be released into the circulation since after the menopause a gonadotropic hormone which is probably of pituitary origin can be extracted in appreciable quantities from the female urine. Possibly the increased amount of hormone in the pituitary and in the urine after the menopause is due simply to the failure of the gonad to utilize existing supplies.

Since there is a great increase in the activity of the pituitary after the natural decline of reproductive function it might be expected that it would occur if the normal activity of the reproductive organs is otherwise impaired. Such impairment is sometimes seen in cases of cerebral tumour with an increased intracranial pressure which may disturb or even suppress the menstrual rhythm. The results obtained on the pituitaries of such patients were rather inconclusive although the activity of some of the glands tended to be greater than normal. It is not known whether this is due primarily to a disturbance of ovarian function or to the direct effect of the increased pressure on the pituitary. The amenorrhoea in all the cases was of short duration so that no comparison could be made between the duration of menstrual dysfunction and the activity of the pituitary.

From the action of human pituitary tissue on the ovary of the normal immature rat it cannot be decided whether there is a change at any stage of life in the qualitative nature of the gonadotropic complex of the human pituitary. It is hoped that experiments at present being made in conjunction with Dr R. L. Noble on hypophysectomized rats will throw light on this question.

The experiments of Saxton and Loeb (1937) in which human anterior pituitary tissue was implanted into immature guinea pigs suggested that during childhood the pituitary contains follicle stimulating hormone and only small amounts of luteinizing hormone but that later in life there is an increase in the amount of the latter substance in the pituitary of individuals of either sex during or after the period of sexual activity. It is possible that the discrepancy between these observations and those recorded above may be explained by reference to the different test animals used.

#### Summary

After being desiccated in acetone 109 human pituitary glands were assayed individually on groups of immature rats for gonadotropic activity. Fifty-two of the glands were from patients with increased intracranial pressure due to cerebral tumours while the remaining fifty-seven glands from cases with normal intracranial pressure served as controls. The activity of each gland was expressed as a percentage of that of a mixed sample of human pituitaries which was used as a standard preparation.

The control series showed that the gonadotropic activity of the pituitary varies with age. During early childhood the amount of hormone in the gland is small but it increases slowly to the end of the period of sexual activity. In women at the menopause there is a sudden rise in the activity of the pituitary but in men a corresponding increase does not occur until about the seventieth year. The significance of this is briefly discussed.

The amount of gonadotropic hormone in the pituitary of patients with increased intracranial pressure tends to be more variable than in normal subjects. Several of the women showed menstrual dysfunction and there was a suggestion of a premature rise in the amount of gonadotropic hormone in their pituitaries. There appears however to be no relation between gonadotropic activity and the duration of the increased pressure.

We desire to thank Dr J. E. Greenfield of the National Hospital Dr A. C. Crooke of the London Hospital Dr W. G. Barrard of the L.C.C. and Dr G. H. News of the Sick Children's Hospital for assistance in the collection of the pituitary glands used in this work.

#### REFERENCES

- Henderson W. R. and Robson J. M. (1936) *Lancet* 2 303.  
Hill R. T. (1935) *J. Physiol.* 83 137.  
Saxton J. A. and Loeb L. (1937) *Anat. Rec.* 89 261.

## THE BIOLOGICAL NATURE AND QUANTITATIVE VARIATION OF THE GONADOTROPIC ACTIVITY OF PREGNANT WOMEN'S SERUM

BY

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It is already known that gonadotropic material extracted from pituitary tissue differs in its biological reactions from that of human urine of pregnancy. When tested in immature rats pituitary extracts cause an almost unlimited increase in ovary weight whereas urinary extracts in which the gonadotropic material is probably of placental origin cause only a strictly limited response. Also in hypophysectomized immature rats pituitary extracts will produce follicular growth and luteinization leading to increase in ovary weight. Urinary extracts in similar animals give little if any increase in ovary weight although considerable luteinization takes place. These and other experiments suggest the existence of two gonadotropic factors—that is, follicle stimulating hormone and luteinizing hormone only the latter being present in extracts of urine of pregnancy.

The investigation described below was made to ascertain some of the biological properties of the gonadotropic material which can be extracted from human blood serum during pregnancy and to compare it with gonadotropic material from other sources particularly with highly purified extracts from pregnant mare serum.

Quantitative estimations of the amount of gonadotropic substance present in the blood of pregnant women have been made by Evans, Kohls and Wonder (1937) who found that its concentration was at a maximum between the thirtieth and the forty-sixth day (pregnancy being dated from the beginning of the first missed menstrual period) at the same time as the gonadotropic substance in the urine reached its maximum. On the other hand Kennedy (1933) found in a very wide range of cases that as pregnancy advances there is a gradual increase in the concentration of the substance in the blood. The present work shows that there is a high peak in the concentration

\* B.D.H. Research Fellow since October 1937.

of this substance in the blood serum during the tenth to sixteenth weeks of pregnancy. No gonadotropic substance could be detected in the blood of non-pregnant women by the method adopted, although Frank and Salmon (1935) claim to have found small amounts, and to have been able to detect a regular alteration of its concentration during the menstrual cycle.

### Methods

Samples of about 20 c cm of blood were taken from the median basilic vein and allowed to clot in a sterile test-tube. The clot was later compressed, and the serum decanted and centrifuged. A large number of such

was calculated, the data being given in Table I and in Fig 2.

In all cases the period of pregnancy is calculated in weeks from the date of the first day of the last menstrual period, so that in Fig 2 a deduction of about two weeks should be made to obtain the probable time after fertilization.

### Results

#### COMPARISON OF THE GONADOTROPIC ACTIVITY OF PREGNANT WOMEN'S SERUM WITH THAT OF OTHER EXTRACTS

The type of response given by the gonadotropic substance present in human pregnancy serum is compared with that given by a human pituitary extract and that of a human urine of pregnancy extract in Fig 1. The dose-response curve of the last mentioned substance is taken from the results of Deanesly (1935), and that of the human pituitary extract from the results of Henderson and Rowlands given on page 1094 of this issue.

The constantly rising curve representing the activity of the human pituitary extract shows that an unrestricted response can be obtained in the rat as judged by the weight increase in the ovary. On the other hand, urine of pregnancy extracts give a response which reaches a constant maximum of 40 mg. The response given by the pregnancy serum extract (PWS 77) is similar in character to that of the urinary extract. Using the same method of assay, however, it is seen that a slightly greater response is obtained with the pregnancy serum extract than with the urinary extract. Since Saxton and Loeb (1937) found that the human pituitary during pregnancy contains no measurable amount of gonadotropic hormone, it is likely that the gland is secreting this hormone into the circulation as rapidly as it is produced, and that its

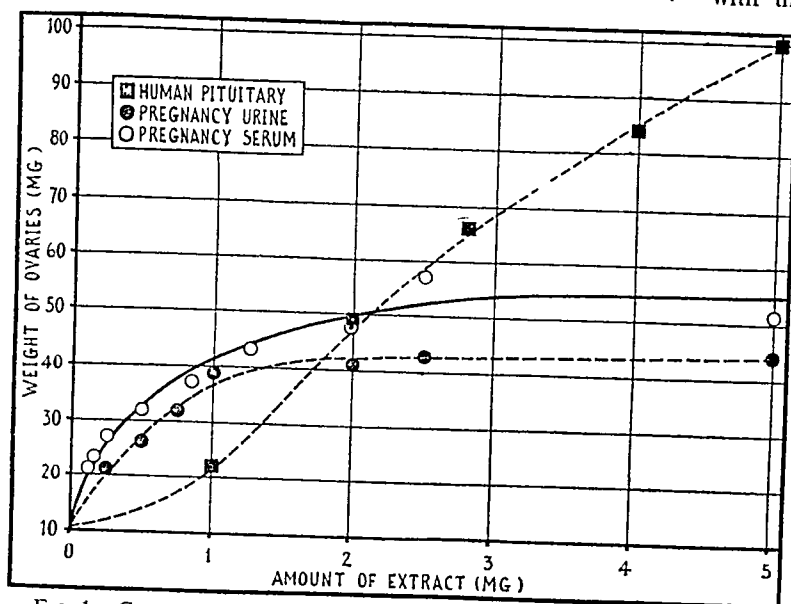


FIG 1—Comparative activity of gonadotropic extracts from human pituitary, pregnancy urine and pregnancy serum on the weight of the ovary of the immature rat.

samples, taken at random at different stages of pregnancy, were pooled (total volume = 710 c cm serum), and an extract (PWS 77) weighing 614 mg was prepared by the method described by Freed (1936). This substance was used for the construction of the dose-response curve shown in Fig 1.

Assay of this extract was carried out by injecting groups of ten to twenty immature female rats weighing 40 to 50 grammes once daily for five days. They were killed twenty-four hours after the last injection, the ovaries and uterus were dissected fixed in Bouin's fluid, and the following day transferred to 70 per cent alcohol and weighed on a torsion balance. A large number of individual samples of untreated serum were then assayed in the same way on groups of five rats. An amount of serum was injected which was expected to produce ovaries weighing between 14 and 30 mg, the weight of the normal rat ovaries at this age being about 10 mg. It was found that the volume of serum required to produce a response within these limits varied from 0.025 c cm to 1 c cm, depending on the period of pregnancy. All samples were injected in a volume of 0.2 c cm daily, when a smaller amount of serum had to be injected it was diluted to this volume with saline. The amount of the standard extract, converted into an equivalent volume of original serum, required to produce the same response as that obtained with each sample of serum was calculated, and the activity of each sample was then expressed as a percentage of that of the standard extract. The mean monthly percentage

presence in the blood probably accounts for the slightly greater response obtained with the serum extract than with the urinary extract.

Further evidence of the nature of this substance in the blood during pregnancy is obtained by its effect on the hypophysectomized rat. Only a few preliminary experiments have been done, but the injection of 2.5 mg of the extract PWS 77 into rats at two days, eight days, and twelve weeks after hypophysectomy failed to produce vaginal opening or to increase the weight of the ovary. Histologically, the ovaries show no follicular development, but some increase in the stromal tissue. These observations are therefore in agreement with those in which gonadotropic extracts of pregnancy urine are used.

The only other species which is known to contain a gonadotropic substance in the blood serum during pregnancy is the mare. Highly purified extracts of this substance are now available, and, tested on the immature rat, they give an unlimited response in the ovary similar to that evoked by horse or human pituitary (Rowland, 1938). With this substance ovaries averaging over 200 mg have been obtained. These extracts also produce follicular growth and luteinization in the ovary of the hypophysectomized rat.

There is thus a qualitative difference between extracts of pregnant women's serum (mainly luteinizing hormone) and pregnant mare's serum (follicle stimulating and luteinizing hormones) which can be shown from assays on immature and hypophysectomized rats.

# QUANTITATIVE ESTIMATIONS OF GONADOTROPIC ACTIVITY OF HUMAN SERUM DURING PREGNANCY

The mean monthly value of the activity of a number of samples of human pregnancy serum is given in Table I and Fig. 2 the value being expressed in terms of the activity of the preparation PWS 77. A number of samples of serum from non pregnant women were pooled and in an amount of 2.5 ccm per rat produced no effect on the

TABLE I—Percentage Activity of Samples of Human Pregnancy Serum in Comparison with Extract of PWS 77. The Samples are Grouped at Monthly Intervals

Mean Duration of Pregnancy (Weeks)	Number of Samples Tested	Percentage Activity in Relation to that of Extract of PWS 77 (a)
6.5	3	67
7	3	261
11.5	12	222
17	27	53
20	15	34
24.5	13	16
29.5	5	50
32.5	8	35
33	8	51

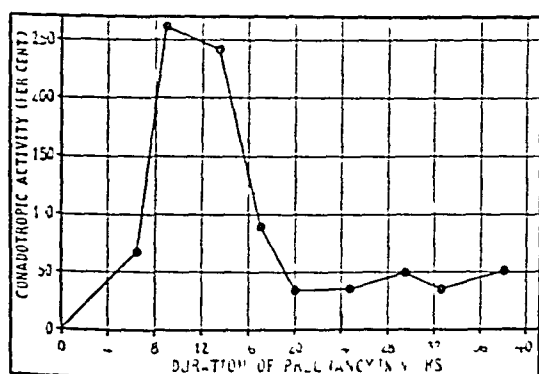


FIG. 2—Graphical representation of data given in Table I

ovary. Only very few samples taken during the early weeks of pregnancy were available but it is clearly shown that by the sixth week the gonadotropic substance is present and very shortly afterwards increases rapidly in its concentration. The maximum concentration of gonadotropic activity in the serum is found over a short period between the eighth and twelfth weeks pregnancy being dated from the first day of the last menstrual period. Subsequently there is a somewhat less rapid decrease in concentration the low level which is found in late pregnancy being established at about the twentieth week. From this time to the end of pregnancy the mean activity of the samples was shown to be about 40 per cent of that of the extract with which it was compared.

The very wide scatter of the points (from which the curve in Fig. 2 was constructed) during the eighth to the fourteenth week (30 per cent to 640 per cent) suggests that the maximum concentration of the gonadotropic substance in any particular pregnancy is either transitory or very variable. By making repeated estimations in the blood and urine of a few cases throughout pregnancy Evans Kohls and Wonder (1937) and Browne and Venning (1936) who made similar urine estimations found that in each instance the concentration of this substance was at a maximum for only a very short period and both these groups of workers give figures which show that the maxima vary greatly.

## Discussion

The significance of the presence of the gonadotropic (mainly luteinizing) substance in the blood and urine during pregnancy with a sharp rise and an equally rapid decline in its concentration during the second to fourth months is not understood. Browne and Venning (1936) who offered an explanation for its occurrence point out the importance of the placenta in man in superseding the ovary during this period of pregnancy as the seat of production of the corpus luteum hormone (progesterone). The placenta secretes large amounts of the gonadotropic luteinizing hormone which maintains the function of the corpus luteum at a certain concentration of which is necessary in the blood. On the regression of the corpus luteum the placenta itself produces progesterone and Browne and Venning suggest that the concentration of the gonadotropic hormone falls in the blood being now required only in the placenta where both this hormone and the luteal hormone are then forwarded produced.

This however does not satisfactorily explain the very abrupt rise and fall in its concentration during the critical time of the regression of the corpus luteum and the assumption of the luteal function by the placenta. It does not appear likely that this is a coincidence. Rather it seems that the great increase in production of gonadotropic substance serves to prolong the life of the corpus luteum as long as possible during this transition period and to stimulate the placenta to assume its new function. It is recognized that failure of the placenta to produce progesterone at this period leads to abortion. A clue to the significance of the rise in the secretion of gonadotropic hormone during the second to fourth months of pregnancy may be forthcoming from the observation of Browne and Venning that the characteristic rise in the excretion of this hormone is not so great in cases of habitual abortion. If this is generally so then favourable results might be obtained by the injection of urine of pregnancy extracts at this stage in such cases. Good results have been reported from the use of progesterone in cases of threatened abortion but the stimulation of the luteal cells of the placenta to secrete progesterone by the injection of extracts of gonadotropic hormone would appear to be a more rational method of correcting the physiological defect.

## Summary

A large number of samples of serum were obtained from pregnant women and assayed for gonadotropic activity, a bulk preparation from pooled samples being used as a standard of comparison and for determining the general gonadotropic properties. It is shown in contrast to pregnant mare serum extract that extracts of human pregnancy serum behave similarly to extracts of urine of pregnancy in that (a) they cause only a limited response in the rat ovary judged by increase in ovarian weight and (b) they produce no follicular growth in the ovary of the hypophysectomized rat.

Assays on the individual samples of serum taken at different stages of pregnancy show that the concentration of gonadotropic substance rises rapidly from the sixth week is at a maximum from the eighth to the twelfth week and thereafter declines to a low level which is fairly constant from the twentieth week to the end of pregnancy. By the technique of assay employed no gonadotropic activity could be detected in the serum of non pregnant women.

The significance of the presence of the gonadotropic substance is discussed in relation to the luteal activity of the placenta

We wish to thank Dr R K Callow, who prepared the extract (PWS 77) of pregnant women's serum

## REFERENCES

- Brown, J S L and Venning E M (1936) *Lancet* 2, 1507  
 Deanesly R (1935) *Quart J Pharm* 8, 651  
 Evans H M, Kohls C L, and Wonder D H (1937) *J Amer med Ass* 108, 287  
 Frink, R T and Salmon, U J (1935) *Proc Soc exp Biol, NY*, 32, 1237  
 Freed S C (1936) *Endocrinology* 20, 224  
 Kennedy W P (1933) *Quart J Physiol* 23, 367  
 Rowlands, I W (1938) *J Physiol* 92, 8 P  
 Saxton, J A, and Loeb, L (1937) *Anat Rec* 69, 261

## TREATMENT OF CHANCROID WITH SULPHANILAMIDE

BY

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Chancroid is an ulcerative condition of the genitals due to infection with Ducrey's bacillus, and is observed more frequently in males than in females. The genital ulceration is often followed by the formation of large inguinal buboes. A provisional diagnosis may be made on clinical grounds, since the ulcers have a characteristic appearance, but in addition there is a specific test—Reenstierna's test. In this test 0.2 c cm of Dmelcos testing vaccine (1 c cm = 450 million organisms) is injected intracutaneously in the forearm. After forty-eight hours there is a marked local reaction around the injection, with a papule and often a pustule or a necrotic area. It is necessary to exclude syphilis in every case, and this is done by dark-ground examination of the exudate from the ulcers on three successive occasions at intervals of twenty-four hours. During this period saline soaks are applied to the ulcers. The blood is examined at regular intervals by the Wassermann and Kahn tests.

The usual treatment is by securing free drainage of the ulcers, applications of weak antiseptics such as eusol, etc., and intravenous injections of a vaccine of Ducrey's bacillus—Dmelcos vaccine. Injections are given on alternate days or as determined by the general reaction of the patient. The initial dose is 0.5 c cm (120 million organisms) and each successive dose is increased by 0.5 c cm. The general reaction is usually severe: a temperature of 103° F frequently follows in about eight hours and returns to normal in twelve hours. This treatment is not suitable for ambulatory patients, and patients are usually in hospital for at least two weeks.

### Sulphanilamide Treatment

Following a suggestion of Dr McGregor Robertson of Glasgow, made at a meeting of the Scottish Division of the Medical Society for the Study of Venereal Diseases, we have treated ten cases of chancroid with sulphanilamide by mouth. Four cases had relapsed after treatment with Dmelcos vaccine.

**Case 1**—A man was admitted to the Royal Infirmary Edinburgh with genital ulceration and an inguinal bubo. Reenstierna's test was positive. There was no evidence of

syphilis. Treatment with five injections of Dmelcos vaccine was followed by the rapid disappearance of the sores and the bubo, and the patient left the ward. Ten days later he reported to the outpatient department with a large bubo. Treatment with sulphanilamide by mouth was given, and the bubo healed in six days. This patient has been under observation for thirty days since treatment was stopped; his condition remains normal.

**Case 10**—A woman had previously been treated for syphilis and gonorrhoea, treatment being discontinued before clinical or bacteriological cure. She was referred back to the clinic by the prison medical officer on account of genital ulceration of ten days' and left inguinal bubo of five days' duration. The introitus vaginae was surrounded by shallow ulcers, ragged and with undermined edges. The bubo was about three inches in diameter. It was slightly tender, but no softening was detected. The serum from the ulcers did not contain *Sp. pallida* and Reenstierna's test was positive. The blood Wassermann and Kahn tests were also positive. The patient was given sulphanilamide by mouth—6 grammes a day for three days, then 4 grammes a day for four days. Healing was rapid and complete. On the sixth day the ulcers had healed and the bubo was almost completely absorbed. On the tenth day the patient's condition was restored to normal.

Table showing Summary of Cases

Case No	Ref No	Sex and Age	Genital Ulcer	Bubo	Total Dose of Sulphanil	No of Days Treatment Required	Previous Treatment
1	C9877	M 34	+	+2	Grammes 57	11	5 injections Dmelcos 10
2	C9928	M 55	+	+2	53	10	5 injections Dmelcos 10
3	D48	M 29	+	+2	46	8	4 injections Dmelcos 10
4	C9788	M 42	+	+1	36	10	5 injections Dmelcos 10
5	B	M 31	+	+2	68	5	Nd
6	D164	M, 23	+	+1	40	7	Nd
7	D1800	M 27	+	-	52	8	-
8	D3489	M 21	+	+2	76	10	-
9	D3497	M 18	+	-	36	11	Syphilis
10	D216	F 25	+	+1	34	7	Syphilis & Gonorrhoea

Average dose of sulphanilamide 50 grammes  
 treatment required 9 average number of days

### System of Treatment and Observation at Present Adopted

First, second, and third days. Dark ground examination of serum from ulcers, saline dressings applied to ulcers. Reenstierna's test carried out, Wassermann and Kahn tests of blood.

	Male	Female
4th and 5th Days Sulphanilamide	8 grammes a day	6 grammes a day
6th 7th 8th and 9th Days Sulphanilamide	6 grammes a day	4 grammes a day

The use of sulphanilamide is not devoid of risk. Case 5 was that of a man, aged 31, whose co-operation in treatment was not perfect, as he had eaten three aspirin tablets during five days' treatment and had taken two aspirin tablets during five days' treatment. After 34 grammes of sulphanilamide had been taken in five days he became sick and vomited. On this he had felt weak. On examination he showed a striking degree of pallor. The pulse rate was 120 per minute and the temperature 102.2° F. On the next day he could not sit up in bed to take food, and had to be fed—even the exertion of speaking tired him. The chancroid, however, healed rapidly, with rapid subsidence of the adenitis without abscess formation.

It was observed in one case that evidence of syphilis is not derived by this treatment in Case 9 dark ground examination of the sore was negative. The ulcers healed rapidly under sulphamamide treatment but there was evidence of generalized syphilis and positive Wassermann and Kahn tests three weeks later.

Case 5 was treated initially by injections of solu-septisine and the clinical response appeared satisfactory.

### Summary and Conclusions

- 1 Ten cases of chancroid have been treated by sulphamamide. A rapid cure was effected in all.
- 2 Sulphamamide does not interfere with Reinstierna's test.
- 3 Four of the above cases had relapsed after treatment by Dmeleos vaccine intravenously.
- 4 The good results of treatment appear to be permanent.
- 5 This method of treatment is suitable for ambulatory patients and out patients but strict supervision is required when large doses are given.

## Clinical Memoranda

### A Case of B coli Meningitis

This condition is apparently a well recognized though uncommon cause of neonatal death. Craig (1936) gives a full account of twenty one cases of neonatal meningitis of which ten were due to *B coli* alone. Cruickshank (1930) found meningitis in 4 per cent of 800 neonatal necropsies. The following are some details of the case which I saw.

#### CASE REPORT

Mrs. A gave birth to a healthy child of 11 lb. on December 20 1937. It was her second baby. The confinement was quite straightforward and both did well. I paid my last visit on December 30 leaving a competent district nurse in charge. Late on January 2 1938 I was called to see the child as it had refused all feeds that day appeared unusually quiet and occasionally cried in a peculiar way. It had been perfectly normal the previous day. I found the baby looking very ill with a temperature of 100.5 F a pulse rate of 150 and a respiration rate of 38. There were no physical signs except a patch of stomatitis in the left cheek. The fontanelle was not tense or distended there was no cervical rigidity and the ears were normal. The infant showed no interest or resentment on examination and refused the breast. There was a vague history of mild convulsions that day. In spite of taking some expressed feeds and water it died early the following morning. At the necropsy the cerebrum was extensively covered with a thick purulent exudate from which was grown a pure culture of non-haemolytic *B coli*. There were patches of stomatitis in the mouth which I regret I did not have cultured.

#### COMMENTARY

The striking points were the brief history the absence of indicative physical signs and the gross pathology found post mortem. In his series Craig observed prematurity and feebleness at birth in 70 per cent and lesions of skin or mucous membranes in all but three. Here there was definite stomatitis as in three of his cases. Other accompanying conditions quoted were otitis pneumonia colitis

and cellulitis of the scalp. He observed that the main clinical characteristics were lack of desire for fluids increasing bodily weakness and loss of or failure to gain weight. Fever was never high reflex changes were in constant conditions were fairly frequent convulsions were present in only 10 per cent and anuria was common in terminal stages. The average age at death was 10.8 days. Gibbins (1932) suggests that the adaptability of the infantile skull explains the soft or spongy fontanelle and probably the absence of early signs of increased intracranial tension hence the difficulty of early diagnosis. Von Reuss *et al* (1935) give the late appearance or absence of convulsions as a strong diagnostic point against intracranial haemorrhage. With sepsis of mouth or ears it may be caused by local spread but actually it is probably a septicaemia due according to Cooke and Bell (1922) to the increased permeability of the intestinal mucosa in infants with an absence in the blood of normal agglutinins for *B coli*. Though Neff (1924) reports a recovery there is no reference to treatment in the literature.

My thanks are due to Dr. Robo of Exeter for his pathological reports.

ADMINISTRATOR

A. L. CROCKFORD M.C. M.B. B.Sc.

#### REFERENCES

- Cooke J. V. and Bell H. H. (1922) *Amer. J. Dis. Child.* 24: 387.  
 Craig W. S. (1936) *Arch. Dis. Child.* 11: 171.  
 Cruickshank J. N. (1930) *Med. Res. Conf. Sp. Rep. Ser. No. 1*, London.  
 Gibbins J. (1932) *Lancet* 7: 1293.  
 Neff F. C. (1924) *Abstr. Paediatrics* 7: 54 London.  
 von Reuss A. R., Pfander M. and Schlozman A. (1935) *Diseases of Children* 1: 57 Philadelphia.

### Vulvo-vaginal Diphtheria

Cases of vulvo-vaginal diphtheria are rare enough to merit a note when they occur. The following case had some interesting features.

#### CASE REPORT

A B. a girl of 8 years suffered from a "cold in the head" on January 18 1938. On January 23 her sister aged 2 years developed a sore throat and was removed to hospital on the 25th suffering from severe faucial diphtheria. On the 27th a brother aged 3 years was removed to hospital also suffering from faucial diphtheria. Contact-swabbing of the members of this family on January 26 showed that the girl A. B. and a brother were both throat carriers. They were excluded from school and were directed to attend the school clinic for supervision. On January 25 the child A. B. began to complain of slight urinary disturbance which gradually got worse and on February 3 Dr. Dingle was called. He suspected vulval diphtheria and took a swab which subsequently yielded diphtheria bacilli in pure culture. The child was therefore removed to Sheriff Hill Isolation Hospital on February 4.

On admission the patient who was well nourished presented some excoriations of the nares accompanied by a slight discharge from the nose. There was nothing abnormal about the throat or neck glands. The vulva showed definite inflammatory changes. The skin of the perineum had several excoriated papules while there was a profuse and offensive watery discharge from the vagina. On inspection it was seen that the vaginal mucosa visible through an annular hymen was covered with white membrane. Upon the inner surfaces of the labia minora opposite the vaginal introitus there were two small shreds of membrane one on either side. The child was at once given 60 000 units of diphtheria antitoxin and swabs were taken from the vulva throat and nose while a direct smear was made of the vaginal discharge and

examined for gonococci with negative results. The throat swab was negative, but the vulval and nasal swabs were afterwards reported positive and on being submitted to a virulence test at the Bacteriological Laboratory of King's College Newcastle, were found to show virulent organisms of the 'gravis' type in each case.

The girl showed slight pyrexia for two days, while the urine was albuminous for a week. On February 7 the excoriation was healing the discharge had markedly diminished, while the membrane had disappeared from the labia and was only visible to a slight extent on the anterior wall of the vagina. By February 9 the improvement had continued but a little membrane was still evident on the right side of the vagina fairly high up. Subsequent progress was not abnormal, and on February 22 swabs were negative for diphtheria bacilli. It was noted during convalescence that the child tended to the habit of masturbation. She was allowed up on February 24 and was discharged on March 8 in perfect health.

#### COMMENTARY

I have already reported (*Journal* 1934, 1, 1074) a case of vulvo-vaginal diphtheria which was admitted to a venereal diseases ward. Then, as in the present instance, associated cases of clinical diphtheria were noted. It would seem that in the present case the child developed a diphtheritic infection of the nose which was missed, but which infected two other members of the household with faucial diphtheria, and spread in the patient herself, through her habits, to the vulva.

JAMES GRANT

Medical Officer of Health, County Borough of  
Gateshead and Medical Superintendent,  
Sheriff Hill Infectious Diseases Hospital,  
Gateshead

### Acute Perforative Appendicitis

The following record of a case of acute perforative appendicitis in a child of two months may be of interest.

W.W. aged 2 months was admitted to hospital on March 2, 1938 with a history of screaming with pain, persistent vomiting and constipation of twenty-four hours duration. The temperature was 102.6, the pulse 160, and respirations 60. On examination the patient was a very ill, poorly nourished infant with sunken fontanelles and drawn dehydrated appearance. Nothing abnormal was found in the chest. There was a large hard tender swelling in the right inguinal region extending into the scrotum. This had been present since birth but had become larger during the past twenty-four hours. No impulse was observed on crying. The mass was irreducible, but there was no abdominal distension. A small enema produced a copious constipated result. Vomiting ceased and feeds were well taken. The temperature fell to 100 and for thirty-six hours the child improved steadily.

At 7.20 on the morning of March 27 I was called because the child had suddenly collapsed, was grey in colour and quite pulseless. He had vomited a little during the night. With warmth and oxygen the general condition improved, and at 2.30 p.m. under a local anaesthetic, a small incision was made over the external inguinal ring. A large hernial sac was dissected out and opened. The sac was completely filled with a normal caecum, but the appendix was perforated and adherent to the fundus of the sac. The appendix was resected, the stump carbolyzed, the caecum replaced, and the sac excised. A small rubber dam drain was left in for forty-eight hours. There was a slight discharge purulent for two days and serous for two days but the temperature came down to normal. The wound healed and recovery was uneventful. The patient was discharged on April 10 quite well and rapidly gaining weight.

DONALD D. CAMPBELL,  
M.D., F.R.C.S. Ed.

Guest Hospital, Dudley

## Reviews

### THE MEDICAL ANNUAL, 1938

*The Medical Annual: A Yearbook of Treatment and Practitioner's Index 1938*. Edited by H. Letheby Tidy, M.A., M.D. Oxon., F.R.C.P., and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S. (Pp. 696, 103 figures, 68 plates, 20s. net). London: Simpkin Marshall, Ltd. Bristol: John Wright and Sons, 1938.

This annual review of the progress of treatment, now in its fifty-sixth issue, has established itself as a guide to developments in medicine and surgery. Its general arrangement is well known. The matter is in alphabetical order under disease headings, and gives a summary of recent papers on these subjects. As always, the information is compact and sufficient. The editors introduce each year some interesting features, and in this volume special articles cover the diseases common to animals and man, blood groups, the disturbances at the menopause, and the present position of prontosil and the sulphonamides in relation to infective states. Professor Heathcote, in dealing with the last subject, states that while it is too early to be dogmatic it seems that the outlook for a patient with streptococcal infection has been materially improved by the use of the sulphonamides. Several of the newer chemotherapeutic agents for use in trypanosomiasis (trypan blue, trypan red, germanin) belong to the group of sulphonated dyes. It has now been possible to obtain and use several of the group of sulphonamides, introduced under various trade names. The results in puerperal septicaemia, erysipelas, scarlet fever, streptococcal meningitis (the drug is found to enter readily the cerebrospinal fluid and to be maintained there at a level slightly below that in the blood at the same time) showed its valuable properties in streptococcal infections and it has been used with advantage in gonorrhoea and coliform infections of the urinary tract. As always when used as widely as the prontosil group, toxic phenomena have been described: renal irritation, sulphemoglobinemia, a characteristic febrile reaction with or without the appearance of a rash, and in a few cases agranulocytosis has been reported as a sequel. Though too much should not be expected, the sulphonamide group of drugs has already made good in certain states.

Dr. Gardiner-Hill contributes a helpful discussion of the menopause and its disturbances, with suggestions as to their management. The menopausal syndrome is made up of disturbances of other endocrine glands as well as the ovary, of changes in psychological reaction, temperament, and emotions, and symptoms of irritability of the involuntary nervous system. Some of these are controllable by the physician. Professor Cameron's review of the diseases common to man and animals points out that in Great Britain most diseases of animals reach man either by personal contact with domestic animals or by contact with their products, such as milk, meat, hides. Milk is by far the most common means of infection, the most usual being tuberculosis, brucellosis or undulant fever, and diseases due to haemolytic streptococci. While some milk can only be produced under clean conditions by healthy cows, there is no doubt about the advantage of combining insulin with protamine, and the addition of zinc further stabilizes it. In this way the absorption of insulin is more gradual and the number of injections can be reduced even to one a day. Sir Walter Boddy and Brown discuss the application of the new insulin and

other matters of importance in the treatment of diabetes. The remaining contributions keep up the high standard expected in this valuable annual. It can be taken up and studied in in easy chair better than used as a work of reference since in the latter event it may be necessary to look through several recent volumes to obtain the information sought. In this regard we may question the advisability of removing the index from its customary position after the title page to a comparatively obscure place between miscellaneous information and advertisements. Surely continuity of form is wanted in such a handy and useful volume as the *Medical Annual*.

## X-RAY DIAGNOSIS

*A Textbook of X-ray Diagnosis* (In Three Volumes)  
Volume I By S. Cochrane Shanks, M.D., Peter Kerley, M.D., M.R.C.P., D.M.R.C. and E. W. Twining, M.R.C.S., L.R.C.P., D.M.R.C. (Pp. 591, 198 figures, 10s. net)  
London: H. K. Lewis and Co. 1938.

As diagnostic radiology is becoming more and more complex it is inevitable that specialists will arise in all its branches. The editors of this new textbook have wisely obtained the collaboration of radiologists and clinicians who are recognized as authorities in the various branches. A certain element of dogmatism results but this will prove of help to the post-graduate student who is particularly in need of authoritative textbooks. The first volume deals with the radiological examination of the cardiovascular system, the respiratory system and the urinary tract and male genital tract. The minimum of technical details is given and these are mainly concerned with the correct relationship of x-ray tube to patient in order to obviate distortion and with the preparation of the patient and the steps of the various surgical radiological procedures in cases of urological disease. The three editors of the textbook are each responsible for one system in this volume but perhaps it would have been well had the first volume covered the cardiovascular and respiratory systems and that section on the urinary system added to Volume II which covers the radiological examination of the abdominal viscera.

Dr Peter Kerley has dealt with the x-ray appearances of the heart and aorta in health and disease. The various methods of examination employed by the radiologist including kymography and x-ray cinematography are described and evaluated. Dr Twining is responsible for the section on the respiratory system. He is equally insistent on the value of radiography in diseases of the chest and on the need for the most careful consideration by the radiologist of the clinical aspects of the case and of the results of other investigations. Unfortunately the latter point of view is not universal among radiologists though in their defence it is agreed that too often is the radiologist provided with quite inadequate clinical data regarding the patients whom he is called upon to examine. The third section on the urinary tract and the male genital tract is in the capable hands of Mr Jennings Marshall and Dr Cochrane Shanks. Their subject is most completely dealt with and the collaboration of surgeon and radiologist ensures that the role of each procedure of investigation of urological cases is evaluated in a critical fashion.

Many textbooks on radiology suffer from indifferent illustrations and it is a pleasure therefore to emphasize the very high standard of those accompanying the text. The editors and publishers are to be congratulated on the production of a textbook which is likely to become the standard English work on the subject both for the post-graduate student in radiology and for the clinician.

## GENERAL THERAPEUTICS

*The 1937 Year Book of General Therapeutics* Edited by Bernard Fantus, M.S., M.D. and Samuel J. Nicholas, A.B., M.D. (Pp. 496, 38 figures, 2.50 dollars, 10s. 6d. net, Postage 6d.) Chicago: Year Book Publisher Inc. London: H. K. Lewis and Co. 1938.

Dr Fantus has once again produced an up to date summary of the development of therapeutics. The book is remarkably inclusive in scope and yet the process of epitomization has not been carried to such length as to make it difficult to understand rationale and technique of the various methods of treatment which are referred to. This is in fact the outstanding value of the book that having read any section the reader can then without difficulty proceed to carry out the particular form of therapy which interests him and will find that everything relevant to the technique, probable results and even complications has been set down clearly. With a work of this sort the great difficulty is always to decide what to discard and here again the editor may be congratulated on his choice which has eliminated with a few exceptions unimportant contributions to medical literature of the last year. On the other hand it can be stated without fear of contradiction that anyone wanting to find out what is the latest approved treatment for a particular disease will almost certainly find it set out in this work. It thus justifies itself and is a tribute to the industry of the editor.

## LECTURES ON RHEUMATIC DISEASE

*The Rheumatic Diseases. A Course of Lectures arranged by the Medical Staff of the St John Clinic and Institute of Physical Medicine* Edited by Sir Leonard Hill, M.B., LL.D., F.R.S. and Philip Ellman, M.D., M.R.C.P. With a Foreword by Sir Arthur MacNalty, K.C.B., M.D., F.R.C.P. (Pp. 270, 46 figures including 8 plates, 2 tables, 10s. 6d. net.) London: Edward Arnold and Co. 1938.

During the winter of 1936-7 a series of lectures was delivered at the St John Clinic and Institute of Physical Medicine, London. These have now been collected and published in the present volume under the editorship of Sir Leonard Hill and Dr Ellman. The course was started by Sir William Willcox with an aetiological survey of the rheumatic diseases. This is a general introduction with special reference to specific treatment by sera and vaccines. Dr Fortescue Fox in a discussion of the social and economic aspects points out the serious gaps in our knowledge, the efforts made in various countries to combat the effects of this group of diseases and the general scheme necessary to make a campaign against rheumatism successful. Dr Ellman takes up the various classifications which have been proposed and discusses the characteristics of the rheumatoid and osteoarthritic syndromes respectively. Dr Leonard Findlay gives an excellent survey of acute rheumatism in childhood and points out that the pessimism with which we are bound to regard established rheumatic carditis in children calls out for better housing conditions which have been shown to be effective in its prevention. Mr Timbrell Fisher in his lecture on the pathology of acute rheumatism and rheumatoid arthritis remarks that the streptococcus must be incriminated in each disease possibly with the addition of an allergic reaction or a virus or both. The relation of infections in the nose and throat and pelvis are discussed in the next three chapters and these are followed by a chapter on radiology in rheumatic disease from the diagnostic standpoint. Next come three clinical chapters



on muscular rheumatism, rheumatism of the spine, and sciatica and brachial neuralgia. A long chapter on the anti-streptolysins and blood uric acid in chronic rheumatic diseases is contributed by Drs Koerner and Poulton, and they find that 77.5 per cent of forty cases of rheumatoid arthritis are associated with the haemolytic streptococcus. Chapters on the physical and physiological basis of physical measures used in the treatment of rheumatic diseases are useful summaries both of the methods used and the rationale of their employment. Finally, treatment by light, hydrotherapy, drugs, and surgical and orthopaedic measures is discussed.

As will be seen, several interesting aspects of the rheumatic problem are dealt with in this book, and if the lectures do not cover the whole ground they will repay the reader as up to date expositions of the subjects under discussion.

### ELECTROCARDIOGRAPHY

*Essentials of Electrocardiography For the Student and Practitioner of Medicine* By Richard Ashman, Ph.D. and Edgar Hull, M.D. (Pp 212 100 figures 15s net) New York The Macmillan Company 1937

This work presents clearly the common abnormalities of the electrocardiogram, and explains briefly the principles on which the form of the curve, both physiological and pathological, depends. As clinically the disorders of rhythm are now ranked secondary in importance to the state of the myocardium, of which they are merely symptoms, the authors wisely deal last of all with the arrhythmias. Yet the latter occupy a relatively large part of the book, while the changes associated with cardiac infarction, now perhaps the most important single aspect of cardiography, are discussed rather too briefly. A short description of curves obtained with chest leads is included, but the technique employed does not happen to coincide with the one recommended for routine use by the Cardiac Society and the American Heart Association, the book being published a few months before this was made (see *British Medical Journal*, January 22, 1938, page 187). There are numerous illustrations, and their quality is uniformly good. The book will fully meet the requirements of the beginner, and may well be read by those more advanced in the subject.

### RADIOGRAPHY IN DIAGNOSIS OF LARYNGEAL TUMOURS

*Le Diagnostic Radiologique des Tumeurs Malignes du Pharynx et du Larynx. Étude anatomotopographique et Radiographique* By F. Baclesse. Preface by A. Hautant. (Pp 270, 236 figures, including several plates 100 fr.) Paris Masson et Cie 1937

Many attempts have been made to utilize radiography as an aid to the diagnosis of laryngeal disease. That it has not become more popular is due to the facility with which the larynx can be inspected either by indirect or by direct laryngoscopy, and the additional information to be obtained by the inspection of x-ray films has not been of great value. Among such attempts the work of Baclesse is exceptional, and he has shown how radiology may be employed as a subsidiary means in making a complete diagnosis of tumours in the larynx and pharynx. Inspection will reveal the presence and site of a tumour, the microscope will confirm its neoplastic nature and demonstrate its histological character, but even with this information it is often difficult or even impossible to estimate accurately the extent of a tumour, especially when it is no longer in an early stage and has become rather extensive. It is particularly difficult in such cases to determine the extent in the downward direction, where it

is least accessible to inspection. Baclesse shows in his book, which is so profusely illustrated that it is more an atlas than a monograph, how the extent of a tumour, especially its lower limit, may be defined by an x-ray film, and thus a complete diagnosis can be made. In addition certain tumours which cannot be seen on ordinary examination, such as subglottic tumours, may be revealed in an x-ray film.

The author gives a detailed classification of the tumours around the base of the tongue, in the lower pharynx and of intralaryngeal tumours. In his groups of x-ray films which are admirably reproduced on special paper he is able to show how the effects of treatment modify the appearance previously produced by the tumour. It is evident that special experience is necessary in the interpretation of such films, but Baclesse shows clearly that under favourable conditions this form of radiography can be made a valuable addition to the classical means of diagnosis. A careful study of the normal is naturally an essential preliminary, to which the author has devoted much attention.

### INSTITUTIONAL CATERING

*Scientific Catering for Institutions. A Handbook for Food Supervisors in Hospitals, Nursing Homes, Sanatoria, Hostels, Schools, Hotels, Boarding Houses, Etc.* By Juliet de Kay Whitised. With Appendices edited by Ethel Browning, M.D. (Pp 262 8s 6d) London Baillière, Tindall and Cox 1937

Large-scale catering seems at first sight to have little connexion with medicine, but it is clear that the food provided in hospitals may have a great deal to do with the success or failure of medical or surgical treatment. Miss Whitised is dietitian at Johannesburg General Hospital, and her experience is largely of South Africa. She is somewhat at a disadvantage, therefore, in writing for the English reader, for although feeding habits are similar here and in South Africa they differ in various respects. Further, the author tells us that no hospital in South Africa has an established dietetic department on the lines of those in the British hospitals, and the chapter on "How to Train as a Dietitian" would have been far better had it been edited by someone working in this country. About half the book consists of recipes and methods for large-scale cookery, grouped under various headings, and suggested menus for different types of people are given. This part of the book is good. A chapter entitled "The Model Kitchen" contains descriptions and plans of several large kitchens, including that for Harrods' staff. It would have been a much more logical arrangement to put this chapter immediately following the one called "Planning and Equipping the Kitchen" instead of ten chapters later. Dietaries in actual use in several institutions in South Africa and England are given and discussed, largely to the advantage of the former. In this respect the author's opinion appears to be somewhat biased. An entertaining description is given of the dietary of the competitors in the Olympic Games. The enormous quantities of meat eaten by the Americans and Germans are the most striking feature.

Miss Whitised may be an excellent caterer, but she is no expert on the scientific aspects of nutrition. The chapter on the dietary essentials and the foodstuffs in which they may be found should have been revised or alternatively omitted. Statements such as "Vitamins A and D in tomatoes, oranges, vegetables" can be passed over without comment. The book is of practical use to caterers in large institutions, but to the medical man it will probably not be more than theoretical interest.

## Notes on Books

Professor WILBERT C. DAVIDSON has carried out a very complete revision for a second edition of his synopsis entitled *The Complete Paediatrician* which struck a new line when first produced in 1934. New features of the second edition (Cambridge University Press 1935) include chapters on growth, development, nutrition and infant mortality. A vast amount of literature has been surveyed to bring the book up to date and as a ready work of reference it stands alone.

*The Management of the Sick Infant and Child* by Professor LANGLEY PORTER and Dr WILLIAM E. CARTER now appears in a fifth revised edition and its scope has been somewhat extended to an older group of patients so that the term "infants" no longer suffices for its title. Much new material has been included but none of the changes has altered the valuable practical nature of this useful book from the western side of the U.S.A. It is published by Henry Kimpton at 42s.

*Die Pathologische Anatomie des akuten Rheumatismus* by Professor H. CHIARI forms Volume V of *Der Rheumatismus* edited by Professor Rudolf Jürgens (Dresden and Leipzig: Theodor Steinkopff RM 6). The author discusses the general histological appearances characteristic of the tissue changes in acute rheumatism. They are brought about he says by processes which in their final stages show certain differences but are in essence uniform. He refers to Aschoff bodies, nodulous nodules and that particular alteration of the colloid connective tissue which Klinge called fibrinoid swelling. The second part of the book deals from the point of view of morbid anatomy with changes in single organs and systems produced by acute rheumatism: it should be read in the original by the interested student.

*Atmosphärisches Geschehen und witterungsbedingter Rheumatismus* by Dr EMIL FLACH forms Volume IV of the same series. The author found that colds occur at all degrees of wind strength and that the amount of cooling is without influence. Further the probability of catarrhal diseases declines with the increase of wind velocity. The tendency to fall ill is much less on very moist days than on dry ones.

*Children's Dreams: An Unexplored Land* by Dr C. W. KINNERS is a complementary volume to one published by the author shortly after the war but there is little really new in it. According to this somewhat superficial review of dream materials children's dreams fall in the majority of cases into one of three categories: simple wish fulfilments, fear dreams and kinaesthetic dreams. It is thought that a more intensive study of children's dreams would lay bare their inner urges and difficulties and so be of assistance in education and upbringing. The book is published by George Allen and Unwin at 4s. 6d.

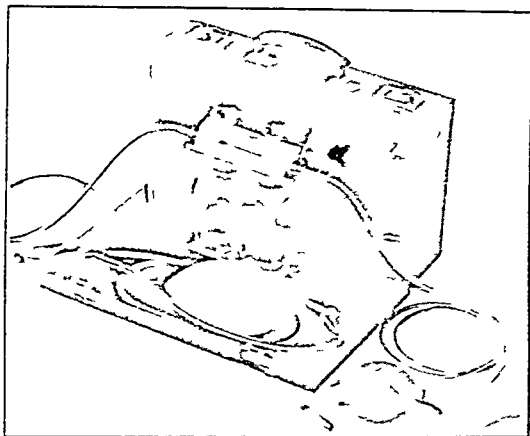
*Über die Ernährung des Säuglings* by HANS BEUMER is now in a second edition published at Leipzig by Georg Thieme price RM 2. The author, director of the Paediatric Clinic at Göttingen in this little book on the feeding of the infant seeks to propagate a wider knowledge of the curdled milk among general practitioners. When the disadvantage of too great dilutions of milk for the artificially fed infant had been discovered soon after 1920 the author started feeding those infants with undiluted cow's milk with an addition of 2 per cent of flour and 3 to 6 per cent of sugar. Much better however is the use of curdled milk as recommended by Marriott in America. Such a milk may be produced by lactic acid or by other organic acids such as those contained in lemon or orange juice. There are powders for curdling milk and the author recommends especially the acitellen prepared according to his directions by the chemical factory Bockler Ludwigshafen.

## Preparations and Appliances

### MODIFIED SHIPWAY APPARATUS

Dr W. B. PRIMOSE (Glasgow) writes

The accompanying illustration shows a reconstruction of the Shipway apparatus I designed. In this a single rotating valve of simple pattern replaces the various rubber tube connections and non return valves at present in use the former of which are liable to wrong attachment. The valve at the same time gives any desired proportion of ether and chloroform with air or oxygen. Another position of the valve allows



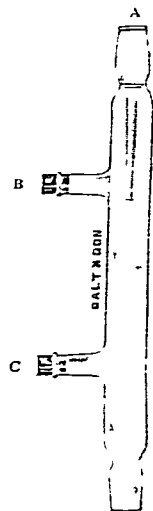
both bottles to be filled thereby eliminating corks of doubtful fitting.

The supply and delivery tubes—the only tubes on the apparatus—are of thin flexible copper which permits of the vapours being heated to theatre temperature on their passage to the patient. This renders unnecessary the usual vacuum flask. This compact and fool proof unit with its accessories is carried in a neat attache case and is now manufactured by Anaesthetists Ltd 163 Hope Street Glasgow C2.

### MODIFIED LAURIE DRIP BULB

Mr J. LEIGH COLLIS (Birmingham United Hospital) writes

Considerable trouble is often met with when administering fluids intravenously owing to the ordinary type of drip bulb filling up. To deal with this the first improvement tried (Laurie) was to put one side tube at B. Then by closing the apparatus at A and opening B the fluid would run out into the vein while air was allowed to enter at B. However when the drip is running slowly it is difficult to get the fluid to run out into the vein. A second side tube was therefore made at C. Now by closing off the trans fusion fluid at A and opening B and C air is allowed to enter at B and the fluid runs out at C. The intravenous drip can then be restarted. Rubber bungs have been used at B and C. They are found to make the apparatus neater while at the same time being efficient. The drip bulb thus modified may be obtained from Messrs Salt and Son Ltd Birmingham 2.



## Nova et Vetera

### "A HUNDRED YEARS OF CHEMISTRY"

In his book with this title<sup>1</sup> Professor Alexander Findlay presents a serial view of the succession of events which make up the history of modern chemistry. Findlay has here characterized himself as possessed of the qualities needful for relating these events each in the right perspective, and the book he has produced is an entertaining and illuminative piece of history. The young chemist trained under modern teaching could have no appreciation of the efforts of the chemists of the past to clothe the facts they had found with theories which were satisfying, or of the many false foundations of theory laid on which nothing further was built, nor of the many times a true foundation was abandoned because it appeared, in the light of imperfect or incomplete knowledge, not to be tenable. There were it seems theories unheard of by the present generation, such as a formula for benzene, proposed by Ladenburg in 1869, which placed the atoms of carbon at the corners of a prism, and for a time the prism formula was a serious rival of the hexagon. The hypothesis of Avogadro was presented prematurely to men who were unable to grasp its implications or to free their minds from preconceived ideas.

Findlay begins everything at the beginning. The developments in chemistry due to the spectroscope started in 1758, when "the German chemist Andreas Sigismund Marggraf, a pioneer of analytical chemistry, had shown that the salts of sodium and of potassium can be distinguished by the yellow and the lavender colour which they respectively impart to a flame", and turning from the spectroscope to another subject he follows the train of events from the observation first made that certain colouring matters will dye wool but not cotton, to the later discovery that certain living tissues show a different absorptive power for different dyes—methylene-blue when injected into a living animal stains only the nerve tissues—and thence to the discovery of the selective absorptive power of organisms for materials having a specific toxicity for them, whence arose the treatment by which the spirochaete is destroyed by organic preparations of arsenic. Here the chemist and the physiologist meet and work on common ground.

Matters of such diverse kind as the disintegration of the atom and the nature of vitamins are included in the work and are discussed with an equal lucidity of treatment. The book can be read as freely for entertainment as for instruction and is a useful history of chemistry.

### SPONTANEOUS HUMAN COMBUSTION<sup>2</sup>

The issue of the *London Medical and Surgical Journal* of November 25, 1837, contains the following survey of recent cases of alleged spontaneous combustion of the human body in an unsigned article entitled "The Medical Jurist".

Dr Paris thinks that in these cases the body is never nearly consumed and that the combustion never originates spontaneously but there are many accounts of cases in which a very small portion only of the body is left and at Berlin an instance took place in which a flame, which issued from the fingers set fire to the surrounding substances. Blouquet has collected about twenty cases, and other authors have recorded many more. The Countess of Burdt who perished in this way was in the habit of rubbing her body with camphorated spirits. When discovered the head lay between the legs from which circumstance it was concluded that she was in a sitting posture when she died. A woman at Ipswich used to drink and smoke by the fire at night and was found one morning like a half-burned wooden log, a heap of cinders covered with a white ash. There was no fire in the

grave, a candle had burnt into the socket near the body. The case of the priest Bertholi is well known. He was found enveloped in a blue flame. Battaglini, the surgeon who attended him, found part of the arm consumed. Mortification ensued, he suffered under burning thirst, attended with vomiting, and succeeded by coma and died in four days. While the coma was present the body was so putrid that it exhaled an unportable odour. Worms crawled from the body while yet alive and the nails of the left hand separated. In most of the cases recorded the sufferers were addicted to intoxication, but not in all. They were either fat or very lean or very much debilitated though some exceptions to this state of things have occurred."

Little is heard nowadays on this macabre subject, which in the first half of the nineteenth century attracted much notice. We may recall that Charles Dickens makes spontaneous combustion the mode of death of alcoholic Mr Krook in Chapter XXXII of *Bleak House* and a lurid piece of writing it is. Dr W. A. Brend, in his *Handbook of Medical Jurisprudence* sums up the point of view of forensic medicine thus:

Spontaneous combustion of the body, in the sense that the layman attaches to the words never occurs, but very rarely a state of the tissues exists for which Dixon Mann suggests the term *preternatural combustibility*. The condition has been most frequently noticed in the bodies of fat bloated individuals who have been excessive drinkers. Probably, in such cases, inflammable gases are generated in the body after death and if a light is near, become ignited, leading to a partial consumption of the soft tissues."

### MORE OLD MEDICAL BOOKS

Hard upon the Sion College and Ham House library sales come two more containing old medical books of rarity and interest. The second part of the Ham House sale (Sotheby's June 20 and 21) has only a few—but they are really rare. First comes *Macer's Herbal* Practised by Doctor Lynacro. Translated out of laten into Englysshe, whiche shewing their Operacions and vertues, set in the margent of this Boke to the entent you myght knowe their Vertues. Imprinted by me Robert Wyer dwellynge in seynt Martyns Parvise at the seyne of seynt John Evangelyst besyde Charvinge Croc 1530. Only one other perfect copy is known that in the British Museum one imperfect copy is also known. The Lynacro mentioned is, of course, Thos. Linacre, 1460-1524 founder of the Royal College of Physicians, he was born at Canterbury, educated at Oxford and Padua and became a physician to both Henry VII and Henry VIII. Then there is a translation into English of Monardes's *News out of the New-Found Worlde* 1596, a rarer edition of which was in the Sion College sale. Next, Thomas Ryndal's *Compendious Declaration of the excellent vertues of a certain lately invented oile called for the worthiness thereof oile imperial* Venice Gryphus, 1551, of this apparently but two other copies exist. Another extremely rare production, in black letter, is *The Seeing of Urines*. "Here begynneth the seynge of Urine and of all the Colours that Urynes be, wth the medecines annexed to every Uryne, and every Uryne his Urinall medicine profitable for every man to knowe", London, Wm Poell 1562. Lastly, James Young's *Wounds of the Brain Proved Curable* 1682.

In the other sale (Hodgson's, May 26 and 27) there are to be noted a black-letter edition of Sir T. Ekot's *Casus et Health* 1580 (not, of course, an early edition of this classic), Bayfield's treatise *de Morborum Capitis* 1663, C. Gould's *The Royal College of Physicians of London and its Historical Account of Proceedings against Empiricks* 1684 (4 copies), a MS of the *Statuta Collegii Medicorum Londinensium*, P. Madan's *Essay of the Waters of Tanbridge* 1613 and M. J. S. *Essay on Mineral Waters of Castle C. Limerick*, Harvey's *De Febribus Tractatus* 1672, S. P. Sloane's *Account of a Medicine for Soreness and Distention of the Eyes*, Catherwood's *Method of Curing Apoplexy* 1715, J. Reynolds's *Prodigious Abstinence* 1715, *Twelve Months Fasting of Martha Taylor* 1669 and volumes of Sir G. Floyer's treatise on *The Pulse* 1707-10.

<sup>1</sup> *A Hundred Years of Chemistry*. By Professor Alexander Findlay. (Pp. 352. 15s. net.) London: Duckworth and Co., Ltd. 1927.

## WATER SUPPLIES AND RIVER POLLUTION

The tenth annual report of the Water Pollution Research Board has been issued by the Department of Scientific and Industrial Research (H.M. Stationery Office 9d). The Board carries out research mainly on the treatment of water for domestic supply and for other purposes, the treatment and disposal of sewage and trade effluents and on problems of river pollution.

### Water softening Materials

Experiments have been continued on the preparation of materials for softening water by the base exchange process. This process is used in household water softeners and is also employed on a large scale at a number of waterworks. The investigations of the Board have shown that satisfactory water softening materials can be prepared from fuller's earth which is found in parts of the British Isles. The base exchange capacity of the final product depends on the type of fuller's earth used, yellow weathered varieties being more satisfactory than blue varieties.

### Removal of Salts from Water by Resins

The discovery that acids, bases and salts can be removed from solution in water by means of synthetic resins has aroused widespread interest both in this country and abroad. It has been shown for example that fresh water can be prepared from saline water by treating it first with a suitably prepared base-exchanging resin and then with an acid exchanging resin. The removal of traces of deleterious substances from water used for domestic supply or other purposes is desirable in many parts of the world. For example, it is known that a defect of the teeth known as "mottled enamel" may be caused by drinking water containing as little as one part per million of fluorine in the form of compounds. Experiments are in progress to determine whether these compounds can be removed from water by treatment with suitable resins. Again in recent years considerable attention has been given by agricultural chemists to the presence of compounds of boron in water used for irrigation, certain plant diseases are caused by excessive or insufficient concentrations of the compounds. Recent work has shown that partial removal from water of boron compounds is effected by treatment with a resin prepared from a tannin.

### Lead in Drinking Water

Certain types of water take up appreciable quantities of lead from lead pipes and fittings. An investigation is in progress to determine the average quantities taken up by waters of different types under the conditions of household supply. A method is used in which a volume of 20 to 300 gallons of water is passed through a meter and then through a filter containing a mixture of chalk and magnesia which takes up the whole of the lead from the water, the amount of lead taken up is determined by analysis. Apparatus of this type has been tested in eight towns in England and Scotland. Average concentrations of lead ranging from less than 1 part per 10 millions to as much as half a part per million of water have been obtained.

### Milk Factory Effluents

Work on the purification of waste waters from dairies and milk products factories which is being carried out in collaboration with the milk industry has been continued. One of the most important results of the work has been to show that the loss of valuable products and by-products carried away with the waste waters from dairies and milk products factories can be considerably reduced by inexpensive modifications in the manufacturing processes. For example, when churns of milk are brought from farms to a central milk depot they are inverted and emptied into a large receiving tank. If sufficient time is not given to allow the churns to drain an appreciable quantity of milk remains in the churns and is later washed out and discharged with the waste waters. By a short increase in the time of drainage of the churns the

average quantity of milk carried away with the waste waters can be reduced from more than one half of 1 per cent to less than one quarter of 1 per cent of the milk handled. For a depot receiving 10,000 gallons of milk daily this represents a saving of over 9,000 gallons of saleable milk annually. Beside the saving of valuable material the polluting nature and thus the cost of treatment of the waste waters are greatly reduced. The work of the Board has shown that the unavoidable waste waters from dairies can be purified by processes similar to those used for the treatment of sewage.

Work in progress includes investigations on the biochemical and biological processes of purification of sewage by the activated sludge process, and on the removal of organic matter by flocculation and sedimentation.

## TUBERCULOSIS IN TANGANYIKA

The final report of Dr Charles Wilcocks on investigations carried out between 1930 and 1936 under the auspices of the Colonial Development Fund represents a sound piece of research, the conclusions from which add to knowledge on tuberculosis among primitive races. The results of 13,113 tuberculin tests showed that no part of Tanganyika Territory could be regarded as virgin soil. The lowest percentage of positive reactors in adult males was 4.6. The highest percentage in adults (males and females) was only 5 per cent less than that found in London by Dr Aron Hart. The result obtained showed however that the natives were more sensitive than Europeans to tuberculin and that strong reactions tended to occur in contacts. This confirms the findings already reported from South Africa. The tuberculin tests related to other findings showed that the tuberculin rates provide good indices not only of the amount of infection in the districts but also of the amount of actual disease. In Dr Wilcocks's opinion by far the most important factor in the epidemiology of native tuberculosis was contact with sputum positive cases. Apparently the great majority of the natives who have been infected are capable of resisting that infection though on the whole their resistance to tuberculosis is not so great as that of white races. In connexion with the allergic state of the natives a comparison is made between tuberculosis and malaria but Dr Wilcocks concludes that sensitivity and immunity seem to be more dissociated in tuberculosis than in malaria. The date of the first infection appears to be similar to that already described among South African natives.

Study of the incidence of tuberculous disease in the Tanganyika natives (both radiological and bacteriological examinations were carried out) showed that the large number of pulmonary cases were between the ages of 15 and 35 and that the curves in general bore more resemblance to those of the young adult type than those of the middle age type recognized in Britain. The incidence of disease in proportion to population was exceedingly difficult to estimate because it was impossible to examine large numbers or completely unselected natives. The figure of 11.55 per 1,000 of the population calculated over the whole of the places investigated is probably too high because it seems likely that more tuberculous patients presented themselves for examination than would be proportionate to the whole. Bovine tuberculosis is not considered at present to be a factor of importance. Finally it is of interest to note that examination of the x-ray films of the native cases of definite pulmonary tuberculosis showed a preponderance of acute galloping consumption and of bilateral disease. Fibrosis was not common being found chiefly in middle-aged people. The base of the lung was often affected. Cavitation was often seen but it was rare to see a zone of fibrous tissue around it. Dr Wilcocks concludes that on the whole the appearances while not so gross as would be seen in a virgin race were not so fibrous as are seen in civilized countries, these natives thus "lie midway between the completely primitive races and our relatively resistant selves."

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## MALNUTRITION IN AUSTRALIA

The Advisory Council on Nutrition, under the chairmanship of Dr J H L Cumpston, Director-General of Health, Australia, has recently issued a fourth report, which is of great interest. It reveals a relatively high incidence of malnutrition among children of school age, though, "generally speaking, the people of Australia are, by contrast with the older and more densely populated countries, well nourished and well developed." The surveys on which the report is based were made by Dr F W Clements with commendable thoroughness. In all, he examined 3,384 children in inland areas of Queensland, New South Wales, and Victoria. The methods of examination were of two types—physical and clinical. The physical method consisted of nine measurements so chosen as to enable the following standards of nutrition to be calculated: (a) height and weight for age, (b) weight for height, (c) arm-chest-hip index, and (d) "pelidisi" of Von Pirquet. The clinical method consisted of an examination of the eyes, nose, throat, and chest, together with a careful appraisal of the state of development and nutrition as assessed by general clinical observation and the application of Pirquet's "sacratama".\* By these two methods "it was possible to summarize the nutrition and to determine whether the state of nutritional development was 'satisfactory' or 'unsatisfactory'." Those children falling into the latter class, and a number of the 'satisfactory' type, were submitted to one or all of the following tests: (a) an x-ray examination of the epiphysis at the wrist, (b) an estimation of the haemoglobin, (c) Gothlin's capillary resistance test for scurvy and borderline scurvy, (d) a visual acuity test for partial night blindness.

"By the application of these methods it was possible to select the cases of malnourishment, and in the majority of these to detect the effects of the malnutrition." We would here remark that it is possible by these methods to detect *some* effects

of malnutrition—the range of possibility being limited by the limitations of the methods employed. For "malnutrition" is disorder of the function of nutrition from whatever cause arising, the chief cause being faulty food, and nutrition is the sum of the processes whereby structure and functions of organs or parts of the body are maintained. It follows, therefore, that only in so far as the methods of examination employed embrace all processes involved in nutrition can disturbance of nutrition (malnutrition) be fully detected. Nevertheless, the tests used by Dr Clements are more comprehensive than those generally employed, and in proportion to their comprehensiveness the value of the results obtained by them is enhanced. Evidence of unsatisfactory nutrition was found in 18.8 per cent of children in Western Queensland, in 23.7 per cent in New South Wales, and in 13.3 per cent in the north-western districts of Victoria. Previous surveys in inland South Australia had revealed unsatisfactory nutrition in 14 per cent of children, while reports received from Dr John Dale showed that among the pre-school children of Melbourne 21.7 per cent presented evidence of malnutrition. Dr Clements found no scurvy, probably because of the large potato diet and the antiscorbutic value of this vegetable. Rickets varied from 6 to 11 per cent and nutritional anaemia from 4 to 6 per cent of the children examined in different areas. Among children in Queensland whose nutrition was unsatisfactory, active rickets was found in 22.2 per cent and anaemia in 40 per cent. Both these conditions were attributed to mineral deficiency—the former to lack of calcium, the latter to lack of iron. Observations made on the teeth revealed such figures as 48.5 and 80 per cent of children in different areas having either carious or stopped teeth. Fluorine mottling of teeth was observed in two communities in Western Queensland. The condition occurs only in those children who have consumed from birth, or before the age of three, the local bore water containing 1.6 parts per million of fluorides.

In view of these and other findings the Commonwealth Advisory Committee again urges the necessity of increasing the consumption of protective foods, and emphasizes the value not only of whole milk but of skimmed milk and of goat's milk, meat and vegetables, potatoes, fish, and other sea food. It repeats the resolution recorded in the third report that "the provision of a daily supply of milk for school children distributed where, on inquiry, it was probably do the most good would be a measure of great public health value. Its ultimate effect in reducing the amount of hospitalization would probably be very great." It would be greater if combined with other foodstuffs so as to provide

\* *Sacratama* is Pirquet's word formula to indicate a child in a state of normal nutrition. The consonant *s* stands for *sanguis* (blood), *cr* for *crassitudo* (thickness or fat), *t* for *turgor* (water content), and *m* for *musculus* (musculature). The *a* after each of these letters represents the normal. By changing the vowels the intensity of any of the four qualities may be represented.

a diet containing all elements and complexes needed for normal nutrition. A tragedy of our times is that hospitals and other health services involving vast expenditure of public funds have to be maintained to remedy many ailments that need not arise were the knowledge of nutrition we already possess universally applied.

## RECENT EXPERIENCE IN TYPHOID FEVER

We publish to-day (p. 1085) a review by Sir William Willcox of the clinical features and treatment of typhoid fever based in part on experience gained among cases in the recent Croydon epidemic and a description (p. 1090) by Drs J. Fenton and C. P. Hay of circumstances in Kensington which led to the first recorded attempt at prevention of typhoid fever by means of serum. This attempt seems to have been successful although there is of course no actual proof that any of the individuals so treated had in fact been infected and the accompanying paper by A. Felix to whose work the production of this serum is entirely due records the antibody levels reached in the blood of those given the serum. As Sir William Willcox points out typhoid fever is a rare disease by comparison with forty years ago. An epidemic is as much an event as in other countries is an earthquake. It happens that there have been two epidemics on a large scale in England recently while several smaller outbreaks have occurred within the past few months including that at Hawick about which an authoritative statement has yet to be published. The wide publicity given to the danger of contaminated milk and water should lead to more general vigilance in these directions and the frequency of epidemics is almost certain to diminish. In these circumstances it may well be asked whether clinical material will be forthcoming for an adequate trial of new methods of treatment and prevention. Promising as the results with serum have been in both of these directions they are far from having reached the stage of unassailability from a statistical point of view. Another remedy which seems to merit more attention is sulphanilamide. This drug has a curative action in typhoid infection in mice comparable to that in streptococcal infection. Although Sir William Willcox's opinion that the drug is contra-indicated in typhoid fever must be received with respect it is right to require that this treatment be adequately tried unless this has already been done. Even if unavailing in the later stages it might well be effective earlier and the possibility of its exerting a protective action if given during the incubation period seems to have been entirely

overlooked. By analogy with experimental findings it is reasonable to hope that there would be such an action.

Although uncertainty about mode of employment and clinical effect is not to be wondered at in the case of new remedies it is perhaps a little disturbing and surprising that there should still be a difference of opinion on the advisability of giving vaccine during an epidemic. This question has been discussed several times in this *Journal* recently and conflicting views have been expressed. There are even elements of doubt in connexion with prophylactic vaccination generally, not of its efficacy which is unquestioned but of the best reagent to employ. On this and other matters connected with typhoid fever much useful information is to be found in an extensive monograph by W. Lewin<sup>1</sup> dealing with experiments on the Witwatersrand. Here again some promising though not fully conclusive results have been obtained with serum treatment and not only with a serum containing Vi antibody which is believed to be an essential element in the new serum now in use in England but with one dependent for its efficacy on O antibody alone. Lewin's most extensive and interesting studies are concerned with prophylactic vaccination which is employed on the Rand on a large scale. Three methods are used—ordinary bacterial vaccine and endotoxoid vaccine given by injection and a vaccine given by the mouth. This last highly debatable method of immunization advocated originally by Bezredka receives little support from the South African results. The evidence of preventive power is inconclusive and serological studies showed that contrary to several assertions by other authors antibody formation in consequence of this measure is negligible. It is very much to be hoped that studies now in progress at the London School of Hygiene will eventually place this whole matter on an assured footing. The isolation of the essential immunizing fraction from the typhoid bacillus and other bacteria is their object and there is good reason for hoping that such a product will eventually supersede the crude and variable reagents now employed for active immunization.

## POLIOMYELITIS IN VICTORIA

The current number of the *Health Bulletin* published twice yearly by the Department of Public Health State of Victoria Australia contains details of the 1937 epidemic of poliomyelitis in Victoria. This epidemic which started in Ormond a residential suburb of Melbourne and eventually spread over the whole metropolitan area of Melbourne as well as many parts

<sup>1</sup> Typhoid Fever on the Witwatersrand. *Publications S Afr Inst med Res* 1938 7: 413.

of the State, has differed in several respects from the previous epidemics which have occurred in Victoria and other parts of Australia. Poliomyelitis appears usually during the warm months, and in this country the late summer and early autumn is the time of its major incidence. In the Southern Hemisphere the same climatic influence on the incidence of the disease has in the past been observed, but the 1937 epidemic started in the winter, the first case being reported towards the end of June. Quite early it became obvious that the epidemic differed from previous ones also in the ease with which it spread from infected to susceptible, in the very large proportion of cases showing involvement of the muscles of the trunk, neck, and face, and in the frequency of bulbar forms. On the advice of the Minister of Health, Sir John Harris, M.D., the Government appointed a Consultative Council to advise as to the steps which should be taken to attempt to control the epidemic, and the Council held its first meeting when the epidemic had been in existence for one month, there having been twenty-two cases, of which four had ended fatally. We possess no effective means for the control of poliomyelitis. There is no evidence from either laboratory or field experiments that passive immunization will be of use prophylactically, and the recent efforts to discover a safe and effective vaccine with which to produce active immunity in man have not been attended with success. Even the method of spraying the nasopharynx with solutions of alum, picric acid, tannic acid, or zinc sulphate, which had given such encouraging results in experiments on monkeys, would seem powerless to prevent infection of man with poliomyelitis. Aware of this inability to combat poliomyelitis by means of prophylactic measures, specific or otherwise, the Council had perforce to rely in the main on the isolation of cases and contacts in their attempt to control the epidemic. It was of the opinion that adults would probably play but a small part in the dissemination of infection, and therefore decided to place no general restriction on the movement of adults provided they remained healthy. But an attempt was made to control any movements of children which would facilitate contact between infected and susceptible. The suburb of Ormond and a considerable area surrounding it was defined as an infected area. The closing of schools in this area was advised, as was the restriction of the movement of children both within the area and from this area to surrounding uninfected districts. Parents were advised to keep their children at home and not to allow them to go to cinemas, picnics, swimming pools, or to other places of entertainment. They were requested to report any indisposition of their children. Meanwhile the health authorities set to work to isolate actual cases and their contacts with the utmost expedition. In this they were aided by the high virulence of the epidemic and the readiness with which infection passed from individual to individual. How effective they were in this work is shown by the fact that on more than one occasion the contacts of an actual case were already isolated when they themselves developed the disease and further spread from them was avoided. Everyone, including the majority of the

parents, co-operated enthusiastically, and although the impression gained was that these measures were probably effective in slowing down the spread of the epidemic and limiting it to a certain extent, poliomyelitis eventually encroached upon neighbouring parts of the metropolitan area of Melbourne and country districts in various parts of Victoria. By the end of January some 1,200 cases had occurred, which goes to show only too clearly that in the control of a disease like poliomyelitis prompt recognition and isolation of the case and its contacts, even when supplemented by restriction of the movement of susceptibles, can only achieve a very partial success.

### VARIATIONS IN FUNCTIONAL ACTIVITY OF THE PITUITARY

Research in endocrinology goes on apace, and as contributions to this we welcome the papers in this issue by Henderson and Rowlands and by Boycott and Rowlands which deal with the assay of the gonadotropic potency of the pituitary body and the nature of the gonadotropic substance circulating in the blood of pregnant women. Assays of human pituitary tissue show that there is a reciprocal relation between the gonadotropic activity of this gland and the functional state of the gonads. After the menopause there is an increased potency of the pituitary in response to the increasing resistance of the ovary to gonadotropic stimulation. Evidence of this excessive pituitary secretion has been found in the presence of abnormal quantities of a follicle-stimulating factor in the urine, and it has even been suggested that this increased activity may be responsible for the menopausal syndrome and that the efficacy of oestrin therapy is due to its inhibitory effect on the pituitary. That such inhibitory effects may occur has been repeatedly shown experimentally, and the rationale of certain forms of administration of oestrin and of male hormone is based on this assumption. For example, oestrin has been given in cases of acromegaly<sup>1</sup> with symptomatic relief and also in Cushing's syndrome<sup>2</sup> with the object of diminishing the secretions of the basophil cells. With a like object in view oestrin in large doses was administered in cases of Graves's disease,<sup>3</sup> though with little effect, and more recently treatment with male hormone has been suggested as a means of inhibiting the supposed excessive secretion of thyrotropic hormone in this condition. It has been further suggested<sup>4</sup> that if the pituitary has been inhibited by an intensive course of oestrin therapy its "release" at the end of such a course of injections will result in an increased activity which may provide a sufficient stimulus for ovulation in certain cases of sterility associated with non-ovulatory cycles. The diminished activity of the pituitary during pregnancy is another example of the reciprocal relation between that gland and the ovary, for ovarian secretion reach a high level in pregnancy, and it is al-

<sup>1</sup> *Proc. Mayo Clin.* 1936, 11, 121

<sup>2</sup> *Endocrinology*, 1938, 22, 374

<sup>3</sup> *Lancet*, 1936, 2, 970

<sup>4</sup> *Dtsch. med. Wschr.*, 1935, 61, 1149



certainly the pituitary release at parturition when the concentration of oestrin rapidly falls which is responsible for initiating the secretion of the luteogenic hormone. Although pituitary activity is inhibited in pregnancy a gonadotropic factor elaborated by the placenta still circulates as is shown by its high concentration in the urine. Boycott and Rowlands have demonstrated that the gonadotropic factor extracted from the serum of pregnant women possesses exactly the same luteinizing property as that found in the urine. This is of considerable interest in view of the fact that the gonadotropic factor extracted from the blood of pregnant mares is not luteinizing but follicle stimulating, and forms the source of such useful commercial preparations as gonadyl and antostab.

### THE IDEA OF A GARDEN CITY

*Health and Garden Cities* is the first of a new series of pamphlets issued by the Garden Cities and Town Planning Association 13 Suffolk Street Pall Mall SW1 price sixpence. The author Dr Norman Macfadyen chairman of executive of the Association maintains that the environment which mankind requires is the most natural one possible for the circumstances under which he lives. The inevitable strain of life can be eased by good housing conditions and good working conditions together with amenities for the enjoyment of leisure freedom for proper rest and facilities for obtaining fresh food. Dr Macfadyen defines the essential idea of a garden city. It is self-contained it is planned beforehand it is a social unit independent and surrounded by an open belt of country. Some striking figures are given in support of the author's contention that life in a garden city is the healthiest known in this country under present conditions. For example the number of tuberculosis cases per thousand living is 0.38 in Letchworth and 0.574 in Welwyn the figure for England and Wales is 0.804. The rates for general mortality and infant mortality are also remarkably low in the garden cities. Indeed Dr Macfadyen maintains that if all the children in England and Wales were born under the conditions ruling in these fortunate towns some 20,000 infants would be saved every year. The pamphlet is illustrated by eight photographs of Letchworth and Welwyn Garden City showing factories houses and facilities for outdoor recreation.

### AETIOLOGY OF TRACHOMA

The discovery by Noguchi in 1927 of a very small Gram negative bacillus *Bact. granulosis* in the lesions of human trachoma and the reproduction of a granular conjunctivitis in monkeys by inoculation with pure cultures of this organism raised hopes that the long-disputed aetiology of trachoma had been solved at last. Observations by subsequent workers however failed in considerable measure to confirm Noguchi's findings and it became clear that the question of the real

causation of the disease was still in the melting pot. In 1931 Coles in South Africa drew attention to a conjunctivitis in sheep that appeared to be due to invasion with an organism of the Rickettsia group. This report suggested a new line of approach to the trachoma problem and workers—notably Busacca<sup>1</sup> in 1933 and Thygeson in 1934—were soon forthcoming who described the finding of rickettsial bodies in the conjunctival and corneal epithelium of patients suffering from trachoma. A review of the progress of investigations in this field is afforded by Foley and Parrot.<sup>2</sup> Working in Algeria they were able to substantiate the finding of tiny coccoid bodies 0.2–0.3  $\mu$  in diameter staining pale blue with Mav Grunwald Giemsa and occurring—sometimes in enormous numbers—in the epithelial cells removed by gentle scraping from the conjunctiva. In the granulation tissue they were far harder to find. They appeared to resemble closely the well known elementary bodies of Prowazek and Halburstaedter. The bodies were observed in seventeen out of eighteen untreated children in twelve out of thirty children that had received some treatment and not at all in four normal children. The name *Rickettsia trachomatis* is suggested for the causative organism in preference to the name *Rickettsia trachomae* proposed by Busacca. Interesting as these findings are it must be remembered that it is dangerous to regard every small coccoid bacillus staining with Giemsa and occupying an intracellular position as necessarily belonging to the Rickettsia group. On such characteristics some of the larger filterable viruses like vaccinia would have to be included with the Rickettsiae. Hitherto one of the essential properties of the Rickettsiae has been their insect habitat. It may be that certain Rickettsiae can be directly transmitted from mammal to mammal without passing through the intestinal canal of arthropods. Until this however is clearly established and until much more work has been carried out on their cultural metabolic and antigenic properties it will probably be wise to maintain an open mind on the exact nature of the small bodies found in trachoma.

### LYSOZYME AND THE BOWEL

Lysozyme discovered by Fleming as long ago as 1922 appears now to be coming into its own after a long period of comparative neglect. This remarkable substance which is found in large amount in the lacrimal nasal and bronchial secretions and is also demonstrable in tissues can rapidly destroy many non pathogenic bacteria and has a less pronounced effect on a few potentially pathogenic species such as *Streptococcus faecalis*. That the conjunctival sac depends for its sterility on lysozyme and that the air passages are assisted by it in destroying inhaled bacteria no one now disputes but the original claims for lysozyme went further than this. It was said to be an important factor in the resistance of the tissues generally to infection and susceptibility to its action was actually suggested as



a determining cause of non-pathogenicity in bacteria. This view was not generally accepted, nor is it to-day but a good deal of attention has recently been given to lysozyme, in the direction of studying its constitution and distribution and demonstrating its importance as a surface defence mechanism. It was shown some years ago by Findlay that the xerophthalmia of vitamin A deficiency is accompanied by a diminished lysozyme content of the tears. A series of elaborate experiments now reported by Sullivan and Manville<sup>1</sup> suggest that a similar effect occurs in the lower bowel. The lysozyme content of the colon in rabbits was found normally to be high and in vitamin A deficiency it was increased, a fact attributable to failure in its secretion. The feeding of dried apple to such rabbits reduced the content to normal, from which it is concluded that either vitamin A or the active constituent in apple, which is said to be uronic acid, is required to enable the colon to secrete lysozyme in adequate amount. The differences in lysozyme content are far from striking, the absolute maximum and minimum concentrations of the extract causing lysis in one series of experiments being no further apart than 1 in 3,200 and 1 in 12,000, a fact which may call for some reserve in interpreting the results. It may be recalled that a diet consisting exclusively of apple has been recommended in the treatment of diarrhoea in children—a paper by Birnberg on this subject was referred to in these columns some years ago. The beneficial effects of this diet were then attributed to other causes, but the recent observations on lysozyme suggest that this may be a factor. Sullivan and Manville regard it as fully established that adequate secretion of lysozyme is necessary for the protection of the colon against attack by its own flora, and suggest that "over-stimulation of mucus production with a resultant depletion or exhaustion in lysozyme output" may have something to do with the origins of ulcerative colitis. Although this is pure fancy it is an idea well worth investigating, and, indeed, if experiments such as those quoted are to be accepted at their full significance deficiency of lysozyme should command attention as a possible factor in chronic infections of all mucous surfaces.

### LIPOID PNEUMONIA

Some months ago in commenting upon several papers from America dealing with changes in the lung secondary to inhalation of oily substances, we pointed out that pathologists in this country had not so far shown any particular interest in the subject. *Post hoc* a contribution has been made by Dr J. L. H. Paterson<sup>2</sup> who has discovered eight cases of "lipoid cell pneumonia" in 813 consecutive necropsies at University College Hospital London. The histological appearances were similar to those previously described, and as with other cases reported the eight cases comprised either old people who were comatose or suffering from some chronic disturbance of the swallowing

mechanism, or, as in two of the cases, young babies. In these two babies, each aged only 2 weeks, the oily substance found in the lungs was milk. Something like a panic seems to have been created in the U.S.A. by the attention directed to the risks of oily substances used for various nasal conditions, and these have been more or less banned there by certain public health authorities. Judging from the published papers it would be as logical to ban cod-liver oil, milk, and any of the other things which have been found in the lungs, of which Dr Paterson gives a long list. He has followed up his post-mortem findings with some experimental work, the object of which was to reproduce in animals, as far as possible, lesions found in the human subject, and a large series of animal, fish, mineral, and vegetable oils have been utilized. It seems clear that "lipoid cell" pneumonia can be produced experimentally by the intratracheal administration of oil. Relatively large quantities given in a series of small doses are required to bring about a typical reaction, but it is interesting to know that in rats bronchiectasis may follow a single large dose of oil, a finding which is not recorded in association with "lipoid cell" pneumonia in man. Dr Paterson finds that the reaction is similar with all oils, but the more easily they are removed from the lungs the less severe the change. Vegetable oils, for example, are most easily removed, while liquid paraffin and cod-liver oil lead to the most severe reactions. Certain fractions of the oils produce the same reaction as the oil itself. Lecithin, for example, is especially potent and cholesterol gives very little reaction. This latest study of the matter suggests that "lipoid cell" pneumonia is an aspiration pneumonia of a chronic type, and so far as the evidence is available it would not seem justifiable to ban the administration of oily preparations via the nose or the mouth for individuals able to swallow and cough normally.

### THE VERTEBRAL NERVE

Leriche could never be accused of being an unenterprising surgeon, and his latest contribution to the surgery of the sympathetic system is at the least unexpected.<sup>3</sup> There are probably few people who know of the existence of the vertebral nerve, much less what it is and what it does. The vertebral nerve is the name given to the strand or strands of nerve fibres lying on the vertebral artery; these fibres arise by three or four roots from the stellate and middle cervical sympathetic ganglia. Distally the fibres form a perivascular plexus around the vertebral and basilar arteries and give branches to the cervical spinal nerves. It is said that stimulation of the distal end of this nerve causes constriction of the vertebral artery and its branches and also some vasoconstriction in the upper extremities. Stimulation of the central end of the nerve is said to give rise to manifestations of pain. Leriche now advocates section of the roots of the vertebral nerve for the following four objects: to diminish cerebral vasoconstriction, to diminish vasoconstriction in the upper

<sup>1</sup> *Amer. J. publ. Hlth.* 1937, 27, 1108.

<sup>2</sup> *British Medical Journal* 1933, 1, 624.

<sup>3</sup> *Ibid.* 1937, 2, 919.

<sup>4</sup> *J. Path. Bact.* 1938, 46, 151.

<sup>5</sup> *Progr. med.* Paris, 1938, 4, 113.

limb to act on the vessels of the cervical spine and to reduce spasticity in the upper limb. No cases are described but Leriche says that he has performed the operation twelve times and has obtained encouraging results in hemiplegia, Raynaud's disease and Little's disease and expects success in cases of arthritis of the cervical spine. The vertebral nerve is automatically severed at its origin in operations for removal of the stellate and adjacent ganglia and we may wonder why it should be worth while removing this relatively small part of the sympathetic supply to the head and upper extremity when all can be removed with little more exposure and greater certainty. Leriche's reason is that this new operation is less often followed by pain in the back and arm. However since the adoption of the anterior as opposed to the posterior approach to the stellate ganglion post operative pain has been a comparatively infrequent complication at all events in this country and it is to be expected that few of our surgeons will feel any disposition to change. It is also to be noted that such sympathectomy as is achieved by section of the vertebral nerve is post- and not pre-ganglionic and the new operation is thus opposed to the general trend of thought in sympathetic surgery.

### SPONTANEOUS FISSURING OF BONES

During the past five or six years a number of cases have been reported of an obscure condition of unknown aetiology characterized by what on radiological examination appears to be a series of fissures in the bony skeleton. These tend to be symmetrical in distribution involve particularly the pelvic bones and metatarsals show little or no tendency to heal and although there is in some cases a generalized osteoporosis may be unassociated with changes in the blood calcium. Early this year R. Leriche and A. Jung<sup>1</sup> recorded the case of a woman aged 38 in whom there were incomplete fissures just above the intertrochanteric line on the under surface of the neck of each femur, the left ischio pubic ramus was similarly affected. Latent tetany was thought to be present in association with a lowered calcium content of the blood. This patient sustained a fracture of the right forearm which healed normally, there had also been nervous symptoms and pain in the buttocks and thighs. She appeared to benefit from ultra violet irradiation and the administration of vitamin D, calcium salts and parathyroid extract. Pierre Lombard and Henry Tillier<sup>2</sup> report in detail a similar case that of a man who died in 1933 at the age of 26 and had multiple bony fissures. His parathyroids were explored in February 1932 with a negative result, and at necropsy only normal parathyroid tissue was observed. These writers find it difficult to say whether the condition is a distinct entity or whether it is common to different bony dystrophies. American<sup>3</sup> and German<sup>4</sup> authors have seen similar cases and last year J. C. Leedham Green and F. Campbell Golding<sup>5</sup>

recorded a case in this country in a woman aged 24 who had fissuring of both the horizontal and ascending pubic rami and of the first and second metatarsals of either foot. Like other writers they point out our ignorance of the origin and nature of the fissures and of their treatment. They suggest that the condition should be called osteoporosis melolytica but for the moment the term 'spontaneous fissuring' would seem preferable.

### LORD HORDER'S PORTRAIT

View Day at St Bartholomew's Hospital on May 11 was the occasion of a ceremony of a kind which does not often occur. A large gathering in the Great Hall witnessed the presentation to Lord Horder of his portrait painted by Sir William Nicholson. The presentation was made by Lord Stanmore until lately treasurer of the hospital on behalf of a large number of the staff and other friends. Lord Horder accepted it in a speech happily combining wit with wisdom; he observed that no man can judge himself and he must be content to be judged by his friends. That they had considered him worthy of this distinction was a tribute which he greatly valued. He then presented the portrait to the hospital where it is to hang in the Great Hall in company with that of Paget Abernethy, Bowlby and other illustrious predecessors. It was accepted by Mr George Aylwen the present treasurer in a speech of tribute to Lord Horder's career and his services to St Bartholomew's. The portrait makes a striking contrast with those already in the hall and may well mark a change in style of which the future will in time provide more examples. The older portraits are large as life or larger, smooth, meticulous in detail and warm in colour. In this the only striking colour is that of a peer's robe which is cast over another chair behind that in which the subject is seated. The figure being full length and a good deal of the canvas occupied by fore and background its scale is small. The likeness is a fine one although perhaps a little on the grim side and lacking the twinkle of humour which many would have liked to see in it. The portrait will be on view in a public exhibition before being finally hung at St Bartholomew's.

We regret to announce the death of Sir THOMAS FLITCROFT who was for ten years chairman of the Bolton Division of the British Medical Association and took a keen interest in local public affairs.

The Right Hon. Walter Elliot D.Sc. F.R.S. who succeeds Sir Kingsley Wood as Minister of Health in the Cabinet reconstruction this week is the second medical man to hold that office. Lord Addison M.D. F.R.C.S. was the first Minister of Health—from 1919 to 1921. Dr Elliot graduated in medicine at the University of Glasgow in 1913.

<sup>1</sup> *Lyon chir.* 1938 35 47  
<sup>2</sup> *Mémoires Acad. Chir.* 1938 64 336  
<sup>3</sup> *Amer. J. Roentgen* 1930 24 29  
<sup>4</sup> *Fortschr. a. d. Geb. d. Röntgenstrahlen* 1932 45 187  
<sup>5</sup> *Brit. J. Surg.* 1937 25 77

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## HEARING AIDS IN GENERAL PRACTICE

BY

F. J. CLEMINSON, M.A., M.Chir., F.R.C.S.

If the physical intensity of a sound is increased ten times it is said to be increased by one *bel* (this name being in honour of Alexander Graham Bell, the inventor of the telephone). If the increase is a hundred times it is by two bels, and if a thousand times by three bels, and so on. For instance, the average noise in a very quiet room is two bels—that is, the noise is one hundred times as intense as that which would be just perceptible. A bel is divided into ten *decibels*, and a decibel is now recognized as the standard unit for the expression of differences in sound intensity.

### Testing for Deafness

The pure-tone audiometer is an instrument for testing the acuity of hearing both for air and bone conduction, for pure tones at octave intervals over the greater part of the entire auditory range. At each pitch the sound is slowly diminished

in intensity till it just ceases to be heard by the patient, who signals the exact moment by pressing a button. In this way curves are obtained for each ear for bone and air conduction, the results being recorded on a chart such as that illustrated here (a modification in monochrome of the chart used by Dr Kerridge in the hearing aid clinic at University College Hospital). The results are shown for one ear only, for clearness' sake. The zero line (thick) is horizontal and represents the threshold for normal persons in a silent or sound-proof room. The continuous curve represents the threshold for normal bone conduction. The curve marked by bars registers the patient's air conduction, and the dotted line his bone conduction. The curve shows that at the frequency of 512 cycles per second (C) the patient did not hear by air till the note's intensity had been increased by 40 decibels above the normal threshold—that is, until it had been made 10<sup>4</sup> (or 10,000) times stronger than necessary for a normal hearer.

The other form of audiometer in common use consists of a gramophone which reproduces spoken numbers, it shows the level in decibels above the normal threshold, at which speech becomes *intelligible* (not merely *audible*) to a deaf patient. In this form of audiometer the normal threshold has been determined in a quiet (but not sound-

proof) room—one in which there would be about 20 decibels of noise. Hence a patient who has an average loss of, say, 50 decibels over the important speech frequencies (200 to 2,000 cycles per second) in a *pure-tone* audiometer test would in a *speech* audiometer test have a loss of only 30 decibels—an apparent discrepancy which is at first confusing.

The only excuse for this brief acoustic preface is that, for some readers, it may clear up a certain degree of vagueness in their ideas about units and measurements, we are now free to pass on to the subject of hearing aids. It is difficult for those with normal hearing to realize how speech perception is affected by deafness. If, owing to some fault on the telephone, no frequency

above 1,000 cycles per second could be transmitted a normal hearer would probably say, "I can hear the voice but cannot make out the words," and would at once realize what the deaf mean when they use the same phrase. If the transmitted frequency could be raised to 1,000 cycles intelligibility would be greatly improved, but even then different voices could not be distinguished one from another. A further

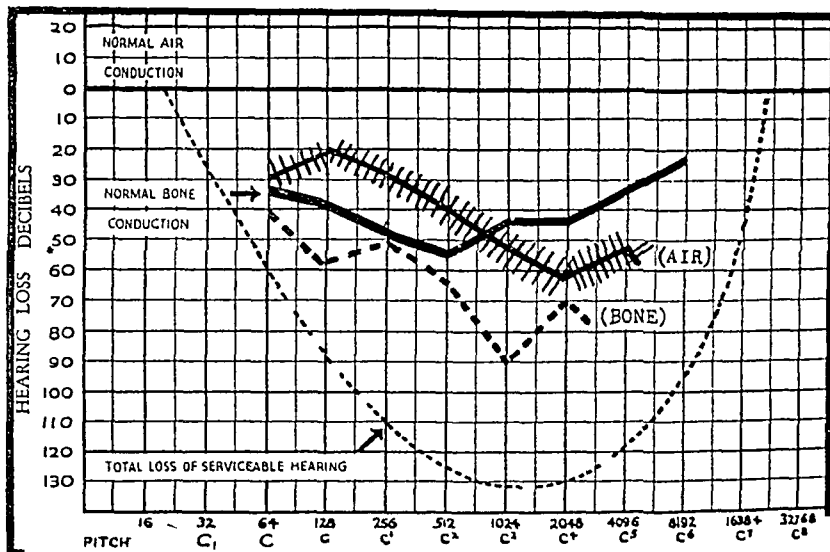


Chart showing bone- and air conduction curves obtained in testing for acuity of hearing by the pure tone audiometer

rise to 2,000 cycles per second would allow familiar voices to be recognized with ease, more of their characteristic harmonics being reproduced. In this case the telephone engineer would have done for the normal hearer what the manufacturer of hearing aids aims at for the deaf, and in this aim he has very largely succeeded especially since the invention of the midgap thermionic valve.

### Non electrical Aids

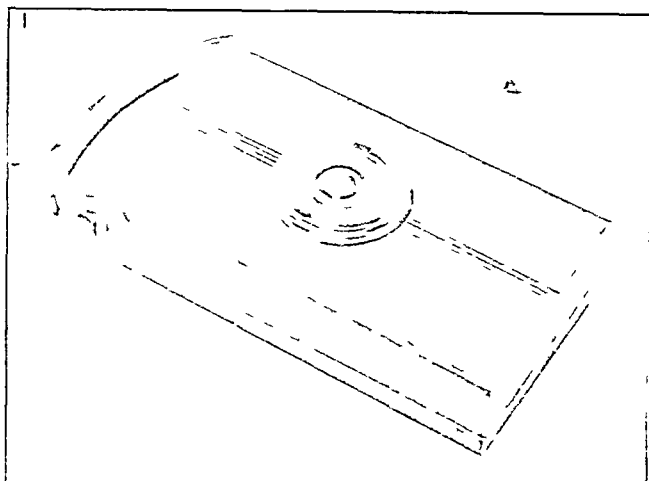
The earliest aid (going back at least 250 years) was a trumpet or tube, and such an aid has still many advantages. It is cheap to buy, costs nothing to maintain, has no "endogenous" background noise, and tends to emphasize the upper end of the scale. It is therefore useful in internal ear deafness—for example, for the people—in which the greatest loss is always in the higher frequencies. There is little distortion, voices sound natural, and it is often the most suitable aid for moderate loss of hearing. These non electrical aids are made in various forms—for example single or double auricles, "banjo" horns, flexible conversation tubes, parabolic reflectors with collecting tubes leading to the ear from the focus. Auricles are more popular with women than men because they can be concealed.

# HEARING AIDS IN GENERAL PRACTICE



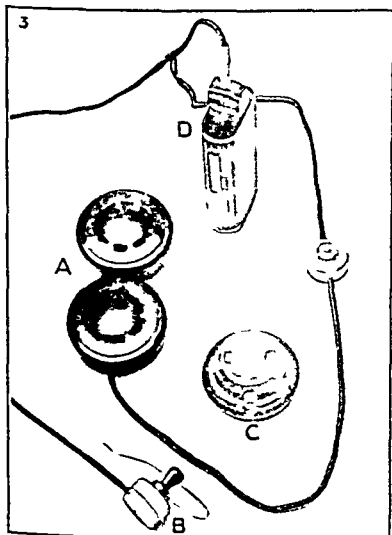
(4) MODE OF WEARING A PAIR OF AURICLES (F C Rein & Son)

The earpieces of this binaural adjustable auricle can be moved backwards, forwards inwards or outwards to suit the direction of the meatus. The auricles are held in position by a light adjustable head spring. The instrument is built in a number of graded powers and special models are available for children.



(1) "PERCEPTON" VALVE AID

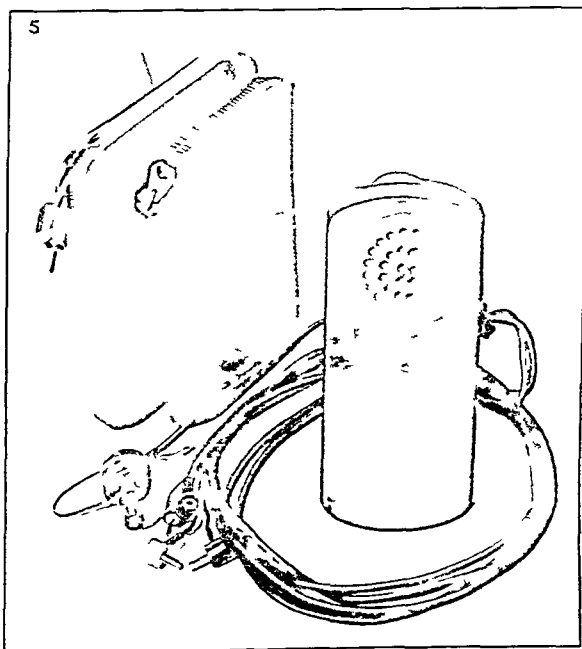
Crystal microphone. Selective amplification obtainable by the insertion of filters. Three stages of amplification. Bone or air conduction. Made to resemble a Kodak camera. Dry batteries used.



(3) MICROTELEPHONE TYPE HEARING AID (F C Rein & Son)

(Total weight complete with battery 7½ oz.)

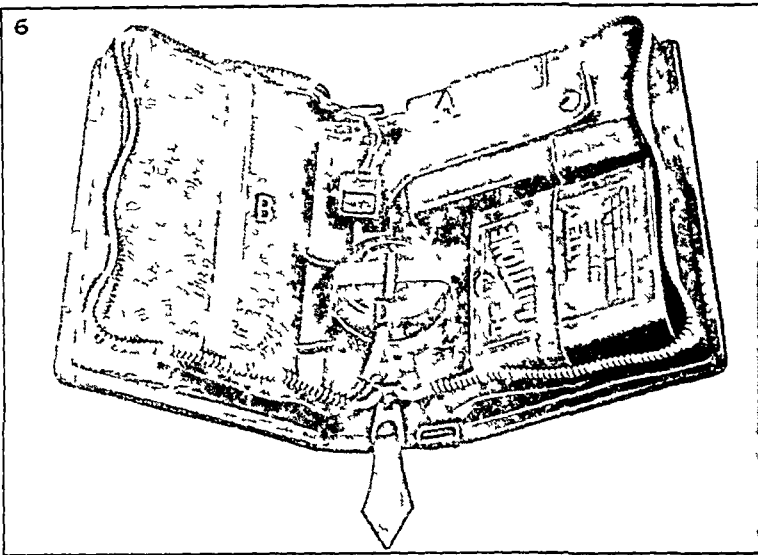
The transmitter or microphone (A) is worn by the male user under the necktie or by the female user similarly under the clothing. Volume control can be fitted. (B) The midget flesh tint self retaining receiver. (C) Watch pattern disk receiver interchangeable if desired with midget receiver. Proximal side down. Head band not shown. (D) Small dry pocket battery.



(5) PETO-SCOTT "MAXADE" (wearable model)

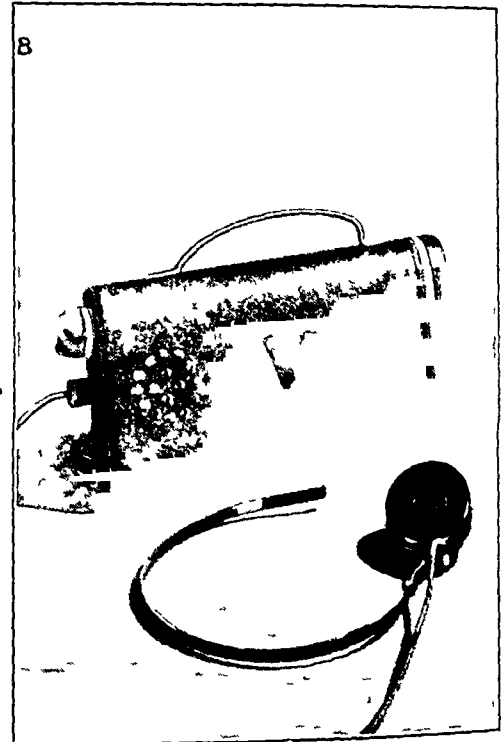
The three units are from right to left: (1) amplifier with 3 valves and built in crystal microphone, (2) low tension cell and (3) high-tension battery. Small earpiece to fit meatus.

## HEARING AIDS IN GENERAL PRACTICE



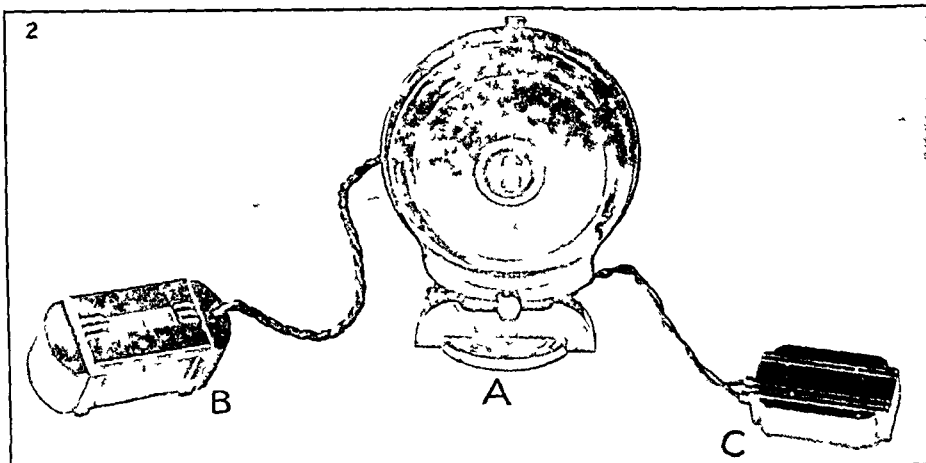
(6) MULTITONE ELECTRIC CO V P MODEL  
with "Book" Container

(A) Amplifying unit (3 valves) (B) Flexible high tension battery (C) Dry low-tension cell (D) Crystal microphone Earpiece not shown The contents can be removed easily and disposed about the person



(8) VERNON-SPENCER  
"FULL RANGE"

3-valve Model VS1 (7½ inches by 3½ inches by 1½ inches) with crystal microphone and crystal earpiece



(2) SONOTONE AUDICLE (451)

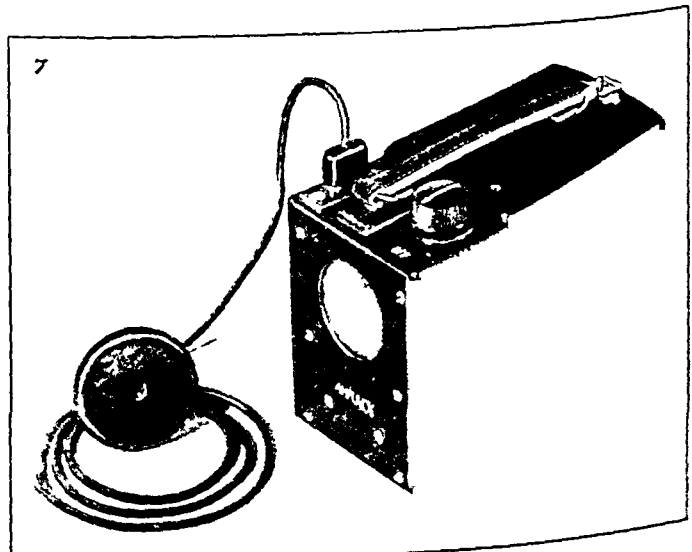
A Transmitter—Contains two microphones back to back Non directional—picks up sound equally well from every direction No holes in transmitter, sound enters at side

B Amplifier—Selective amplification obtainable by the insertion of different booster chambers Sound filter to suppress "staccato" sounds—for example clatter of knives and forks on plates

C Oscillator—Supplied in different pitches Large surface to oscillator to fit mastoid bone Both sides of oscillator can be used One side loud the other side soft

(7) MODEL C8 AMPLIVOX

The model C8 Amplivox with crystal microphone, three-stages valve amplification all dry battery working



hair and coloured to match it. Auricles can be held in place by a head spring but the others of this class leave only one hand free and cannot be used at work. The conversation tube is said to produce an amplification up to 5 decibels, and even auricles can average 12 to 15 decibels. Next to the conversation tube the binjo horn is perhaps the most efficient.

### Electrical Aids

Electrical aids in their simplest (and oldest) form are merely portable telephones that can be worn on the person. They are well known and need little description. The microphone is of the carbon granule or dust type and the granules may be larger or smaller, while the carbon diaphragm may be made of hard or soft carbon. The earpiece or receiver may be small and be worn in the ear, or it may be large (and more efficient) and be held closely to the ear by a head spring. The cell is usually of the 3 volt dry type and is carried in the pocket. Except in the carbon dust type there is often a large amount of instrumental background noise but in middle ear deafness especially when paracusis is present this is not so objectionable as in nerve deafness. Recently the receiver has been so modified that a small vibrating surface can be placed directly on the mastoid bone so that the sound reaches the inner ear by bone conduction. This

by-passing of the middle ear is particularly successful in cases of middle ear deafness with a fixed or almost fixed stapes. Bone conduction aids need more current than the simple microtelephones and are fitted with an amplifier which in some cases is of the valve type. In my experience bone-conduction aids were disappointing in their early stage when the vibrator was merely a small button apt to slip out of place and by no means so efficient or comfortable as the present type. In their original form they were found to be the most suitable aid in only about 3 per cent to 4 per cent of my cases but in their improved form the percentage is far higher than this and many patients prefer their quality of voice reproduction.

In the Medical Research Council Report No 219 (*The Use of Hearing Aids*) somewhat untavourable views are expressed on bone conduction aids. I think it very doubtful whether such views would be supported now by the experience of most otologists: they certainly seem to be at variance with our experience in the hearing aid clinic at the Middlesex Hospital. It is unfortunate however that the variety I prefer is rather too costly to be available in every case for which it appears to be most suitable.

### The Valve Amplifier

The third and most recent class of hearing aid is the valve amplifier. These were formerly large and heavy, and were made in the form of a box but now they are much smaller and some manufacturers have divided them into two or more parts so that it is possible to carry them easily about the person or in a bag. In some makes the microphone is separate and can be worn in the button-hole like a flower or under the rock. The valves may be two or three in number of the midjet valve type and are very reliable. Some makers provide not only a volume control but also a tone control whereby the relative volume of the upper and lower tones in the amplified voice can be varied and each patient can keep it in the position in which his friends' voices sound most natural. This is a great advantage. Moreover the amplification in some models is as much as eighty decibels. The low tension cells tend more and more to be of the easily obtainable

ever-limp type. The high tension batteries usually have a voltage of about 30 and last some months. The earpiece is commonly of the large and more efficient kind held over the ear by a spring. Small receivers which fit into the meatus can be supplied but these though less conspicuous are also less efficient. The microphone may have a carbon diaphragm. A crystal microphone increases the price by some pounds but greatly diminishes that part of the background noise due to the instrument itself. Some instruments have a crystal earpiece also and are particularly quiet. One maker has an automatic volume control which prevents for example a hand-clap near the wearer from sounding loud enough to startle him. He has also introduced a special device whereby while one ear receives the whole output of sound high and low only the high tones are allowed to reach the other. This involves wearing two earphones. Its purpose is to reduce what is called the masking effect of low tones on high tones. The synthesis is probably carried out in the cerebrum.

All valve instruments tend especially to amplify the upper end of the scale and therefore with a crystal microphone to minimize instrumental background noise they are particularly suitable for cases of senile or other internal ear deafness because they tend to compensate for the disproportionate loss of high tones. Hence it is no longer true that for senile deafness an electrical aid is useless: on the contrary it is often most valuable.

There are many ways in which the sound output of a hearing aid may be varied. But when all is said and done it remains quite impossible to prescribe aids for loss of hearing in the same accurate way as lenses can be prescribed for changes in refraction. In the microtelephone aid the situation of the peak or amplification can be influenced by the degree of hardness of the carbon diaphragm and to some extent by the material of the earpiece diaphragm but broadly speaking it is the middle part of the range of pitch more than the upper which is amplified and this fact together with their greater tendency to record background noise makes them unsuitable for senile or other forms of nerve deafness for which either a non electric aid or a valve aid with crystal microphone and tone control is most suitable. Bone-conduction aids should be tried more often in middle-ear or mixed deafness especially where there are signs of limitation or movement of the stapes. This condition may occur as the result of otosclerosis, chronic middle-ear catarrh or the fibrotic changes following suppuration.

### The Medical Man and the Deaf

How can a medical man do his best for a patient who needs an aid? In the first place it may be difficult to persuade him (or more often her) to try one. One objection after another may be made. To use one will proclaim my deafness to the world but of course his world knows it only too well already and would welcome anything to make social intercourse less exhausting. I can hear well enough if people will only speak distinctly but everybody mumbles nowadays. He must be shown that the fault lies in his own ears and then an appeal to his better nature may succeed if he can be made to realize how tiring it is to talk when the voice has to be raised and almost every remark repeated at least once.

I have no friends now—people avoid me so why should I bother? his friends will come back when they find they can talk to him easily. I am afraid it will make my hearing worse there is no evidence whatever that an aid makes hearing worse but, as when a short-

sighted person who takes to spectacles may realize how imperfect his vision was without them, so the deaf man with an aid may wonder whether his hearing really could have been so bad as he now knows it to be "I shall lose my employment if it is known I am deaf" his employer almost certainly knows it already, and he will be less, not more, likely to lose it if he can hear what he is told. Deep-rooted vanity, perhaps unconscious, is the greatest obstacle. A charming but rather masterful old lady was once persuaded by her friends to consult me, and as conversation was difficult she was induced to try a valve aid 'just to see'. Everything seemed to be going well and the conversation had become quite brisk when it suddenly came home to her that the apparatus was a great help. She instantly removed it, stiffened perceptibly, abruptly closed her mind to its virtues, and said it was "quite useless, very unsightly, and she would never dream of wearing it". "But what about your family, who tell me they have almost to shout at you?" "Well, they must go on shouting."

Without special knowledge of the subject it may perhaps be inadvisable for the medical man to name any particular hearing aid. The responsibility can usually be shifted to one of greater experience, and if it is impossible to arrange a private consultation the patient can be referred to the aural department of a good hospital or, better still, to a hearing-aid clinic such as those now established by Dr Kerridge at University College Hospital and, more recently, following the same lines, by the Ferens Institute of Otology, Middlesex Hospital. In time every hospital will probably have one. At such a clinic the patient will have an audiometer test done and then be tested with the most appropriate of the series of hearing aids kept for the purpose. A home trial of the most suitable one, if any, will be arranged, and the almoner will discuss with the patient the best means of payment and tell him what organizations may be prepared to help him and to what extent. If after trial the instrument proves satisfactory it can be obtained through the almoner at a specially reduced price. A number of the leading manufacturers have been kind enough to send specimens of their products on permanent loan for testing patients at the hearing-aid clinic at the Middlesex Hospital, they are Messrs Amplivox, Multitone Electric Co., Peto Scott, F. C. Rein and Son, Sonotone, and Vernon-Spencer, without their ready help it would have been difficult to establish the clinic. So that the reader may have an idea of the range of hearing aids and know what they look like, illustrations of various models have been included in this article.

#### Advice to the Deaf

Patients who wish to go direct to a dealer will find the following advice excellent. It is from a paper (*British Medical Journal* 1935 1, 1314) by Dr Phyllis Kerridge, whose work and publications on the subjects of deafness and hearing aids are so well known and so valuable.

- 1 Take a friend with you, and listen to a voice you know as well as to that of the demonstrator.
- 2 Move about with the instrument on.
- 3 Switch the battery on—if it is an electrical aid—and listen when nobody is speaking, both when you are sitting down and moving.
- 4 Try more than one make of instrument of the type you favour.
- 5 See that the carpiece fits really comfortably. They can easily be adjusted to individual requirements.
- 6 Try a large carpiece as well as a small one.
- 7 Insist on a home trial without obligation to purchase.

8 When at home listen to general as well as to individual conversation.

9 See how long the battery (if any) lasts you, and calculate the cost of upkeep.

10 Do not wear a new instrument for too long at first. You will probably make your ears tired, and therefore seem more deaf.

11 If, after trial of an instrument, you can hear satisfactorily with it and procure one and subsequently cease to be able to hear with it, or if adventitious noises develop do not conclude that you are getting deafer or that the instrument is no good. Send it to be overhauled. A simple repair or renewal is probably all that is necessary.

#### Lip-reading and General Information

A doctor should strongly advise patients with chronic deafness to have lessons in lip reading and to practise it most assiduously. It is an invaluable accomplishment, readily attained in earlier life but far more difficult to learn after 50. For information about lip reading classes or teachers, application should be made to the National Institute for the Deaf, 105, Gower Street, W.C.1 (secretary, Mr A. J. Story). This organization is of the greatest use. It supplies literature in the form of leaflets, pamphlets, and books, gives information about the employment of the deaf, choice of aids, and the danger of the exploitation of the deaf by unscrupulous dealers. To minimize this a list is kept of those dealers and manufacturers who agree, among other things (1) to permit no representative of the firm to pay unsolicited visits to clients' homes, and (2) to allow a reasonable home trial of their apparatus for a fee which does not exceed 5 per cent of the purchase price for non-valve and 7½ per cent for valve aids per week. This fee is deducted from the cost if a sale results. Patients should be urged to keep to this list in making their choice.

#### ROYAL MEDICAL BENEVOLENT FUND

At a recent meeting of the committee three annuitants were elected, the total amount voted being £86. In addition thirty-eight beneficiaries (including eleven new applicants) were awarded grants amounting to £947. The following are particulars of three cases.

Widow, aged 64, of M.R.C.S. who died in 1916 aged 43. The widow has had a salaried post in social work for many years but owing to the closing down of the association, lost her employment in December, 1937, and at the age of 64 cannot find fresh employment. Her two children, aged 34 and 30, are unable to contribute to her support. The Fund voted an allowance of £1 a week for six months, and is seeking the co-operation of other charitable societies to help this most deserving applicant.

Daughter, aged 60, of M.R.C.S. who died in 1914 aged 76. The daughter has helped her mother to run a boarding house since 1914, and they have just managed to maintain themselves. The mother is now 83, and all the work falls on the daughter who does the cooking for the establishment as well as looking after her mother. For years she has had a hard life and a struggle to make ends meet, with no money for extras or a holiday. The Fund voted £20 to enable the daughter to have a holiday and rest.

Widow, aged 66, of L.S.A. who died in 1915 aged 52. She has an invalid daughter. The widow since her husband's death supported herself and had educated her daughter by success in running a boarding house until 1933 when circumstances forced her to give up. Recently she has suffered from a duodenal ulcer which necessitated nursing home treatment. Her own and daughter's illnesses have been a great drain on her resources and the money she had put aside has been used up. Her only income is now £60 and the invalid daughter is able to earn £26 per week by teaching painting. The Fund voted an allowance of £1 a week for six months when the case will be reviewed.

New annual subscribers are urgently needed by the Fund. Cheques may be sent to the Honorary Treasurer, Royal Medical Benevolent Fund, 11, Chandos Street, Cavendish Square, London, W.1.

## WESTMINSTER HOSPITAL MEDICAL SCHOOL

### OPENING OF NEW BUILDING

The new medical school at Westminster Hospital was opened by the Earl of Athlone, Chancellor of the University of London on May 12. With the new nurses home recently opened by Queen Mary it forms a large block on the west side of St John's Gardens, Horseferry Road, while the main hospital building is in course of erection on the east side. It is expected that the hospital will be opened by the King and Queen in April 1939 when the old site in Broad Sanctuary will pass into the hands of new owners who propose to erect thereon a Gothic building harmonising with the architecture of Westminster Abbey immediately opposite. The cost of the rebuilding of the hospital nurses home and medical school is estimated at £520,000. This includes the acquisition of the sites. A sum of £14,000 is required to complete the cost of the new school.

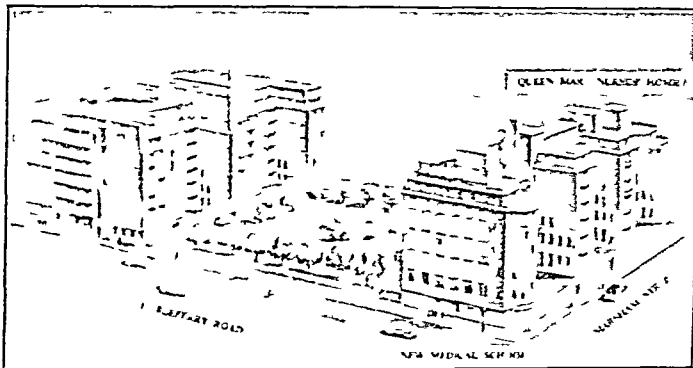
### Planning and Equipment

The medical school, a building of eight floors, embodies many new ideas in planning and equipment. On the ground floor is a students common room and refectory as well as other rooms for the cultivation of the social side of student life. The main lecture theatre occupies a part of both the ground and the first floors. It seats 250 who are all accommodated in special chairs with panels for notebooks and it contains a film projector and modern epidiascope. Most of the first and mezzanine floors is occupied by the museum and library beautifully panelled in Australian walnut and teak and with special lighting arrangements suitable to each department. The museum contains 3,000 specimens a collection which has become of great value with constant replacement. The library which has additional space in its galleries for future expansion is provided with the latest edition of every standard work and an excellent choice of monographs and periodicals.

The second floor includes the main classroom with the desks so arranged as to give an uninterrupted view of blackboard and screen from every seat and each student's place is provided with microscope and equipment for experimental work. Adjoining the main classroom is a preparation room and a small lecture theatre in which again a cinematograph projector is available. On the third and fourth floors is a first rate suite of laboratories and workshops in which the principal pathological work of the hospital is to be carried out. The main clinical laboratory named after John Burford Carlill, a generous benefactor is divided into cubicles for individual workers. On the higher floors are rooms reserved for special examinations and tests on the living subject, small laboratories for urgent pathological investigations, arranged in close

association with the wards and operating theatres of the hospital and a large biochemical laboratory with comfortable little rooms adjoining where out patients may be received for special tests without the necessity of entering the hospital itself. There is also a physics room a laboratory for the measurement of radium emanation—Westminster Hospital being a special centre for radium treatment—and in the basement a vibration proof laboratory for the testing and use of delicate instruments in clinical and research work. A room is set apart for training students in operative surgery. An anatomical museum and a special x-ray room for post mortem specimens have been installed. Post mortem examinations are to be conducted in a room designed by the staff in which the air is ozonized and filtered. On the recreational side a gymnasium, squash rackets court and shower baths are provided and flat roof spaces afford opportunities for leisure or study in the open air. One interesting feature is the assignment of a room for old Westminster Hospital students whose visits at any time will be welcomed.

The old school accommodated from ninety to ninety-five students; the new one will accommodate at maximum capacity 200 but 120 at any one time are expected.



The main hospital building, on the left of the drawing will be completed in 1939.

### The Opening Ceremony

Dr ADOLPHE ABRAHAM, Dean of the School of Medicine in welcoming the Chancellor of the University when he arrived to open the new school said that the magnificent new building was due to the wisdom and generosity of men of vision who had recognized the importance of the student and had

appreciated that side by side with the treatment of the sick proceeded the training of the doctor of the future. He placed on record the school's lasting gratitude to all who had made possible the existence and equipment of the building not least among them being the University of London.

The EARL OF ATHLONE in declaring the school open congratulated the authorities on their success in raising the large sum required to provide a school not only worthy of the hospital to which it was attached but also fully adequate to the needs of modern medical education. The benefits of such a school connected with an institution for the healing of the sick were threefold. First the existence of a medical school made it possible for the hospital to obtain the services of physicians and surgeons of distinction and eminence. Secondly the continual presence of medical students vigilant critics of what they saw and heard kept the teaching staff up to the mark. Thirdly and most important the existence of a medical school connoted not only the treatment of the patients in hospital but also the steady day to day compilation of accurate clinical records and unceasing research into the cause and treatment of disease. The provision of the building he was opening had removed the handicap of accommodation inadequate to the requirements of modern



medical education. It was a source of satisfaction to the University of London that the school's facilities for teaching would be so greatly enhanced. The University had made its usual contribution with the best of good will and in the desire to acknowledge the great efforts that had been made by the school's benefactors and governors, and by the medical, surgical, and scientific staff. The results of their efforts were evidenced in the well-planned and appropriate accommodation provided in the new Westminster Hospital Medical School which he had so much pleasure in declaring open.

Mr HUGH M CLOWES chairman of the School of Medicine, speaking on behalf of the governors of the hospital, expressed thanks to the Chancellor for opening the school of which all concerned were so proud. He was glad to be able to report that as a result of the generosity of their friends only £14,000 had yet to be found out of the £65,000 required for rebuilding. In the last few days the figure had been reduced from £15,000 to £14,000 because of the generous gift of £1,000 by a prominent citizen of Westminster who wished to remain anonymous. And in addition to the contributions he had already made Sir George Tilley had promised a further £600 towards the sum still to be found. The hall in which the opening function was taking place bore the name of "Meyerstein." It was difficult to express adequately the gratitude due to Sir Edward Meyerstein, whom it was a pleasure to all to see on that occasion. In conclusion Mr Clowes paid a tribute to the members of the building committee, and mentioned especially the names of the indefatigable chairman, Mr Bernard Docker, Mr Rock Carling, senior surgeon, Mr J D C Couper, Dr Pulvertaft, director of the laboratories, and Mr Peter Adams, architect.

Sir GEORGE TILLEY, chairman of the Medical School Rebuilding Fund Appeal Committee, seconded the vote of thanks, and earnestly expressed the hope that he might receive further support in the final effort to secure the completion of the fund. At any rate, he had promised not to relinquish office until the remaining £14,000 had been secured.

The opening proceedings ended with a prayer of dedication by the Dean of Westminster, following which the Chancellor and guests were shown over the new building.

## THE TAVISTOCK CLINIC

### EFFECTIVE RESULTS OF TREATMENT

The annual meeting and luncheon of the Tavistock Clinic were held at the Cafe Royal on May 9. Lord ALNESS (chairman Child Guidance Council), the newly elected chairman who presided at both functions, paid a tribute to his predecessor, Sir Henry Brackenbury, who for eight years had shown unflagging zeal and untiring energy in his efforts on behalf of the clinic.

#### Nervous Disorders in Industry

The EARL OF FEVERSHAM (Parliamentary Secretary to the Minister of Agriculture and Fisheries) endorsed this tribute to Sir Henry Brackenbury who before he joined the council of the Tavistock Clinic had recognized the great importance of psychological medicine and had done much to familiarize the whole of the medical profession with the subject of psychology. Lord Feversham went on to say that as a probation officer in years gone by he had come to know that crime and delinquency were in many instances only an expression of deep-seated psychological causes. It was then that he had come into contact with the Tavistock Clinic, and

realized that it was doing more than any other body to meet a national need. He now found himself at the Ministry of Agriculture dealing with the subhuman species, but he still held that to see nature in the raw one must turn to man. Those engaged in industry undoubtedly knew that, in these days of high speed and pressure, industry was a mushroom bed for breakdown and inefficiency. The recent researches by Professor Millais Culpin on behalf of the Industrial Health Research Board and of Dr J L Halliday of the Regional Medical Officers Department of Health for Scotland showed that there was a formidable percentage of nervous illness amongst the working population. Obviously, if the much needed further contribution was to be made to all branches of occupational disorder, the work for which the Tavistock Clinic stood must develop at an even faster rate than during the past eighteen years of its life. It was necessary not only to get general practitioners in the provinces to have a higher regard for the problems involved but also to persuade the public to contribute an ever increasing sum towards the maintenance of the work of the clinic.

Mrs I M SIEFF a member of the council of management, said the records of the clinic showed in regard to patients that of 1,000 cases followed up over a period of six years 55 per cent had been permanently relieved—no mean achievement for a branch of medical science as yet in the pioneering stage. And it was always necessary to bear in mind that a neurotic individual must cause a feeling of strain and anxiety in the family circle, which strain and anxiety might lead to physical breakdown of one or more members of the family. It was hoped that the research department of the clinic might one day discover a method of short circuiting the present somewhat protracted method of psychological teaching, and thereby make possible the treatment of a larger number. The wiser handling of children from the psychological point of view had shown itself in the springing up of over thirty child guidance clinics. The Tavistock Clinic was engaged in an investigation into nervous illness as affecting the industrial worker. The speaker hoped it would eventually investigate the question as affecting the employer and managerial classes for it was just as important that they should be harmoniously balanced.

#### Scientific Handling of Psychoneurosis

Dr J R REES medical director of the clinic, said that the waiting list was again closed with 400 names on it, and asked the audience to think quietly to themselves what was to happen to some of those 400 before they could undergo treatment in perhaps a year or eighteen months' time. How many would have committed suicide and how many would have had to be certified? Such questions involved problems concerning not merely the work of the Tavistock Clinic but the wider problem of the psychoneurotic in the country at present so inadequately provided for. It was a lamentable fact that only about one medical practitioner in 150 had experience of the scientific handling of psychoneurosis. About one third of all illness was due to neurosis, and 31,000,000 working weeks per year were lost to industry from that cause. To say nothing of the inefficiency arising from neurosis. Obviously the training side of the clinic's work was most important. The clinic now provided 25,000 hours of treatment a year, and as it had been able to help those who had been drawing sickness pay, in some cases for nine years, it was doing something of economic value to the country as a whole. A psychological approach which could offer explanation and treatment of nervous illness must eventually lead to the prevention of a large number of disorders which were obviously not always attributable to neurosis. Whether one viewed the subject from the economic or the humanitarian point of view or as a general problem of national fitness, it was important that those engaged in the clinic should be enabled to make a steadily better contribution to the solution of the problem.

Sir HENRY BRACKENBURY reporting on the year's work of the annual meeting which preceded the luncheon stressed three features which had characterized the work of the clinic throughout its existence: its continuity, its variety, and its



## INTERNATIONAL ACADEMY OF POST-GRADUATE MEDICINE

In 1909 an International Committee for Medical Postgraduate Work was formed during the sixteenth International Congress of Medicine in Budapest. Professor Waldeyer (Privy Councillor) of Berlin was elected president. The Italian delegate to that congress was the great scholar and statesman G. Bacelli, who delivered a magnificent address, *La via delle vene aperta ai medicamenti e ioici*.

The first session of the International Committee was held in 1913 under the presidency of Sir Donald MacAlister during the seventeenth International Congress of Medicine in London. The report of this session was not, however, published until 1918, under the editorship of Hofrat Professor E. von Grosz and Professor C. Adam. The war and post-war period prevented any further convocation of the committee. The members of the executive commission are almost all of them dead, and very few of the committee are still living. Professor von Grosz had intended to convene a conference in Budapest in 1933 with the idea of reorganizing the original committee. At the request of the German representatives this conference was postponed, since the Third Reich had only just been founded at the time.

The German State Organization for Postgraduate Medicine in August, 1937, convened a Congress for Medical Postgraduate Work in Berlin, and this was attended by delegates from forty-four nations. It was decided to found an International Academy of Postgraduate Medicine. A preparatory committee was elected at this congress, consisting of the following: Professor Adam, Director of the Kaiserin Friedrich Haus, Berlin; Dr. Blome, mandated by the Reichs-medical Leader of postgraduate work, Berlin; Privy Councillor Professor Borst, Munich; Professor Raffaele Bastianelli, Rome; Colonel A. H. Proctor, Dean of the British Postgraduate Medical School, London; Professor Roussy, Dean of the Medical Faculty, Paris; and, more recently, Rector of the University of Paris. This committee convened a special congress in Budapest for the ceremonial constitution of the Academy. The Royal Government of Hungary and the city of Budapest sent a formal invitation to the Academy to hold the congress in that city. One hundred and six delegates attended and twenty States were represented.

### Aims and Machinery

On April 23, 1938, the International Congress appointed an International Committee and approved the constitution of the International Academy for Medical Postgraduate Work. As set forth in the constitution the objects of the Academy are:

- 1 To arrange for an International Congress on Postgraduate Medical Education to be held every four years
- 2 To render readily available to all nations the most recent results of scientific research and medical experience
- 3 To provide for postgraduate training of doctors in all countries and to furnish information to authorities and organizations working in the field of hygiene and public health

The Academy intends to pursue this aim by all expedient means—as for instance, by the exchange of teachers and students by planned tours of study, by the exchange and publication of literature. The headquarters of the Academy have been fixed in Berlin.

The International Committee consists of the delegates from the countries participating. The Presidential Board is composed of the President, five Vice-Presidents, and the members of the permanent bureau. The Vice-Presidents

each represent a different country. Professor Borst was elected President, and the following as Vice Presidents: Professor Raffaele Bastianelli, Rome; Professor M. Tieffeneau, Dean of the Faculty of Medicine, Paris; Colonel A. H. Proctor, Dean of the British Postgraduate Medical School, London; Professor Olivecrona, Stockholm; and Professor Arcze, Buenos Aires. Dr. Blome was elected President of the Permanent Bureau, with Professor Adam of the Kaiserin Friedrich Haus as General Secretary and Dr. Putz as Treasurer.

### Opening Session in Budapest

The opening session of the Academy took place in the Ceremonial Hall of the Hungarian Academy of Sciences. In addition to the delegates of the various countries, representatives of the Royal Hungarian Government, of the Municipality of Budapest, and of the universities of Hungary were present. The opening speech was delivered by Professor Borst of Munich. Then came the representatives of the Hungarian Government, followed by the Mayor of Budapest, Dr. Karl Szendy. After this there were speeches from the delegates of other countries: Professor Bastianelli of Rome, Professor Leriche of Paris, and Colonel Proctor of London. Dr. Blome reviewed the tasks and aims of the International Academy, and Professor Borst concluded with an address on "An Ideal for the Doctor."

The scientific proceedings took place on April 25, 26, and 27 in the Semmelweis Hall of the Royal Medical Society. Papers were read by Professor Olivecrona, Professor von Bergmann, Professor Szent Gyorgyi, Professor Leriche, Professor Bastianelli, and Dr. A. S. Parkes. Receptions were given by the Government, the Municipality of Budapest, and the Central Committee for Medical Postgraduate Work, as well as by the National Museum and the Royal Ministry of Agriculture. The President of the Academy gave a banquet for the members of the International Committee. The Balaton Committee invited the members on a trip to Balatonfüred. Several members also visited the provincial universities.

The establishment of the Academy, it is hoped, will benefit the health of every nation and simultaneously advance international friendship and collaboration among the medical profession in all countries.

The Duke of Gloucester presided at the statutory meeting of the Council of the British Red Cross Society on May 12. A report was received in regard to the XVIIth International Red Cross Conference, to be held in London from June 10 to 24, of which particulars appeared in the *Journal* of May 7 (p. 1022). A point of particular interest in a very full agenda is a proposal by the Society for the merging of the Geneva and Hague Conventions into one comprehensive Convention, dealing with land, sea, and air warfare. The Society has continued to assist in Red Cross work in Spain. At the beginning of the year, owing to financial stringency, the International Red Cross Committee asked national societies to undertake the preliminary work in connexion with inquiries regarding prisoners and refugees in Spain emanating from their own countries, and the British Red Cross Society is carrying out this work. In China the Society is co-operating with the Lord Mayor's Fund to make provision for the relief of the sick and wounded and to bring some relief to the suffering and destitute. At home, progress continues to be made in special training and organization to co-operate with the Government in preparation for defence against air warfare. The clinic for rheumatism continues to work at capacity and during 1937 gave a total of 145,922 treatments. The Blood Transfusion Service meets an urgent need and calls on the London service alone amounted in 1937 to 5,622.

## Reports of Societies

### RADIUM FOR CARCINOMA OF THE VULVA

A meeting of the North of England Obstetrical and Gynaecological Society was held in Sheffield on March 18. Dr FRANK ELLIS, medical director of the Sheffield Radium Centre, read a paper on the radium treatment of carcinoma of the vulva. Before the meeting he demonstrated a series of cases in which complete healing of primary vulval growths had been obtained without necrosis by the use of uniform irradiation.

Dr Ellis said that the radium treatment of carcinoma of the vulva had been generally discredited in the past owing to the high incidence of both radium necrosis and local recurrences. The introduction of certain modifications of the usual technique, with the object of obtaining a more uniform irradiation of the growth had transformed the outlook for radium therapy, so that in his opinion it could now compete with surgical measures in the management of this condition. The first and perhaps the most important, modification had been the insistence upon nursing the patients in the same posture as was adopted for the insertion of the radium. The radium needles then retained their proper spatial relationships throughout the treatment and undesirable crowding after the return of the patient to bed had been avoided. Where the growth was at the anterior end of the vulva the needles were inserted with the patient in the supine position, where the growth involved the posterior end of the vulva the left lateral position was adopted, the patient being nursed in the same position. If the entire vulva was involved the needles were inserted and nursing carried out with the patient in the lithotomy position.

When needles had to be placed on the surface of the growth sorbo rubber pads were used to protect adjacent skin surfaces and to keep the needles at a known distance from the growth. After the needles had been inserted a perforated rubber dressing was placed over the vulva and eusol irrigation practised twice daily, an indwelling catheter was necessary. Dr Ellis had found his results were best when all the needles were placed 1.5 cm apart. The theoretically better distribution of the radium with the periphery of the growth receiving half as much radiation again as the centre—that is with the peripheral needles only 1 cm apart—had not given such good clinical results. The total dosage ranged between 4500 and 7000 roentgen units. Where interstitial irradiation of the glands was necessary two planes of radium had to be employed if any of the glands had a diameter of more than 1 cm, these planes were 2 cm apart. Important details in the after treatment were the avoidance of hot baths and ointments. For the desquamation stage gentian violet was the best application. Moist desquamation was treated with 0.5 per cent silver nitrate solution. Necrosis and residual carcinomatous areas called for excision.

#### Results of Treatment

The cases treated fell into five stages, to stage I belonged the operable primary growths, to stage II the operable primary growths with mobile glands, to stage III the operable cases, to stage IV the cases of recurrence after treatment, and to stage V the hopeless cases. In 1935 nine cases were treated, the three patients with stage I growths were still alive and free from disease, the other six patients died. In 1936 fourteen patients were treated, four cases belonged to stage I and were alive and free from recurrence, two of four stage II cases, the one stage III case and one of the stage IV cases were alive. In discussing the choice between radium and surgery Dr Ellis pointed out that both

methods had their successes and failures. Radium had the advantage over surgery in the absence of shock and of the mortality, minimal damage to the urethra and of wider application to advanced cases. Operation avoided necrosis, there was possibly less subsequent discomfort, precancerous tissues were removed, and there was the possibility of removing affected iliac glands.

D. J. F. STACEY (Sheffield) referred to a paper which he had previously read before the society condemning the use of radium in the cases in view of the seemingly inevitable radium necrosis which had always called for secondary excision of the vulva. Since the introduction of Dr Ellis's technique his views had changed. He had no doubt but that in certain cases radium therapy was now the method of election. The paper was also discussed by Professor W. GOUGH and Mr PERCY MALPAS (Liverpool).

#### Pregnancy and Labour after Repair of Prolapse

Mr BRYAN WILLIAMS (Liverpool) read a paper on pregnancy and labour following operations for prolapse. His attention had been drawn to the problem by the occurrence of a case of severe and almost total dyspareunia due to cervical stenosis following such an operation. He had since seen seventy-two cases of pregnancy following this type of operation, in sixty-two of these all details could be obtained. Five patients had had a ventrofixation performed, no adverse effects were noted in subsequent pregnancies. Thirty-seven patients had had a vaginal repair combined with amputation of the cervix. The operations had been performed by fourteen different surgeons. These patients had a total of forty-nine pregnancies after operation. These figures were too small to decide the question as to whether amputation of the cervix lowered fertility, but they did allow the conclusion to be drawn that the operation was by no means a sterilizing procedure as some authors had claimed. In one case fertility appeared to be increased after the operation. Of the forty-nine pregnancies no less than twenty-eight or 68 per cent ended in abortion or premature labour. Comparison of this figure with the results of pregnancies following vaginal repair in which the cervix had not been touched showed that the factor responsible for the premature termination of pregnancy was the amputation of the cervix. In this latter group of pregnancies following simple colporrhaphy, only two ended in abortion. Twelve of the patients had had perineorrhaphy alone performed, eighteen pregnancies occurred after this operation and sixteen of these went to term. In eleven instances instrumental delivery proved necessary, and fresh lacerations occurred. Taking all the patients in the series in whom the perineum had been repaired, only 29 per cent had a normal delivery without a fresh laceration.

Could anything be done to improve these results? In the speaker's opinion the solution would appear to lie in the avoidance as far as possible of extensive cervical repairs in women of child-bearing age and the increased use of episiotomy early in the second stage in cases in which a previous plastic vaginal operation had been performed. Episiotomy had to be done early if the maximum advantage was to be derived from its use and primary healing ensured. Episiotomy was essential in all cases in which a complete perineal tear had been previously repaired.

#### MEDICAL EDUCATION IN THE EAST

At the annual meeting of the Manchester Medical Society held on May 4, after the annual reports had been read and officers and committee elected, Sir RICHARD NEEDHAM delivered an address on "Observations on Medical Education in India, Ceylon, Singapore and Hong Kong."

He said that the benefits of Western or scientific medicine had been extended throughout India and the Crown

Colonies in the East Yet large tracts and millions of inhabitants were dependent on the aid and comfort provided by native practitioners of the ancient systems of indigenous medicine From an account of the early development of scientific medical education—first of an elementary type and later of an advanced type—and the emergence of two grades of practitioners, licentiates and graduates, he wondered whether the time had come to adopt only one—the advanced or graduate type With the increase in medical schools (elementary) and colleges (graduate) the congregation of both grades of practitioners in the towns had made competition unbearable, with important effects on medical ethics The whole position should be reviewed by the recently established Medical Council of India The curriculum provided by the Indian medical colleges was sketched stage by stage in general terms It had been organized from the first and planned in a general way on lines as adopted in Great Britain, and had so continued The opportunities for clinical studies and research were unsurpassed The teaching institutions, whether schools, colleges, or hospitals, were initiated by the Governments, and in one way or other their continuation and maintenance are provided by Government—the object being to provide an agency to extend scientific medical aid to the peoples This was equally so in India, Burma, Ceylon, Singapore, and Hong Kong The cost of providing first-grade medical education, involving an ever-increasing budgetary grant from official sources of Government, had meant delay and hampered progress Except in India there was only the graduate grade of education, since the elementary grade had been abolished In conclusion Sir Richard Needham discussed the effects of Government control, social customs, local conditions, climate, distances between colleges, and consequent tendency to isolation

#### FORTY YEARS' PROGRESS IN MEDICINE

At a meeting of the Mid-Staffordshire Medical Society on May 3 Professor F S LANGMEAD of St Mary's Hospital gave an address on "Retrospect and Prospect in Medicine"

Professor Langmead dealt with the progress of medicine during the last forty years—the period covered by his experience It was fallacious to estimate progress by some outstanding discovery, no matter how important A truer conception could be formed by considering the steady increase of knowledge over the whole field He viewed many of the more important extensions of medical knowledge and procedure, and emphasized particularly the contrast between radiology and biochemistry forty years ago and to-day In his opinion the advance in radiology had contributed more to better diagnosis and treatment than had any other factor Its importance was rivalled only by that of biochemistry He looked to biochemistry for an understanding of the soil as distinct from the seed of disease, or immunity, and of diathesis, though those were fields to be cultivated by tools not yet forged

#### The Growth of Specialism

Professor Langmead then referred to the necessary growth of specialism which had taken place The body of medicine being sliced vertically according to diseases and transversely according to ages had become a sort of minced meat of which each specialist digested his own small piece The advantage of specialization was obvious but there were attendant drawbacks By intensive study of one small part more and more truths emerged from a context growing ever dimmer The disadvantages could be sensibly reduced if specialization were only permitted after a reasonable experience of general medicine and surgery had been acquired after qualification He thought that the faculty of absorbing all that could be

learnt through the eyes, the fingers, and the ears had weakened by desuetude in the last forty years, and that if cut off from modern methods the young physician would be less accurate in the estimation of a case than were his teachers Science had separated more widely from art and the classics "Little Latin and less Greek" had often become "No Latin and no Greek and very little English as well"

The immense progress made in medicine and the growth of the many special subjects had laid a heavy burden on the student, who was able to give less study to individual cases in the wards than was customary forty years ago So many courses of instruction were required by the General Medical Council and the examining bodies that there was little time to think or to correlate To ease the burden there were but two alternatives a longer period of study, or curtailment of the subjects of less immediate value The latter would be a serious step to take Important committees had recently spent much time over the problem and had ruled out extension of the curriculum as being impracticable Being left with the problem of a quart which had to be fitted into a pint pot, they had added a few ounces to the volume, while the pot was a pint still He concluded by indicating that a revolution had quietly occurred in the status of the profession in relation to the State It appeared that in the near future four out of every five of the population would come under a scheme of State medicine Two things he held to be essential if medical progress were to continue unchecked individual liberty for the doctor, unhampered by unnecessary reports and explanations and with freedom to do his best for the patient in his own way, even though that might be unorthodox, and retention of the great teaching hospitals, with their high tradition of service, experiment, and instruction, even if they should need the financial assistance of the State

## Local News

### IRELAND

#### Air Raid Precautions in Northern Ireland

For some months past the St John Ambulance Association has been responsible for educating and instructing the public in the necessity for and the means of attending to casualties occurring as the result of air raids The Ministry of Home Affairs has now appointed Colonel T C C Leslie, AMS, to be medical instructor, and instruction of doctors, dentists, and veterinary surgeons will now proceed during the coming months The large shipbuilding yards, aircraft factory, and numerous linen factories, as well as the other industries, of Belfast would provide an objective for hostile aircraft in the event of war, and the authorities are well aware of their responsibility in the matter The air raid precautions officer of the Ministry will co operate with the instructor and the branches of the medical profession in keeping abreast of the developments in other centres, and be in a position to advise local authorities as well as industrial establishments as to the best means of protection

#### Royal Maternity Hospital, Belfast

The recent annual meeting of the Royal Maternity Hospital, Belfast, was the occasion for a record of a successful year's work The number of patients has increased both within the hospital and in the hospital districts Lady Clark took the opportunity of congratulating the hospital upon its valuable services to the community of Northern Ireland and appealed for financial support to meet the annual deficit Reference was made

to the new department for paying patients which is to be named Johnstone House is a tribute to the long connexion with and valuable services rendered by Sir Robert Johnstone to the hospital and which it is expected will be in operation within a few weeks. It will cater for those members of the community who find difficulty in obtaining the type of accommodation which their means allow. The unit contains fifteen beds with an attached nursery for babies and a well equipped theatre and delivery suite. Cubicles and single rooms are provided.

#### Ulster Hospital for Women and Children

The annual report of the Ulster Hospital records a year of increased activity. The number of beds now available is 116. The total expenditure for the year amounted to over £8,000 to meet which some £600 from a number of donations was added to the ordinary income from investments and subscriptions. That this hospital in the east of Belfast fills a very definite place in the lives of the people of the district is clear from the numbers attending the hospital. In the children's department there were 9,697 new cases and 42,240 attendances; in the gynaecological department there were 2,549 new patients and in the obstetric unit 116 cases.

## ENGLAND AND WALES

#### Education in the Open Air

At the opening of the Havling Island Open Air School under the Tottenham Local Education Authority Mr. Kenneth Lindsay, Parliamentary Secretary to the Board of Education, said that it was now just over thirty years since the movement towards the open air treatment of delicate children which originated on the Continent resulted in the establishment in this country of the first open air schools at Plumstead, Hailuay, Bradford, Norwich and Sheffield. The number of these schools had now increased from seven in 1910 to 133 to-day with accommodation for over 16,000 children and 33,200 children passed through these schools last year. The open air school was not merely a school in the open air, it comprised a way of life and a system both of educational and medical supervision characterized by fresh air and sunlight, a proper and sufficient diet, adequate rest, a hygienic regimen from regular bathing, to participation in formal physical training, medical treatment, individual attention and special educational methods. More and more children in our complex modern civilization were finding it difficult to get the proper amount of sleep for their age under restful conditions and it was a healthy rule in open air schools that one and a half to two hours in the middle of the day shall be spent by the children in the horizontal position. The children attending open air schools, said Mr. Lindsay, are very carefully selected but we should be careful not to look upon the principles of open air education as applicable for that reason only to a special class of children who are suffering from anaemia, debility or other conditions of sub-normal health. The ideals practised in the open air school should be spread among the whole of the school community.

#### Medical Students Conference

The Medical Students Committee of the National Union of Students in co-operation with the Irish Students Association and the Scottish N.U.S. has arranged the second annual conference of representatives of medical student societies to be held in London from July 12 to 15. Accommodation (bed and breakfast) will be provided for men delegates at the University of London Hostel Connaught Hall, Torrington Square, W.C.1 and for women

delegates at Courtauld House, Byng Place, W.C.1. The general subject for discussion is "The Training of the Doctor." The conference will open with a dinner on the evening of Tuesday, July 12, at Pinolis Restaurant, Wardour Street, at which the chief guest will be Lord Horde. The speaker at the first meeting on July 13 will be Sir Henry Brackenbury, chairman of the Committee on Medical Education of the B.M.A. In the afternoon Professor C. A. Lovatt Evans will speak on "The Relation of Pre-clinical Subjects to the Medical Curriculum as a Whole." The speaker at the morning session on July 14 will be Mr. Eric Pearce Gould and in the afternoon Professor W. W. Jameson will open a discussion on "The Teaching of Preventive Medicine." The whole of Friday, July 15, is set apart for clinical visits to the Middlesex Hospital, University College Hospital and the Royal Free Hospital. The conference fee which includes the cost of bed and breakfast for the nights July 12 to 14 inclusive and of the opening dinner is 30s a head. The fee for London delegates not requiring accommodation is 10s. Every student society may appoint 10 delegates to the conference and it is entitled to send further members as observers. The discussions under the general title of "The Training of the Doctor" will be based upon the reports on medical education issued by committees of the British Medical Association and the General Medical Council. In order that the discussion at the London conference may be well informed, medical societies are asked to buy copies of these reports and to get them examined by a committee or discuss on group so that the representatives may be in a position to put forward carefully considered views.

Medical societies in Czechoslovakia, Hungary and Yugoslavia offer facilities for the exchange of medical students during the summer months. Students interested in these exchange offers should apply as soon as possible to the Secretary, Medical Students Committee, 3 Endsleigh Street, London, W.C.1.

#### L.C.C. Nurses' Introduction of 96-Hour Fortnight

The evidence recently submitted by the British Medical Association to the Interdepartmental Committee on Nursing Services (*Supplement* May 14, p. 301) recommends *inter alia* a maximum working period of 96 hours a fortnight exclusive of meals taken out of the ward but inclusive of meals taken in the ward and the time devoted to lectures. On almost the same day on which this evidence was published the London County Council adopted proposals for the reduction of hours of duty of its nursing staff from 54 a week to 96 a fortnight at all hospitals. The hours of duty worked by nurses in the hospitals taken over by the Council in 1930 from the Metropolitan Asylums Board and the boards of guardians have varied considerably. In the Board's hospitals the hours of duty were 25, 56 and 58 for day and 60 for night. A 96-hour fortnight for nursing staff in the mental services was introduced in 1919 and the Hospitals and Medical Services Committee after reviewing the situation has come to the conclusion that the time has arrived when all the general and special hospitals should have the same duty system. It will enable the split-duty system which has been the cause of much dissatisfaction among nurses to be abolished and from every standpoint alike—the welfare of the nurses, the improvement of the standard of nursing and the care of the patients—it is considered that a 96-hour fortnight and a straight shift system will be a highly progressive step. The alteration will necessitate an increase of about 1,000 units of nursing staff. It is also proposed to introduce several other changes of a minor character. The best arrangement for night duty is considered to be a 10½-hour shift on nine nights in fourteen. The time allowed each night for meals will be one hour and twenty minutes and the arrangement will obviate the necessity for shifts changing over during the night or very early morning hours. It is proposed as far

as possible to eliminate lectures for staff while on night duty, but where this is unavoidable a special morning course will be provided for the staff concerned. The 96-hour fortnight system will apply to the fever hospitals, though it is feared that during epidemic periods it may be impossible to provide for a sufficient number of staff to enable the adequate nursing of the patients to be carried out on that basis, and it may be necessary temporarily to revert to the 54-hour week. Certain additional facilities and amenities are to be provided for the resident female nursing staff. Facilities have already been granted to all nurses other than probationers to have leave of absence from the hospital after duty every evening until midnight without having to obtain previous permission. Extension beyond midnight is not, as hitherto, to be the subject of a request to the matron, but to be regarded as normal freedom for trained staff. Certain facilities as to leave are also to be granted to probationer nurses. Members of the nursing staff are to be allowed to use gymnastic apparatus in the massage department in the evenings after the department is closed to patients. Rooms for games, theatricals, and the like are to be provided, nurses are to be allowed to have breakfast or supper in bed on days off or evenings off, residential accommodation at country or seaside hospitals for staff requiring convalescent treatment is to be extended. Finally, weekly periodicals are to be supplied to the staff common rooms. The change in duty periods will be made as from July 1, but in view of the fact that 1,000 nurses will have to be recruited it is evident that an intensive recruiting campaign recommending nursing under modern conditions as a career for young girls will have to be undertaken if the scheme is to be fully effective within a reasonable time.

## INDIA

### Association of Surgeons in India

The meeting to inaugurate the Association of Surgeons in India, to which previous reference was made in these columns on March 26 (p. 697), is to be held in Bombay in October. The surgeons of Bombay have formed a reception committee and are making the local arrangements. It is now announced that Dr. M. D. D. Gilder, the Minister for Public Health, Bombay, will preside and will deliver the inaugural address. Discussions will be held on ileocaecal tuberculosis and carcinoma of the tongue. It is hoped that papers on other subjects will also be contributed by surgeons from other parts of India, and that the new association will find itself in a position to publish a periodical devoted to surgical subjects. Further information may be obtained from the organizing secretary of the Association of Surgeons in India, "Binfield," Kilpauk, Madras.

### Infantile Mortality in Madras

The Director of Public Health, Madras, in his report for 1936 states that although there has been an improvement in the registration of vital statistics, the fact remains that unless and until qualified medical agencies are established in the rural areas and the villagers are made to realize that the recognition of their own existence and that of their families is linked up with prompt reporting of all vital occurrences, a high degree of accuracy of returns cannot be expected. Financial considerations may not permit the employment of such agencies throughout the Presidency, but the utilization of the services of the existing subsidized medical practitioners of whom there are over 400 would undoubtedly help very much in obtaining more accurate returns. It is not at present obligatory for these medical practitioners to take up public health work yet apart from being the very foundation of all

public health activities, such accurate vital records have a very high civic and legal value. Lieutenant Colonel Ganapathy further states that no person should have a legal existence unless there is a birth certificate granted by the proper authority, containing all necessary details, while no dead body should be subjected to cremation or burial until a proper death certificate has been obtained. Deaths among children under 1 year during 1936 numbered 272,393, the infantile mortality rate decreased from 178.47 per 1,000 in 1935 to 164.04 in 1936. More than 50 per cent of the infants died within one month of birth. The death rates for all age groups in rural areas are lower than those for the urban areas, except in respect of deaths during the first month of life. The neo-natal mortality rate is influenced chiefly by unfavourable maternal conditions and the various adverse factors which come into play during the confinement and immediately afterwards. It should be expected, therefore, that in rural areas with hardly any maternity service the neo-natal mortality rate will be higher than in urban areas. In spite of this higher neo-natal mortality rate the total infant mortality rate in rural districts is distinctly lower than that for urban areas. Unfavourable environmental conditions such as congestion, overcrowding, poor sanitation, and defective drainage generally obtaining in the towns are certainly inimical to infant life. Except during the child-bearing period the mortality rates among females in Madras are lower than are those for males. The raised death rate among women during the child-bearing age indicates the necessity for having a well-organized maternity service. In both urban and rural districts there is a high death rate in infancy, but it falls rapidly, reaching a minimum in the age group 10 to 15 years. Colonel Ganapathy adds that the high birth rate and vital index in Madras indicate the rapid growth of the population.

### The Anti-tuberculosis Fund

Reference was made in this column on December 11 last to the launching of a fund to combat tuberculosis in India, to be called the King-Emperor's Fund. This organization will concern itself with the prevention and treatment of tuberculosis throughout India, where deaths from that disease are estimated to number some half a million every year. Its aim is to encourage and expand the work of existing anti-tuberculosis organizations, and 95 per cent of the money raised will be spent in the areas which contribute to the fund. Committees have been formed in the Provinces and many States in India for the collection of donations to the fund. In England the High Commissioner, Sir Feroz Khan Noon, has issued an appeal for help, and a regional committee has been set up in London to bring the work of the fund to the notice of India's sympathizers and well-wishers in this country. "Their Majesties have shown a personal interest in this noble project. Its object is to establish and finance an All-India organization for the prevention and treatment of this silent enemy of my countrymen."

### A Diploma in Obstetrics and Gynaecology

The Council of the College of Physicians and Surgeons of Bombay, at its meeting held in January, 1937, decided to institute an examination for a diploma in obstetrics and gynaecology, and appointed a committee to draw up regulations and a syllabus of study for that examination. This committee submitted its report to the meeting of the Council on March 11, 1938. The report was approved and adopted, and it was resolved to hold the first examination for the Bombay Diploma in Obstetrics and Gynaecology (D.G.O.) in August 1939. It will be open to all practitioners registered with the Bombay Medical Council. Copies of the regulations may be obtained from the secretary of the College, 19, New Market, Bombay.



# Correspondence

## Thyrotoxicosis

SIR—My friend Mr Peter McEwan puts us all in his debt for the brilliant statistical and clinical study of thyrotoxicosis published in the *Journal* of May 14 (p 1037). He—no doubt with malice prepense—courts controversy on many of the issues he raises but I have too much regard for your spice to do more than touch on two matters which I think are of some importance.

Mr McEwan quotes me (p 1040) as attributing the increase in the death rate from thyrotoxicosis in recent years to iodine medication but he does not make it as clear as I should have liked that the increased mortality is due as I hold not to any great tendency for iodine to initiate toxic changes in simple goitre but to persistence in treating established thyrotoxicosis by iodine in spite of its failure to cure or even permanently to ameliorate the condition. The pathetic faith in iodine therapy is not by any means always inculcated by the physician or the patient's private practitioner since it is widely held among the laity that iodine cures goitre. Unfortunately iodine is not on the official schedule of poisons though I believe it has done more harm than some which appear on that list and can be purchased in any quantity by anybody. Mr McEwan also refers to that most controversial problem thyrotoxicosis in the absence of an enlarged thyroid gland. I am sure he will forgive me for pointing out that the photographs he publishes prove nothing since many goitres which are invisible in the very best photographs are nevertheless quite definitely palpable. I do not believe that thyrotoxicosis can exist with a normal thyroid gland—that is normal both in size and structure. Mr McEwan states that in the case quoted the gland was "anything reduced in size yet he omits to tell us anything of its structure—an omission which seems odd in view of its critical importance. He says that in such cases the diagnosis must be clearly established but that is the crux of the whole matter and I should be glad to hear how it is done in Bradford. In London I am still often in grave doubt as to whether a diagnosis of thyrotoxicosis is or is not substantiable. I am often urged to operate on the type of patient who has tremor nervousness tachycardia etc but without any palpable goitre. On a few occasions when the basal metabolic rate and cardiac investigations appeared to confirm the diagnosis of masked hyperthyroidism I have in fact exposed the gland only to find that it had a normal appearance and consistence. In these cases I have excised a portion of gland tissue for investigation and the pathologist's report has been in all "normal thyroid tissue"—I am etc.

London W 1 May 16

Cecil A JOLL.

## Psoriasis

SIR—I read with interest Dr John T Ingram's article on the present position as regards psoriasis (*Journal* April 23 p 881) particularly his remarks on aetiological factors. In the period 1931 to 1934 I made in Glasgow a study of this interesting disease. May I say that Dr Ingram puts the matter aptly when he writes "It is as true to say we do not know the cause of psoriasis as it is to say that we do not know the cause of any other constitutional reaction—for example eczema or dyspepsia. With the exception of Dr Ingram's and Dr Barber's

valuable contributions on pustular psoriasis and acrodermatitis continua vel persians little has appeared in the literature of this country during the past twenty years. It is to the credit of British dermatologists that having had the improved facts to add to our knowledge they have not confused the issue by putting forward hypotheses based on flimsy foundations. I wonder however if psoriasis is as common a disease as would appear from statistics compiled in the skin departments of our hospitals. Radcliffe Crocker (1905) gave the incidence as compared with all skin diseases as 7 per cent in his hospital patients. Abraham for the period 1900 to 1904 found an incidence of 7.4 per cent. Both these figures are for London. In Glasgow in 1894 McCall Anderson found the percentage to be 8.6 in his hospital patients. Dr J Ferguson Smith has kindly allowed me to give the results arrived at for the ten years from 1924 to 1933 in the Glasgow Royal Infirmary. Out of a total of 39,963 patients attending for the first time at the out-patient department for diseases of the skin 1,796 (4.5 per cent) were diagnosed as cases of psoriasis. I cannot from the available information explain the discrepancy between McCall Anderson's figure and that now given for 1924 to 1933.

Nothing is known of the prevalence of psoriasis in the population generally. As medical officer to a large bank in Glasgow I examined in 1937 over 100 new employees or individuals seeking employment. Most of the persons were girls between 14 and 21 years of age—at which period psoriasis is very apt to appear for the first time. In no case did I see the typical lesions of psoriasis. It must be admitted that only when varicose veins were present or there was evidence of rheumatism or rickets in other parts were the naked legs and knees examined. In every case however the scalp the extensor surfaces of the elbows and the chest and back were seen. The only election of these cases was that the lady supervisor before medical examination rejected applicants who were obviously not cleanly. There is however no evidence that psoriasis is more prevalent among the unwashed. It may be argued that persons with a chronic skin condition would be unlikely to apply for a job in a bakery especially if they knew the case was a medical examination. I do not think this is so as I seldom visit the factory without referring to their own doctor one or more cases of acne vulgaris and or seborrhoeic dermatitis generally visible when the patient is fully clothed and sometimes extensive. In my opinion the predominance of female employees is not a factor explaining the absence of psoriasis as in 1924 to 1933 in the Royal Infirmary the sex incidence was 59.4 per cent females and 40.6 per cent males. The female psoriatic is more likely than the male to apply for treatment of an eruption which from the patient's point of view may make inadvisable the wearing of short sleeved garments.

The number of these bakery employees is at present too small to warrant any conclusions being drawn from their investigation. It might be of interest, say in seven years time to put on record the incidence of psoriasis in these young people as all employees under 21 years of age are examined by me annually. I have to thank the directors of Messrs Bilsland Brothers Ltd for permission to make these observations and Miss Duncan the supervisor for her interest in the medical welfare work of the bakery—I am etc.

Glasgow W.2, May 10

W S W GUTHRIE.

## The Planning of Maternity Hospitals

SIR—Like your correspondent Dr Henry H MacWilliam (May 14 p 1068) I was much surprised to read in the *Journal* of April 30 a criticism of the recommendation in the final report of the Departmental Committee on Maternal Mortality and Morbidity that new



maternity accommodation should, when practicable be associated with general hospitals and your statement that "it is now, however, generally accepted that this recommendation is not in accordance with the lessons of experience"

As a member of that committee and therefore jointly responsible for the recommendation in question, I wish to state that further experience, since the final report of the committee was issued in 1932, has only served to confirm the opinion I then held and which was in full accord with that expressed in the report. That opinion is based upon experience as a member of the staff of two maternity hospitals, one attached to a general hospital and the other not. My reasons for preferring the former are clearly set out in Dr MacWilliam's letter, and need not be mentioned again here.

To my mind there is no comparison between the facilities available in the two kinds of institution for diagnosis and treatment of the difficult or obscure cases with medical or surgical complications that are constantly turning up in an obstetric hospital. This is, of course, because one can at all times obtain the *early and continued* co-operation of the physicians, surgeons, clinical pathologists, radiologists, physical therapists, etc., who are colleagues on the staff of a general hospital. In an isolated maternity hospital these facilities simply cannot be supplied, and in consequence the interests of the patients must suffer—I am, etc.,

F J BROWNE

University College Hospital Medical School May 16

### Treatment of Placenta Praevia

SIR—Several interesting points arise out of Dr H G Oliver's account of his case of placenta praevia (*Journal*, May 14 p 1071). It is unusual that in such a case the head should be engaged twenty-eight days before term, and still more so that after labour had started and the membranes had ruptured a steady loss of blood should occur although the head was engaged in the pelvis. I find it difficult to understand, as, if the head was engaged, surely it was compressing the placental site of a praevia placenta. Cases of placenta praevia of the lateral or marginal type in which the patient is in labour rarely require any treatment beyond puncture of the membranes, and when the bag has already ruptured one would regard the situation as ideal without further treatment.

It would be a great pity if the advocacy of manual dilatation of the cervix followed by forceps extraction for such a case were left unchallenged as this treatment is frequently fatal. I know of three cases seen by me where it proved so. As has often been pointed out, manipulations involving the cervix which is unusually soft and vascular owing to the adjacent placenta praevia, are very apt to be followed by cervical laceration and haemorrhage, even when gently carried out. Dr Oliver, therefore, who obtained no cervical damage was not only skilful but also fortunate. In my view, when placenta praevia must be treated in the home the feasible lines of treatment to control haemorrhage are puncture of the membranes, the use of Willett's forceps and version. In this case, if I understand aright my reaction to the haemorrhage which occurred after the membranes had ruptured would have been to apply Willett's forceps.

I think that in many cases of placenta praevia it is possible to be reasonably certain of the diagnosis without vaginal examination, and so avoid this risk before carrying out Caesarean section—I am, etc.,

LEADS May 14

ANDREW M CLAYE

### "Gonococcus Antitoxin" for Gonorrhoea

SIR—With reference to Dr T Anwyl Davies's letter in the *Journal* of May 14 (p 1069) the main point at issue is how the extraordinary discrepancy between his results and ours is to be explained. Three things naturally suggest themselves: (1) that there was some difference in the "antitoxin" used by him and that used by us in respect of composition or of dosage; (2) that different criteria of observation were used in the two series; and (3) that the adjuvant treatment used by Dr Anwyl-Davies is responsible for the good results he claims even though in his first series of cases protosil or some allied substance was not used.

In our series treated by "antitoxin" alone, followed by urethral irrigations, it was shown beyond any doubt that this preparation was not only ineffective but positively harmful. Assuming that the "antitoxin" used by Dr Anwyl-Davies was identical with that used by us, and that the criteria of observation were similarly adequate in both instances, then the explanation for the divergent results must be attributed to the adjuvant treatment given by Dr Anwyl-Davies. The question then arises: Are the results obtained by "antitoxin plus adjuvant treatment in any way better than those obtained by the adjuvant treatment alone?" Unfortunately, the details of the adjuvant treatment used by Dr Anwyl Davies have not yet been stated. We have not yet availed ourselves of the invitation to examine the original case-records of Dr Anwyl-Davies's patients because we naturally expected that he would, in response to our inquiry, have given us the information we asked through the medium of your columns. It is rather difficult to understand why Dr Anwyl-Davies should have thought it incumbent upon us, before publishing our article, either to ask for his observations or to inform him of our experiences with the "antitoxin," even if it had been a "new product still in the early stages of investigation." This is hardly a correct description, since when our work was carried out this preparation was available for purchase in the open drug market, and was extensively advertised in the medical press (*vide Journal* July 10 1937, p 28, and also a full back page advertisement in Parke, Davis and Co's *Therapeutic Notes* September 1937). The material with which we worked at two out of three clinics was purchased in the ordinary way and was not provided by the manufacturers for research or clinical investigation purposes—we are, etc.,

E T BURKE  
J GABE  
A H HARKNESS  
A J KING

London, W 1, May 16

### Insulin for Schizophrenia

SIR—It is interesting to note that much the same arguments which fifteen years ago were raised against an important advance in psychiatry—the malarial treatment of general paralysis of the insane—are now being raised by Dr B H Shaw (*Journal* May 7, p 1026) against another advance, incidentally originating from the same mental hospital—namely the insulin treatment of schizophrenia. It is all to the good that those who have seen many new treatments come and go should reserve their judgment of this comparatively new one. It is sad, however, that so distinguished a psychiatrist should be under the misapprehension that insulin therapy is a

treatment a conception dropped some time ago by those familiar with the therapy in question. Dr Isabel Wilson in her official report published in 1936 doubted whether the insulin effect was properly to be classed with shock at all and suggested the more fitting title of high dosage insulin treatment. Since then it has generally been recognized that the element of shock does not predominate in insulin treatment and that hypoglycaemia rather than shock is the therapeutic agent.

As to the extremely dangerous nature of such a procedure closely verging on dissolution it is illuminating to watch the patients who have undergone such treatment in the morning playing tennis in the afternoon as a matter of routine. The fact that by now close on ten thousand patients have had insulin treatment indicates that Great Britain does not stand alone in the most regrettable tendency towards propagandism in relation to the treatment of mental disorder from the importation of psychoanalysis to the latest exotic. Is Dr Shaw right in describing insulin therapy as the latest exotic? Does not that distinction belong to the cardiazol therapy of schizophrenia which is now being widely used in this country?—I am, etc

London W 1 May 10

H PULLAR STRECKER

### Technique of Anaesthesia

SIR—In the *Journal* of February 5 (p 283) Dr Michael Cohen describes a case of tumour of the vocal cord following nasal endotracheal anaesthesia. In the report of this case there appears not the slightest indication for the adoption of this objectionable method of administering an anaesthetic. If an endotracheal anaesthesia be required there is only one reasonable method of introducing the anaesthetic tube, and that is by direct vision through a sterilizable laryngoscope. The passage of a tube through the nose which may be more or less obstructed and which is probably the site of growth of pathogenic organisms into the larynx or trachea which is liable to be abraded thereby is unjustifiable save in very exceptional circumstances. If it is desirable for the convenience of the operator not to have the tubes actually in the mouth then the upper end should be drawn out through the nose from the nasopharynx.

With reference to Dr G. R. Osborn's article 'Why Post anaesthetic Pulmonary Complications?' the two principal considerations in the administration of a general anaesthetic (apart from dosage) are (a) the maintenance of a clear airway and (b) the prevention of the entrance of foreign matter into the larynx, trachea, and lungs. This is of equal importance during the stage of recovery from the anaesthetic. Three cases stand out in my memory.

(1) A married woman about 27 years of age underwent a laparotomy for some non-infectious pelvic condition under open ether anaesthesia. About half way through the operation the patient whose breathing had been very wet became asphyxiated. I was requested to help the anaesthetist. The patient's tongue was drawn out and the pharynx was mopped out. Her colour improved and the operation was duly completed. Within a few days the patient developed some form of bronchopneumonia from which she took six to eight weeks to recover. This could not have been caused by septic emboli from the field of operation but was undoubtedly due to the anaesthetic.

(2) A middle-aged man of plethoric type had a radical operation upon both maxillary antra which were extensively diseased under intratracheal anaesthesia. Nothing untoward happened during the operation but about fifteen minutes later

I was called urgently to see him. He was a ghastly colour and his first glance appeared to be dead. His skin was very moist and he was making very feeble attempts at respiration. The patient was on his back and the tongue had doubled upon it. He had choked him. He recovered but had a subacute lung condition which lasted some months. This was not a septic aspiration pneumonia which one might have expected but some damage done by the anaesthetic was combined with the effects of the subsequent asphyxia.

(3) My knowledge of this case is obtained from reports of a coroner's inquiry published in the daily press. A young woman was submitted to a simple curettage under general anaesthesia. After being returned to the ward she vomited while still unconscious and was fatally asphyxiated by the vomitus.

Case 1 emphasizes the necessity for the maintenance of a clear airway during the administration of an anaesthetic. Cases 2 and 3 demonstrate the necessity for a clear airway during the recovery period. All these cases indicate the need for the use of some traction apparatus on the tongue during both the administration of the anaesthetic and the recovery period until the patient is fully conscious. It is common practice after the administration of an anaesthetic for the patient to be placed flat on his back with the head turned to the side. This is objectionable as it distorts the air passages and tends to interfere with respiration. Cases 2 and 3 indicate that the patient should be in a lateral posture the upper knee slightly flexed and the head on a low pillow (to prevent accumulations in the nasopharynx) with the face turned slightly down and some means of traction applied to the tongue. In this position provided also that the patient be under proper observation it is highly improbable that aspiration of vomitus or interference with respiration will occur. Apart from orthopaedic cases there must be very few in which this posture cannot be used. In this position any vomiting will place less strain on an operation wound than in the unnatural position of lying on his back with the head twisted to one side and the vomitus and secretions will be carried away from the larynx by gravity aided by the expulsive efforts of the vomiting. It is remarkable how often these simple and elementary yet important precautions are neglected—I am, etc.

ERNEST CULPIN

Brisbane, Queensland, March 10

M.B. CH.M. FRACS

### Divinyl Ether Anaesthesia

SIR—I would like to support Dr E. B. Grogono's suggestion (*Journal* May 14 p 1068) that more attention should be given to divinyl ether (May and Baker's vinesthene) an anaesthetic which is particularly suitable for use by the general practitioner anaesthetist because of the ease with which it can be administered, its safety and the absence of after-effects. It is important for the general practitioner that he shall not be required to purchase and to carry about expensive and complicated apparatus and the simplicity with which vinesthene can be used is greatly in its favour. To my mind the greatest advantage of vinesthene is the ease with which anaesthesia is induced. There is no struggling coughing, vomiting or any other of those undesirable features so commonly associated with induction by ether and in addition to this ease of induction its use appears to be safe.

I have found it particularly valuable in just those cases in which one would expect trouble with an ether induction as for example in the robust middle-aged or elderly man coming to hospital as an accident case or a surgical emergency. Gas and oxygen anaesthesia is hardly satisfactory in either of these

tion presents difficulties and chloroform is not very safe, but with the use of vinesthene these difficulties disappear. In order to avoid any special apparatus I have made use of apparatus already at hand. For the robust individual such as I have described I break three of the glass capsules (9 ccm) of vinesthene and empty them into a Clover's inhaler. The patient is told to take a deep inspiration, the mask of Clover's inhaler is placed over his face and he breathes out into the bag. The barrel of the apparatus is then turned fairly quickly to 2 and in about twenty breaths the patient is anaesthetized with quite remarkable ease. The anaesthetic can be continued for about ten to twelve minutes by allowing one breath of air in every four. Adequate relaxation is obtained, and in the majority of cases there is no bad after effect, so that the patient can go home.

Vinesthene is remarkably useful for the case in which gas and oxygen would not quite suffice—for example the patient (so often an ill and elderly man) admitted with acute retention of urine on whom it is proposed to perform suprapubic cystotomy. For such a case I make use of Clover's inhaler, which is joined in circuit to the ordinary Boyle's gas-oxygen-ether machine. In this case only two ampoules of vinesthene are emptied into the inhaler. The gas and oxygen are then turned on, the facepiece applied, and the barrel turned fairly quickly to 2. In about fifteen or twenty breaths the patient is anaesthetized, and the operation can proceed. A vinesthene-gas oxygen anaesthetic is then maintained with adequate relaxation without the addition of ether.

It is however particularly for the operation of Caesarean section that vinesthene is so very valuable. In these cases I place the vinesthene in the chloroform bottle (having first emptied out the chloroform) of a Boyle's apparatus. If the operation is likely to be short I empty 25 ccm of vinesthene into the bottle; if long 50 ccm. I do not attempt the induction until the surgeon is ready to operate, because vinesthene is very volatile and is quickly used up. The induction is rapid and the surgeon is not kept waiting. I turn on the nitrous oxide-oxygen with the Boyle's machine (in the sight feed-bottle oxygen is bubbling through two holes the nitrous oxide through five holes) and blow the mixed gases over the vinesthene. I find that by this means a light but adequate anaesthesia can be maintained. In some cases I have found it desirable to add a little ether just before the surgeon stitches up the peritoneum but it is not necessary in every case, and even when it is necessary I find that all that is required is to turn on the ether bottle for twenty breaths. Vinesthene appears to have little or no effect on the uterine muscle, so at the end of the operation the uterus will rapidly contract, and there is less risk of haemorrhage.

Vinesthene is most suitable for very ill patients, the neglected cases of intestinal obstruction or those cases where an anaesthetic is required for the treatment of patients gravely injured in some motor accident. With this type of emergency surgery premedication is almost out of the question and it is extremely difficult for those who are not very expert anaesthetists to obtain and maintain adequate anaesthesia with nitrous oxide and oxygen but the addition of vinesthene to the gases relieves the anaesthetist of most of his difficulties and the surgeon of many of his anxieties. In these cases I usually place vinesthene in the chloroform bottle of the Boyle's machine, as already described but where the Boyle's apparatus is not available I see no reason why vinesthene should not be used in a Shipway or some similar apparatus. Vinesthene is a non-irritating anaesthetic and it should have a place in chest surgery although my own experience of its use in this particular branch of surgery has been confined to the opening and draining of empyemata.

I have been using vinesthene for about a year as a general practitioner anaesthetist, and as such, of course, my experience is limited but I have noticed with regret that there has been little mention of this anaesthetic in the medical press. I venture to hope that some of our expert anaesthetists will carry out further work on this extremely interesting and valuable agent—I am, etc.,

New Barnet, May 14

JOHN ELAM

## Origin of Cancer

SIR—Dr Cramer's wide outlook on the problem of cancer makes his paper published in the *Journal* of April 16 (p 829) refreshing reading. A cure for cancer must remain as far off as ever so long as treatment and research are based on the assumption that cancer is a localized disease. The primary lesion can no more be the whole story of cancer than the primary chancre can be the whole history of syphilis. Complete removal or destruction of the chancre, however skilful, can never cure syphilis, and so complete destruction of the primary growth can never cure cancer. Dr Cramer's remarks show the importance of conserving the power of resistance. Unfortunately, deep therapy does the opposite by putting a severe strain on the patient, who is already in a low state. Some survive treatment, many do not.

I know of patients who have been told that the treatment will do no good unless they are burnt. I agree with the late Mr Furnivall when he suggested that patients should be warned of the post-radiation reactions. That the medical profession may form a rough idea as to the present day value of deep x-ray therapy in cancer I suggest that the larger hospitals should publish the composite total of all cancer cases treated by this method, and how many of these are symptom free at the end of a three-year period, a period of five years would possibly be too severe a test—I am, etc.,

London, W 1, May 13

S GILBERT SCOTT

SIR—The suggestion concerning the genesis of malignant growths brought forward by Dr H W Eddison in the *Journal* of May 14 (p 1069) appears to me to be contradicted by facts, both of human physiology and of animal and plant biology. His separation of the surface of the body of man and other land inhabiting organisms into two categories—aerial and aquatic—whereby contact is effected with the two corresponding types of environment however original, is scarcely legitimate. Protoplasm during all the million years of its evolution and differentiation, whether composing the ganglia of a jelly fish or the brain of a human being, has never emancipated itself from the thralldom that cradled its birth—a watery environment, direct contact with the atmosphere spells its death.

This very significant point was stressed in 1903 by two independent observers—A B Macallum and R Quinlan. The latter, in what has been termed the 'Quinlan hypothesis,' likened man to a marine aquarium filled with sea water resembling in salinity the early ocean in which his lowly animal ancestors had their being. As the various forms of living creatures, invertebrate and vertebrate, left the water they took with them, so to speak, this saline fluid, sealed up in their bodies by membranes. In such physiological salt solution each living cell of their descendants' bodies has ever since been immersed. Even the "naked" living matter—such as the plasmodium of the familiar slime mould (*Myxomycetes*) on decaying vegetation, the surface cells of the cornea or of mucous membranes—only makes an apparent contact with the air. It is to live its actual contact must always be with a saline solution. The stomata "guard cells" of leaves, the air-cells of our lungs, etc., are powerless to deal directly with gaseous oxygen for they can only carry on their metabolic processes in and through the mediation of water. At bottom even our respiration is aquatic for the oxygen we draw down as a gas into our lungs is useless until it becomes dissolved in water. Every living cell, whether of the most case hardened xerophilous or

growing from the sun scorched sands of the desert or of the pulpy little book worm *Trochus divinator* that spends the greater part of its mischievous life bowing on the dry as dust leaves of old volumes can only remain actively alive while bathed in a physiological salt solution. All metabolism whether pertaining to the internal contents or the surface area of the living cell takes place in an aquatic medium and there is in strict truth no surface of such a cell that can be regarded—as Dr Eadison suggests—as transitional between the aerial and aquatic state.

In 1896 Sir Archdall Reid maintained that the cancer cell was a reversion to the ever-dividing primordial type of cell a view which as much of this most interesting correspondence in your columns has indicated is at long last coming into its own—I am etc.,

CHARLES M. BEADNELL  
Surgeon Rear Admiral

Egham Surrey May 16

### Prevention of Cancer

SIR—It afforded me great pleasure to read Dr Alfred C Jordan's plea for a natural diet in the prevention of cancer (*Journal* April 30, p. 973). We have heard it stated by a certain research body that food has nothing to do with the occurrence of cancer but these conclusions are based on ill founded experiments which have but little bearing on the dietary of human beings. Dr W. Cramer in his recent article (April 16 p. 829) stressed the fact that cancer is a preventable disease and certainly a study of the incidence of occupational cancer due to such agencies as tar, paraffin and mineral oils shows that correct supervision of those working with carcinogenic substances can diminish if not altogether prevent the occurrence of that type of cancer. The more civilization progresses the more do we use carcinogenic hydrocarbons which have their origin mainly in the destructive distillation of coal, wood oil and even tobacco. If we protect the worker with carcinogenic substances from their poisonous actions surely we must protect the community from the everyday use of similar substances in diet. The use of carcinogenic foods is much more widespread than one might at first imagine. Do not such articles of food as the homely kipper, smoked ham, roast chicken and fried food in general contain carcinogenic hydrocarbons? Although the ingestion of extrinsic carcinogenic substances may be a factor in producing a local lesion such as a gastric carcinoma let us not forget that these substances have a general toxic effect which weakens the body's defences to intrinsic carcinogens—for example, oestrin.

Beck (1927) produced experimental tar cancer in animals the occurrence of which was much greater when intravenous injections of tar were given simultaneously. Fischer and Wasils found that small doses of arsenic likewise increased the occurrence of experimental cancer while Ebner, Klinge and Wacker (1925) noted that experimental tar cancer tumours appeared earlier and had a higher incidence in mice which had been fed on cholesterol than in control animals. A revolution in the feeding habits of civilized peoples is inevitable and a cancer mortality of 1,600 per million living in Great Britain calls for drastic and immediate action. After the indictment of amidopyrine as a cause of agranulocytosis and the placing of this substance on the poisons schedule its deadly effects immediately became noticeably rarer. Did not a Government of our time place a large tax on alcohol thereby diminishing the occurrence of cirrhosis and other sequelae of alcoholism? Similar drastic restrictions must be made sooner or later in respect of many common foodstuffs which are known to be carcinogenic and some far seeing

Minister of Health will doubtless consider such measures or enjoining a fitter Britain. Medical men could likewise further propaganda for the prevention of cancer and adopt such slogans as "Cancer of the stomach awaits you if you season your food and don't spoil your food by eating." Let us as a nation produce fit food or import them from our colonies and not be dependent on the products of synthetic chemistry as other less fortunate nations have to be—I am etc.

Whatever May 9

TOM G. S. HARKNESS

### The Origin of Constructive Variation

SIR—In your current number there is a review of the late Dr Albert Gray's book *The Basis of Tissue Evolution and Pathogenesis*. I should like to point out that neither the reviewer nor Dr Gray's editors seem aware that his essential apparatus was first publicly developed by myself in 1918. Your reviewer's piece of the whole book is so admirably adequate that you will I feel sure permit me to quote it in order to show that well known work of my own antedates it by twenty years.

The essay is based on the hypothesis that the variation which results in evolution are induced variations caused by the response to injury and the repair of tissues. The term injury is used by the writer in the widest possible sense and includes the idea of stimulus that in time of repeated repair from the effects of injury what formerly constituted an injury has become a stimulus. Thus the response to changes in environment takes the form of induced variation in contrast to the idea of spontaneous variation which is rejected.

Now in 1918 I read before the Zoological Society a paper on the function of pathological states in evolution. This paper somewhat amended and repaired appeared in 1920 in my book *Warfare in the Human Body* as the third chapter—Repair in Evolution. I will quote a few sentences from the chapter.

It then can be shown that disease has had a profound effect upon the evolution of all organisms and that analogous results are found in every kind of human constructive effort in such numbers as to suggest as a law that all great variational developments result not from a happy-go-lucky aggregation or small variation or from discontinuous variation whether of a Mendelian character or not but rather from partial failure and repair we seem to be in sight of a general principle of profound importance (p. 6.) "It is to be inferred from these considerations that the structure of an organism is not a congeries of minute fortuitous advantageous variations nor the gradual making of details in an orthogenetic line nor the result of large discontinuous variation due to chromosomal inheritance but a complex of definite reactions to definite stresses. The true theory of living structure is that its growth is neither casual nor to be seen but that it is what we may call in political language the opportunism of the organism as a whole. Every advance is a forced even a desperate experiment. Life like a hypothesis or a dam, is built by stopping up leaks (p. 79).

There is nothing original in Dr Gray's view of injury. I can trace the notion of it as an evolutionary factor no further back than Virchow but in *Malignancy and Evolution* published in 1926 when speaking of morphogenetic symbionts I wrote: "It is hard to say why such facts should not be regarded as relevant to the theory of transmission and the view I have taken that transmission occurs normally by injury to the germ plasma (p. 149). In a later collection of biological essays *The Serpent's Fang* (1930) I wrote that in the anatomy of the human body alone sufficient proof can be found to show that variations of actual structure which are not Mendelian since Mendelian mutations are not really specific characters at all always or almost always arise as

the result of disturbing stresses (p 89) It is not too much to say that the theory claimed for Dr Gray is largely the motive force of these three books, two of which are well known and have been favourably received by many leaders in the medical sciences

It should therefore be clear that I have made a continuous use of suggestive hypotheses which I myself welded long ago into a working apparatus and effective theory I may add that my last book, *Bio-Politics*, lately reviewed in your *Journal* applies the doctrine of constructive variation which I have called *Stress Breakdown and Repair* to life generally and social organization in particular—I am, etc,

London, May 15

MORLEY ROBERTS

### Wound Healing in Carcinomatous Patients

SIR,—Whether carcinoma of the stomach is very common here, or whether patients delay before taking notice of discomfort in the abdomen, or whether I am particularly slow to recognize the disease, I leave to the kindness of any who choose to criticize The fact remains that it has fallen to my lot in the past year or two to open the abdomens of a number of men to find non-operable carcinomata of the stomach I hasten to add that the diagnosis was made before operation in, I think, every case, but the laparotomy was always undertaken in the forlorn hope that the growth might be operable or the diagnosis erroneous The point I wish to bring to notice is that without exception all these patients wounds have healed very rapidly, leaving a thin linear scar such as one all too often hopes for and fails to procure in for example, appendicectomies This property of rapid clean healing is most striking in my experience, provided of course that the growth is not invading the abdominal wall What is the reason for it? The patients are in poor condition and do indeed die of their disease in a few weeks or months One would expect slow healing or even failure of union Does the carcinoma itself in some way favour the proliferation of fibroblasts, or is there an increased tendency in general to form firm fibrous tissue as a natural reaction to the presence of the tumour in the body?—I am, etc,

Cornwall May 10

L A RIDDELL

### Fractures of Neck of Femur

SIR—Mr R Watson-Jones (*Journal* May 7, p 1025) writes a characteristically brilliant letter yet I disagree with his very first statement Having nailed his fracture he refuses to remove the nail when he is satisfied that bony union has resulted from his procedure, being content to wait for post-mortem examination to satisfy my surgical curiosity I reduce all medial fractures of the femoral neck and then immobilize them with a trifling nail But when I am convinced that bony union has occurred I remove the nail—for the same reason that I remove a plaster in dealing with other fractures All routines have exceptions, and my very feeble and very aged patients are not subjected to a second operation

My reasons for removing the nail may be of interest There is no doubt from my observations that stainless steel and bone are unsatisfactory bedmates In almost all cases there is a reaction between the bone and the nail the bone undergoes necrosis—pressure or aseptic—and the neck is weakened In the vast majority of fractures of the femoral neck the fracture has occurred because of atrophy of its bony architecture—the fracture is

characteristically one which occurs in patients of advanced years That we can give the femoral neck temporary additional support by a stainless steel nail is no real advantage What we aim at is to reconstruct the bony architecture of the femoral neck This is possible with the help of the Smith-Petersen nail The nail should be placed either in the middle or above the middle of the femoral neck in the antero-posterior plane (I refer to medial fractures only), and in the middle of the neck in the lateral plane Having accomplished this and allowed time for soft tissue repair, the fractured limb is quite able to bear the full body weight In fact early weight bearing stimulates the reconstruction of the architecture of the femoral neck When we see the reconstruction of the calcar femorale radiologically, then it is wise to remove the nail, in order that the bone in its immediate vicinity may also be reconstructed In other words, our endeavour is to make the femoral neck even stronger than it was before the original fracture, since the fracture is generally caused by trivial violence through the atrophic bone of the femoral neck Consequently I would stress the importance of (1) accurate reduction of the fracture, (2) placing the nail away from the calcar femorale in medial fractures, (3) early weight-bearing, and (4) removal of the nail as soon as the architecture of the calcar femorale is reconstructed in order to strengthen the femoral neck in the immediate vicinity of the nail and to re-establish the neck more soundly than was the case before the fracture occurred

These conclusions are arrived at not on theoretical grounds but from practical experience To revert to theory, however, the explanation of Mr Watson-Jones's single unsatisfactory case from removal of the nail may be that he removed the nail too late, that the bony changes around the nail had resulted in such a degree of necrosis of the neck that when the nail was removed the neck was so weakened that trivial violence re-fractured it Mr Watson-Jones must be quite familiar with the patient who has an osteitis of the femoral neck due to the presence of the nail such that only the removal of the nail cures her symptoms I have no doubt that he removes the nails in these cases My contention is that he should go further and remove the nail at an earlier stage—that is, as soon as he is convinced that bony union has taken place In conclusion, I would like to join the ranks of the optimists who believe in the nailing operation for medial fractures I do most sincerely agree with Mr Watson-Jones's last statement—that Mr Eric Lloyd's aphorism, "the bad results of nailing are the results of bad nailing," should be stamped on every nail—I am, etc,

WILLIAM GISSANE

St James's Hospital, London, S W 12, May 8

### Treatment of Anterior Poliomyelitis

SIR—As a recent arrival from Australia I have been interested to hear the opinions of orthopaedic surgeons and others on the treatment of cases of paralysis suffered by Sister Kenny at Carshalton It seems that if results are not all that were expected Although facilities were given to Sister Kenny at Royal North Shore Hospital, Sydney, and at other clinics, it is by many orthopaedic surgeons and massagers in Australia that Sister Kenny has not in all cases lived up to her expectations It is thought that the abolition of splints is dangerous and that splinting does not aid muscle re-education—I am etc

E A BUCKLEY MBS  
Late Superintendent at Royal  
Shore Hospital Sydney

Bath, May 9

## Tuberculin in Diagnosis

SIR—I have read the recent correspondence on the subject of tuberculin reactions with some interest. It would be instructive to learn what evidence Dr Curre Wilkin and those who have written supporting him have of the value of the tuberculin reaction in the positive diagnosis of active tuberculosis. While there is general agreement that a negative test in the great majority of cases excludes the presence of tuberculosis I have been unable to find any convincing grounds for believing that a positive test is of any value in indicating the presence or absence of active tuberculous disease. The point is of considerable importance for if active tuberculosis be diagnosed on the sole finding of a positive tuberculin test and even if (to quote Dr John R. Gillespie, May 7 p 1026) 'six or nine months treatment with tuberculin makes it all right many healthy people may be subjected to unnecessary mental distress by being stigmatized as tuberculous. Moreover they may possibly be handicapped later for life insurance or even for employment—I am etc

London, S.F.1 May 3

J. R. FORBES

## Multiplicity of Special Diplomas

SIR—Even the small volume of correspondence in your columns that has arrived in India shows that the indiscriminate creation of postgraduate diplomas is far more widely condemned than I had imagined when I first introduced this subject. As I pointed out in the *Journal* of March 26, the medical profession should do all in its power to stimulate postgraduate study. At the same time the granting of series of obscure letters to be attached to one's name and used as a lever in obtaining appointments for which equally or better experienced men have applied is to be deprecated.

Probably one of the most complicated of specialties is venereal diseases yet no special diploma in this subject has been thought necessary nevertheless the Ministry of Health insists on adequate postgraduate training for any appointment in the specialty and certificates of having had training in a venereal centre under a specialist in this branch of the profession are invariably required before a new appointment is made. Could not a similar system be introduced into other specialties? Surely the possession of reasonably prolonged experience under a leader or any specialty should entitle one to a certificate of far greater value than the acquisition of any diploma obtained by good luck in passing an examination after a three weeks cram course such as has been advertised for the Diploma in Anaesthetics. Some of the Scottish universities already have the system of issuing certificates to undergraduates for having duly performed the work in any subject, and there is a lot to be said for introducing such a system of postgraduate studies. If the right to grant such certificates was limited to leaders of each branch of the profession the certificates would at least have some post-obtaining value and would be a considerable improvement on a system which permits a man who studies say, mental diseases in London to become a DPM in Edinburgh a Dipl Psych in Durham a DPsy and in Liverpool nothing at all.

A further point I would like to raise is the use to which diplomas obtained under the present methods are being put. Surely they show membership of some learned society or the possession of certain postgraduate experience and are not meant to be used as decorations to be attached to one's name with the idea of impressing the

general public. No one can object to a medical man indicating that he is a qualified practitioner by having on his name plate the letters MB or MRCS or such symbols of higher qualifications as FRCS or MD. But surely one is no more supposed to attach to one's name the initials of the vast number of unregistrable diplomas that are now procurable than one is expected to walk through the streets proudly wearing a medal obtained for proficiency in first year botany—I am etc,

India April 21

H. M.

## The M.R.C.P. and Psychiatry

SIR—May I endorse the protest made by your correspondent A. M. O. in the *Journal* of May 14 (p 1071) against the policy which he declares the L.C.C. Mental Hospitals Department is adopting—namely that the promotion of medical officers of that department will in future be dependent on their obtaining the M.R.C.P. in addition to the D.P.M.?

I am personally interested in this matter because several conferences have recently taken place between representatives of the University of London the Royal Colleges and the Board of Control with a view to improving and stabilizing the requirements for the Postgraduate Diplomas in Psychological Medicine issued respectively by the University of London and the Royal Colleges. I was the senior representative of the University of London at these meetings and I have within the last few days been approaching the Minister of Health who is seriously concerned with the need for improving the conditions of both patients and doctors in mental hospitals. The Minister with characteristic foresight has agreed that the best means to achieve such a purpose is to secure an adequate supply of properly trained practitioners in psychological medicine.

In co-operation with representatives of the Board of Control I have suggested to the Minister that one of the first and most essential steps to improve the education and experience of practitioners entering for the D.P.M. is to provide opportunities for clinical study by certain measures for procuring salaried study leave for which purpose the local authorities would be urged by the Ministry to defray at least part of the cost and I am now without hope that the Minister of Health in framing his forthcoming Estimates may himself make some provision under this head.

I cannot help thinking that the L.C.C. has not consulted the Royal Colleges before adopting this policy for the Royal Colleges equally with the University of London are eager to make the Diplomas in Psychological Medicine the best preparation for medical officers wishing to make that subject both a special study and their subsequent life work. Possibly certain faults in the existing requirements for the Diplomas in Psychological Medicine may have led the L.C.C. to relegate them to a position inferior to the M.R.C.P. When these diplomas have been raised as they are in process of being to a standard ensuring the best possible training in psychological medicine it may perhaps be hoped that the L.C.C. will reconsider the propriety of demanding in addition what seems to me as well as to your correspondent the rather irrelevant and supererogatory qualification of the M.R.C.P.—I am etc

London W.1 May 14

E. GRAHAM LITTLE

SIR—Lest undue value be placed upon any particular qualification it appears well to remind ourselves that among the greatest contributors to the knowledge of

quixotic yet dogged attachment to a particular view or theory left him unabashed in a minority of one? Several striking essays and addresses delivered in quite recent years gave Boycott occasion to reveal himself as a highly individual thinker and critic, and I would particularly recall in this connexion his presidential address to the Pathological Section of the Royal Society of Medicine on the nature of viruses and the concept of living and non-living agents causing disease and growth, his charming and thought-provoking address entitled "Our Best Friend" at the opening of the winter session of UCH Medical School in 1933, when he dilated on the text "*When the body finds itself in trouble it does things which are helpful*", and lastly his unsigned contributions to the "Grains and Scruples" series in the *Lancet* written from his Cotswold home after his retirement. These with the *obiter dicta* liberally strewn in private correspondence with his friends will long keep fresh the memory of the real Boycott.

He was elected a Fellow of the Royal Society in 1914, and he held from McGill the honorary degree of LL.D. To his widow and two sons the sympathy of all will be extended.

J C G LEDINGHAM

Professor Boycott joined the British Medical Association in 1904, and in his early days of research was awarded several scientific grants. He acted as honorary secretary of the Section of Pathology at the London Annual Meeting in 1910 and vice-president of the same Section at Liverpool in 1912. He was a member of the Medical Research Council 1932-5.

[The photograph reproduced is by Elliott and Fry, Ltd.]

### THE LATE DR MAXWELL TELLING

Dr E E Claxton writes: Dr Maxwell Telling was one of the outstanding medical men of the century. He held in turn the chairs of therapeutics, medicine, and forensic medicine at the University of Leeds, which in itself is a record. His whole life and career were spent in a search for truth in a courageous, pioneering spirit. In a letter to the *Lancet* in October, 1936, he told how he read a timid and tentative 'paper' before the Leeds Medical Society in 1905, entitled "A Plea for the More Systematic Employment of Psychotherapy." As he was only a junior the paper was received with kindly tolerance, but he remembered the outstanding comment was on my courage! This same courageous spirit led him to identify himself with the Oxford Group. While many of our leaders were declaring that no great advance was being made because of the lack of an 'indefinable something' Telling came boldly forward and declared that we were being held up because we had left God out of our lives. It was in the final phase of his search for truth that I met him at an Oxford Group house party. I well remember sitting next to him at a meeting, we were both strangers and first-comers, so we compared notes. I asked him what he thought of it all. He replied that it was right unquestionably right if everyone lived on the four standards of absolute honesty, purity, unselfishness and love we should have none of the present difficulties of the world—that was only common sense. I asked what was his psychological opinion. His answer was: Sound—absolutely sound. If you can get patients to tell their inner thoughts and fears they become free—there is no doubt about its soundness. But it was impossible to do anything about it: the cost was too great. And he said: I haven't the courage to face it. I met him later looking very troubled. He volunteered that he was reconsidering his decision but that he wanted to think it out calmly, free from bias,

in his own home. He was afraid (he humorously added) he knew what his decision would be. When I next saw him he was confirmed in his opinion that when man listens God speaks. This, he believed, formed the missing link in the chain of evidence he had discovered in his search for truth. In the end of his quest he accomplished the unity of his professional and spiritual life. His profession became the means of applying the result of his last investigation—that God's power can change and control human nature.

Dr FREDERICK ERNEST CHAPMAN who died on May 8 at his home in Hartlepool at the age of 50, was a Newcastle medical student, and graduated M.B., B.S. Durham in 1912. During the war he served both as temporary surgeon R.N. and as temporary captain R.A.M.C. Since then he had practised in partnership in Hartlepool, and was honorary surgeon to the Hartlepool Hospital. In his younger days Chapman was a noted Rugby footballer, playing many seasons for the Hartlepool Rovers and thirty-one times for Durham County. He played for England seven times between 1910 and 1914, and had the distinction of scoring the first try in the first international match at Twickenham in January, 1910, against Wales. Two years earlier he was a member of the side which toured New Zealand. He could play equally well on either wing, at centre, three-quarter, or full back, and even after long service over-seas found a place in the Durham County XV.

The sudden death at the early age of 32 of Dr FRANCIS GEORGE MAITLAND has come as a great shock to a large number of friends and patients. He died at Norwich on April 25 from a pneumococcal infection. Dr Maitland was educated at University School, Hastings, and Clare College, Cambridge, and took his hospital course at St Thomas's. After qualifying in 1930 he held resident appointments at St Thomas's, the Lying-in Hospital, York Road, and the Royal Surrey County Hospital, Guildford, and proceeded to the degree of M.B., B.Chir. before going to Norwich three years ago as partner to Dr Preston. He was devoted to his work, and because of this and his charming manner he quickly became established as a successful doctor. A man of wide interests, he would spend his leisure hours racing a Norfolk punt on the Broads, or listening to music, which he had studied since his boyhood. Francis Maitland was a public spirited man who gave valued service to the Norwich Lids Club as an honorary surgeon and to the St John Ambulance Brigade as divisional surgeon. He held the rank of captain in the 161st East Anglian Field Ambulance, R.A.M.C. (T), and was working on its behalf within a day of his fatal illness.

Dr JOHN WATKIN EDWARDS died at his home in Beckenham on April 26, aged 74. He received his medical education at Edinburgh University, and graduated M.B., Ch.B. in 1889. For over thirty years he practised in Middlesbrough, Yorkshire, where he held among other appointments that of medical officer of health for the Tees Port. In addition he was actively identified with musical activities in Middlesbrough, and for many years presided at the annual Eisteddfod. In 1921, following a breakdown in health caused by an accident, he gave up practice in the North and moved to Anerley, London, S.E., where he was in practice from 1922 to 1936. Here again he took a keen interest in public affairs in the district including the Penge and Anerley Branch of the League of Nations Union, of which he was president for several years, and the Penge and Anerley Philanthropic Society, of which he was president in 1930. Dr Edwards was a member of the British Medical Association for over forty years, and was chairman of the Cleveland Division in 1914-15 and of the Bromley Division in 1931.

Dr JAMES JACKSON MINOT founder of the B.T. Tuberculosis Association and father of Dr G. Richards Minot, Nobel Laureate, died at Boston April 30 at the age of 85.



## Medico-Legal

### PATERNITY EXCLUDED BY BLOOD GROUPS

The principal reason why so little has been heard in this country of blood group evidence in cases of disputed paternity has been that our law does not allow the magistrates to say to a woman applying for an affiliation order that she must submit to a blood test or withdraw her application. In many countries where this is allowed the evidence of the pathologist has proved of great assistance to justice in a troublesome class of case. In recent proceedings before the Marlborough justices the applicant expressed her willingness to co-operate in the test. Accordingly she, her child, and the man whom she alleged to be the father visited Dr G. Roche Lynch's laboratory and had specimens taken. Last Monday at the resumed hearing Dr Roche Lynch gave evidence that the mother's group was AMN, the baby's was AN and the man's was OM. He explained that a child with the N character in its blood must have either one N parent or two MN parents. With an MN mother therefore the father must be MN or N. In the present case as the alleged father was OM he could not be the real father of the child. The A and O factors had no significance in this case because the baby could have got its A character from the mother. The applicant's solicitor said he was quite prepared to accept Dr Roche Lynch's statement and the chairman of the Bench thereupon dismissed the application.

This case is therefore of the greatest importance for the future of blood group evidence in this country. The evidence could only have been given by consent and it pointed to an unconditional exclusion which the magistrates who had doubtless familiarized themselves with the scientific facts upon which blood group evidence is based accepted without question. Undoubtedly the time has come for Parliament to give a man accused of the paternity of an illegitimate child the right—or at any rate the opportunity, in the discretion of the magistrates—to clear himself by undergoing a blood test with the mother and the child. Legislation should however take several important factors into account the chief of which is that it should impose no hardship upon the applicant who after all is in an unenviable position and suffers under a considerable handicap. The cost is also a major problem, because the parties to affiliation proceedings are usually people of scanty means. Unless the test were carried out wholly or largely at the public expense an Act permitting magistrates to order it would be a dead letter. In practice it would not be ordered in more than a small fraction of all affiliation cases. In that fraction however where there is a difficult conflict of evidence the result of the test would in a statistical proportion of cases—about one in every three in which the man is not the real father—give the bench solid grounds for dismissing the application. It is difficult to see any good reason why this possibility should not be opened up by statute. It would produce a small but quite definite contribution to the better administration of justice.

### TYPHOID CONVEYED BY MILK

#### An Echo of the Bournemouth Outbreak

In August, 1936 typhoid fever broke out in Bournemouth and Poole and there were some 205 cases in Poole alone. The epidemic directed public attention to the whole problem of urban milk supplies and may in time prove to have been the beginning of a far-reaching improvement. One of its minor consequences was an action\* brought in the High Court by a number of persons who

stilled in the epidemic against a milk supply company whose milk had conveyed the infection to them. This fact is not disputed by the company. The infected milk came from a small holding which regularly contributed to the daily input of 1,600 gallons, and was part of a large dairy farm called Melly Hall Farm. The Company mixed the milk from this holding with that of other farmers all being a credited milk from licensed producers. The infection originated in a sewage effluent which unknown to the farmer and above his land entered a stream from which his cows drank. The plaintiffs Mr. A. H. Square and members of his household pleaded that the company had contracted and had also warranted by letter and by a brochure that their milk should be clean free from infection and fit for human consumption. The plaintiffs alleged that the company had broken this contract and warranty. They also sued for negligence on the ground that the company had failed to take proper precautions to ensure that the milk was pure and for breach of the statutory duty imposed by the Food and Drugs (Adulteration) Act 1928.

#### Submissions by Council

Mr. Norman Birckett K.C. appearing for the plaintiff read certain passages of the brochure and submitted that one who believed them would be misled that the milk supplied by the company was safe and clean. The company obtained their milk from thirty even sources and emptied it all into one tank. The risk of contamination was therefore great. The company had done nothing at all to ensure that the high-sounding words in their brochure were carried into effect. The assurances which the company gave the plaintiffs were untrue to the company's knowledge. The company refused any inspection and did nothing to see that the sources of their milk were conducted under hygienic conditions. The brochure was grossly misleading in creating the impression that the conditions were ideal. The representations had been false at the outset.

Dr. R. J. M. Horne the medical officer of health for Poole said that the company had co-operated with him to the best of their ability. The company's milk depots had a good standard of cleanliness and during a recent year he had written congratulating the manager on a year's analysis of very good milk. There was no method of testing milk for typhoid which could be carried out commercially.

Mr. R. P. Croom Johnson K.C. for the company submitted that the warranty which the plaintiffs alleged to have been broken applied expressly to a future supply of milk and breach of a representation as to the future could not be the ground of a legal claim. No one had suggested that the company could have known or were responsible for the contamination of the milk. There was no indication of recklessness or that the company which supplied 10,000 people were not taking every possible care to see that their milk was free from contamination. No one had given evidence that to bulk milk supplies into one tank was extraordinary or improper practice. The charge of fraud in the warranty was necessary in law in order to enable the other members of Mr. Square's household to recover damage although the offending article had not been sold to them. The manager had been in the milk trade a long time and had done everything that could be required of him and a charge of fraud against him was completely baseless. The cause of the infection was not even known to the farmer let alone the manager of the company. Even if the company had broken their warranty that was not the cause of the plaintiffs' illness for the illness did not arise from any want of cleanliness by the company or the farmer.

Mr. Birckett in reply said that the company's booklet described their model farm but did not say that the milk from that farm was mixed with a much larger supply from many outside sources. All his statements in it about the impossibility of contamination were false. The company had no organization which would enable them to supply as they claimed to do rich pure milk free from contamination. On the question of negligence if the company had required at

\* Square and others v. Model Farm Dairies (Bournemouth) Ltd. Times May 4 et seq.



the farm where the contamination occurred and had made an inspection, they might have found that there was a discharge of sewage into the stream. The fact that they had made no inquiry was strong evidence of negligence. They could have asked the local authority or the farmer. The discharge pipe could have been discovered by inspection.

Mr Justice Lewis ruled that there was no case for the company to answer on the charge of fraud, but that they must answer the charge of negligence.

#### Evidence for the Defence

Mr A J Newman, tenant of Merly Hall Farm, said it was used solely for dairying. He took every possible step to see that the business was carried on properly. Until the investigation by the medical officer of health he had no idea that anything was wrong with his milk or any suspicion that sewage was reaching the stream. The manager of the company had often visited his farm and inspected it. He had never used water from the stream, but the cows drank from it. His wife had died of typhoid, but he had not known the cause of her death until he had seen the death certificate. Each cow underwent a careful periodic test. They had been examined in June 1936, before he had received his licence to produce accredited milk and afterwards at regular intervals of three months. His wife had never assisted with the dairy work. Only after her death had he discovered that sewage was led in to the stream. The land where it was led in was occupied by someone else, and he had no right to go on it. Cross examined, Mr Newman said that the udder of each cow was washed when it was driven in for milking, and then dried with another cloth. The water used for cleansing the utensils came from a steel-lined well.

Mr J W Partridge, manager of the United Dairies depot at Wimborne, said that the bulking of milk was not at all exceptional. If London people had to wait while each lot of milk was separately handled they would not have their milk on the doorstep at six o'clock in the morning but six days later. It was never considered negligent not to test a particular consignment before bulking. There was no test for typhoid which would give a positive result in under five days. Merly Hall Farm had been properly and cleanly conducted.

Mr W F Long, managing director of the company, said he had been in the milk trade for fifty years, and before the outbreak he had no suspicion that there was anything wrong with his or any other milk supply. He had been to the farm many times even before Mr Newman had been its tenant, and before he had made his contract with Mr Newman he had thoroughly inspected it. Had he suspected any contamination of the stream he would at once have taken precautions to have it stopped or to see that his dairy was not connected with it. It was absolutely necessary for a supplier to know all the sources of his milk and the men who produced it. He paid all inspectional visits himself, and never gave notice. He hardly let a week pass without inspecting one farm or another. He had written the company's booklet himself and intended to convey in it that a very high standard of care was being maintained. He had in two years won the Dorset clean milk competition. He had been preaching and practising clean milk all his life. No form of inspection would have enabled him to see that there was typhoid in the stream in which the cows were watering.

#### Judgment

Mr Justice Lewis, delivering a reserved judgment on May 10, said that Mr Newman had beyond all doubt taken the greatest care to see that his milk was clean and pure. Mr Long was a truthful witness and so far as inspection was concerned could have done no more. All the milk bulked by the company was accredited milk obtained from licensed producers and the medical officer of health could find no fault with the company. There was no evidence that the statements in the booklet were untrue and no evidence of negligence. The plaintiffs, however, had another cause of action under the Food and Drugs (Adulteration) Act 1928, s. 2 (1) which provided that no person should sell, to the

prejudice of the purchaser, any article of food or any drug, which was not of the nature, substance, or quality of the article demanded. Apparently no reported case had ever been founded on that section before. The law, however, clearly allowed an aggrieved person to bring a civil action for an injury caused by breach of a statutory duty, even though the statute imposed a penalty as well. The latest illustration of that principle was *Monk v Warbey* (1935, 1 K B 75) in which the owner of a motor car lent it to a friend, though he was not insured against third party risks while the friend was driving, the friend injured a third party and the owner of the car was held liable, because he had committed an offence against the Road Traffic Act 1934. In his lordship's view 'the purchaser' included anyone who had suffered damage from the sale of food of an inferior quality from that demanded. If the company could have been prosecuted on the present facts they would have to pay damages now. Although they were morally entirely innocent, they were none the less guilty of a breach of their duty under the 1928 Act for Mr Square had asked them for clean and pure milk and they had not given him milk of that quality. The plaintiffs were therefore entitled to recover, and he awarded damages amounting to £865 and costs.

#### A FATAL DOSE OF PARALDEHYDE

Not long ago two nurses were found negligent in the High Court<sup>1</sup> for giving a patient six ounces of paraldehyde instead of six drachms. In that case it was said that the instructions had been written on a piece of paper by a staff nurse, and there was a dispute about whether she had written six ounces or six drachms. The Paddington coroner, Mr Ingleby Oddie, recently had to investigate a similar mishap. A lady patient was sleeping badly and her nurse rang up the doctor. He agreed that the patient should be given paraldehyde, and according to the nurse he said that the dose should be six ounces in eight ounces of paraffin. The doctor himself said in evidence that he had said, not six ounces, but six drachms. He would probably have seen to the administration himself, but he was distracted by his wife's fatal illness, and she died on the evening before the paraldehyde was given. In this case also the nurse said she wrote the dose on a piece of cardboard, but that, as the patient did not wish the card board to be kept, it was put on the fire. The nurse said she then copied the dose on to a piece of paper, but eventually tore it up because she did not think it of any importance. She had no wish to protect herself by doing so. The coroner, recording a verdict of death by misadventure, remarked that it seemed to him rather singular, if she had that piece of paper, that she did not produce it at once when she told the doctor the next morning that she could not rouse the patient. The doctor, in a moment of mental confusion, might have used the word 'ounces' instead of 'drachms,' but it was almost impossible to say what had really happened. The doctor was a very experienced practitioner but was suffering from great mental distress. Mr Oddie pointed out the importance when dealing with dangerous drugs, of using the utmost care and of giving written directions in prescribing them.

The danger of confusing ounces of paraldehyde with drachms may perhaps arise from the custom of prescribing the dose in a given number of ounces of paraffin. It is rather surprising to reflect that paraldehyde is not one of the many drugs which, by the Poisons Rules, must be sold under certain restrictions. It is a good deal more dangerous than many of the drugs in the fourth schedule of the Poisons List. The attitude of the family of a deceased lady was a model of generosity, for her mother declared that they bore no ill will nor did they make any charge against anyone, both doctor and nurse. It is shown by his mother the greatest kindness and care. Five years ago Dr C O Hawthorne in his *Short Essay*...

<sup>1</sup> *Strangeways v. Lumsden*, Clayton 1936 1 All E.R. 41

*Medical Topics* said wisely that the prescribing and ordering of medicines should be by written directions and for such purposes the telephone should be forbidden. He was referring to a recent disaster in which in overdose of eucaine had been given after a telephone prescription. No doubt more accidents are caused by this misuse of the telephone than are reported in the newspapers. The practitioner should impose on himself a strict rule never to trust the telephone for anything of which a misunderstanding may possibly lead to injury.

## Medical Notes in Parliament

Dr Walter Elliot has been appointed Minister of Health in succession to Sir Kingsley Wood who becomes Secretary of State for Air. Dr Elliot is succeeded in the office of Secretary of State for Scotland by Colonel John Colville. These and other Ministerial changes were announced on May 16.

Housing Bills have been before both Houses of Parliament this week. The House of Lords also discussed foreign affairs and the House of Commons unemployment. A debate on air rearmament was postponed because of the indisposition of the Prime Minister.

### Progress of Bills

In the House of Lords on May 16 the Baking Industry (Hours of Work) Bill and the Registration of Stillbirths (Scotland) Bill which have passed the Commons were read a first time. On the same day Lord Horder introduced the Funeral Directors (Registration) Bill which was read a first time.

On May 17 in the House of Lords the Eire (Confirmation of Agreements) Act received the Royal Assent.

The Select Committee of the House of Lords which will consider the St Bartholomew's Hospital Bill was fixed to meet on Thursday May 19.

The Criminal Procedure (Scotland) Bill was reported to the House of Commons from the Standing Committee on Scottish Bills on May 12.

On May 16 the Housing (Rural Workers) Amendment Bill passed through Committee in the House of Commons.

### The Capitation Fee for Juveniles

On May 12 Mr RHYS DAVIES asked the Minister of Health to state the reasons which induced him to allow the same capitation fee to panel doctors under the national health insurance scheme in respect of insured persons between 14 and 16 years when no medical certification was necessary as was paid from 16 and upwards when medical certificates were issued while at the same time allowing only 1s 9d per annum to approved societies by way of administration expenses in respect of these younger persons when 4s 6d per annum was regarded as reasonable to cover those over 16 years of age.

Sir KINGSLEY WOOD reminded Mr Rhys Davies that this matter was recently examined by a Court of Inquiry and the fee fixed in accordance with its recommendations.

Mr DAVIES: Is it not a fact that the right hon. gentleman offered terms very much below those mentioned in the question and has he not succumbed to the demand of the doctors for better terms?

Sir K. WOOD: No. This matter was investigated by a court of arbitration.

Mr MACQUISTEN: Does the right hon. gentleman know that the medical profession is spending large sums on pasteurization propaganda? Is it their own money and does not fall on anybody else?

Mr LOGAN: Is the right hon. gentleman aware that this sum is not sufficient for the work done and will he revise it?

### Cheap Milk Schemes

Mr W. S. MORRISON stated on May 5 that the Milk Marketing Board did not at present contemplate any extension of the experimental schemes in the Special Areas. The Government proposed to bring forward proposals for coming in co-operation with the industry a reduction in the price of liquid milk to local authorities generally for the purpose of their maternity and child welfare arrangements. Of persons eligible to participate in the four experimental schemes for the supply of cheap milk to nursing mothers and children under 5 years in the Special Areas the proportions that availed themselves of the facilities varied between 60 per cent in Farrow and 65 per cent in Whitehaven.

On May 9 Mr W. S. MORRISON replying to Mr Ridley said he was informed by the Milk Marketing Board that there had been an average increase of 0.1s pint or 61 per cent in the daily per capita consumption of milk in families participating in the experimental schemes for the supply of cheap milk to nursing mothers and to children under 5 years in the Special Areas.

Sir KINGSLEY WOOD stated on the same date that all the thirty-five authorities responsible for maternity and child welfare services in the Special Areas supplied additional nourishment in the form of milk to expectant mothers and about five of them did so at all stages of pregnancy. Twenty-two of the thirty-five authorities supplied other forms of additional nourishment to mothers; the great majority at all stages of pregnancy. In addition the scheme introduced by the National Birthday Trust Fund for providing other additional food for certain groups of expectant mothers was in operation in most of the Special Areas.

Miss WARD asked if the Minister of Health would consider making representations to those local authorities which did not supply milk and ask them to carry out what she understood was the approved policy of the Minister.

Sir KINGSLEY WOOD said he was following the points up.

### The Case of Francis Healy

On May 10 Mr MCGOVERN asked the Secretary of State for Scotland the date when Francis Healy was transferred from Gartloch Asylum to Perth Prison. It was then certified as sane the date of his removal from Perth Prison to Woodilee Asylum, the circumstances surrounding his removal and certification and who were the medical men who again certified him as insane. Mr WEDDERBURN, who replied said that Healy was discharged from Gartloch Mental Hospital on February 7 last, the medical superintendent being of the opinion that he had recovered from the mental condition from which he had been suffering. He was taken on that date to Perth Prison. Healy's mental condition subsequently gave rise to anxiety and he was kept under observation. On April 17 Healy was certified insane by the medical officer and the assistant medical officer of Perth Prison. On the following day he was removed under Sheriff's warrant to the Glasgow District Mental Hospital, Woodilee. Healy refused to leave the car in which he was taken to the mental hospital although every effort was made to induce him to do so. He had therefore to be forcibly removed.

Mr N. MACLEAN asked if an Act passed four years ago for Scotland did not provide that instead of such a case as this being examined by two official doctors of an asylum one of the examiners should have been an independent doctor. Why was an independent doctor not called in? Mr WEDDERBURN cited statutes to justify the action taken in the case under discussion.

### Drug Traffic Increase in China

On May 16 Mr D. ADAMS asked the Prime Minister whether his attention had been drawn to the greatly increased trafficking in drugs in China by Japanese and Korean traders under the control of the Japanese Government and whether he would make strong representations to every possible source to prevent a systematic demoralization of the Chinese people through these means. Mr BUTLER, who replied said he had

received reports to the effect that recently this traffic had increased considerably but he had no reason to suppose that this was the outcome of any systematic and deliberate plan.

Replying to a further question by Mr Adams, Mr Butler said that the Government was alive to this matter and was making the strongest possible representations on it. In answer to Mr Noel Baker Mr Butler said that no representations had been made to the Japanese Government.

Lieutenant Commander FLETCHER asked if there was not a great deal of evidence to show that the systematic demoralization referred to was part of the deliberate policy of the Japanese Government. Mr BUTLER said that the Government's information did not bear out this suggestion.

Mr NOEL BAKER: Is it not highly desirable that representations should be made to the Japanese Government so that the Chinese people should not be so demoralized?

Mr BUTLER: I will certainly consider the hon. member's suggestion.

On May 16 Mr D. ADAMS also asked the Prime Minister whether he was aware that in country markets in North China heroin and morphine were being systematically sold under the guise of medicine at prices as low as 1½d for a packet of heroin and whether steps were under consideration as to means of controlling the world production and distribution of these drugs.

Mr BUTLER agreed that these drugs were sold at very low prices in North China. As regards the world production and distribution of drugs, the licit drug traffic was already regulated by the Opium Conventions of 1912, 1925, and 1931. The British Government was taking every possible step to control and stamp out the clandestine manufacture and distribution of drugs on their territory. The appropriate committee of the League was shortly to consider what steps can be taken to limit the cultivation of the raw material from which all drugs were made.

### Effects of War Gas Poisoning

Sir HENRY MORRIS-JONES, on May 16, asked the Minister of Pensions whether he could give any information in regard to recent research work on sequelae to war gas poisoning, more especially in regard to deaths from respiratory diseases.

Mr RAMSBOTHAM said it would be impracticable to give complete information on research into the effects of gases used in the war. His Department was fully alive to these results, and he would arrange for his Chief Medical Officer to see Sir H. Morris Jones.

Sir H. MORRIS-JONES asked if the Minister was aware that recent evidence showed that the mortality rates in certain age groups of cases of war gas poisoning ranged from 40 to 70 per cent over the normal rate and whether, in view of that, he would consider a revision of the War Pensions Acts.

Mr RAMSBOTHAM said that the question on the order paper related to research. He could not describe what had been done within the limits of a question and answer.

### Mental Hospital Treatment of Voluntary Patients

On May 16 Sir KINGSLEY WOOD, replying to Mr Lyons, said that many local authorities were providing for the treatment of voluntary patients by the establishment at their mental hospitals of admission units, which were separate from the main institution but where all the resources of the hospital could be applied to the treatment of early cases. The number of persons presenting themselves for voluntary treatment at public mental hospitals had grown every year since the Mental Treatment Act came into force. Last year the voluntary admissions amounted to 8,414, which was 31.3 per cent of the total admissions to those institutions.

Mrs TATE asked if the Minister was aware that the real difficulty was that there was acute shortage of medical men trained in the treatment of these cases, that one of the few clinics for training medical men in this way was the Tavistock Clinic which was only supported by voluntary contributions and that there was urgent need of a larger supply of trained medical men.

Sir FRANCIS FREMANTLE asked if the Minister's reply included any statement in regard to the invaluable out-patient departments which were being established.

No replies were given to these supplementary questions.

### Medical Patents

On May 16 Mr D. ADAMS asked the President of the Board of Trade whether steps were being considered to reform the patent system in this country, either in the direction of compulsory dedication of scientific discoveries to the public or otherwise, so as to ensure to the public the benefits of discoveries made in scientific laboratories and to prevent the undesirable exploitation, *inter alia*, of patent drugs.

Captain WALLACE, who replied, said that Section 38A of the Patents and Designs Acts, 1907 to 1932, already contained special provisions designed to make medical patents more readily available to the public. Proposals for the amendment of the law by making compulsory the dedication of medical patents were fully considered by a Departmental Committee on the Patents and Designs Acts in 1931 which reported against any such amendment. The reasons for the conclusion were stated in paragraphs 185-201 of the report (Cmd 3479). There appeared to be no sufficient grounds for reopening the question of amending the Patent Law in this respect.

*New Medical Standards for Recruits*—On May 3 Mr HORE BELISHA, replying to Sir Alfred Knox, said that the chances which had been made in the medical and other standards for recruits had secured for the Army during the first quarter of this year an extra 1,733 men out of a total of 10,244 accepted.

*Unemployed and Disabled Ex Service Men*—On May 10 Mr ERNEST BROWN, replying to Mr Radford, said that on April 4 29,512 disabled ex service men were registered at employment exchanges as claimants for unemployed benefit or applicants for unemployment assistance allowances and 1,821 other disabled ex service men were also registered. Of the total of 31,333, 17,440 were men whose disabilities did not prevent them from following their usual occupations under ordinary industrial conditions, 13,608 were regarded as suitable for employment on work of a light nature, and the remaining 285 were suffering from disabilities which rendered it difficult for them to secure employment except with some institution specially designed for severely disabled ex service men or otherwise by special arrangement.

*Maternal Welfare in Durham County*—Mr WHITELL, on May 12, asked whether arrangements could be made to establish a maternity centre at Marley Hill, and thus prevent women having to travel the long distance to the Dunston centre. Sir KINGSLEY WOOD replied that he was in communication with the Durham County Council on this suggestion.

*Anti-gas Precautions in Government Offices*—Substantial progress has now been made with the training of civil servants in anti-gas precautions, and a survey has been made of the headquarter offices of many of the bigger departments and the accommodation most suitable for use as refuges earmarked. The survey of other offices is proceeding. Proposals in regard to refuge accommodation are being or are about to be, discussed by Departments with their staffs. The information was given to the House on May 5 by Col. J. Colville.

*Dental Benefit*—In Great Britain 5,400 approved societies and branches with a membership of 13,070,000 have in 1937 dental benefit in their current additional benefit schemes. 350 societies and branches with a membership of 17,000 have additional benefit schemes which do not include dental benefit while 1,150 societies and branches with 1,400,000 members have no disposable surplus from which additional benefits may be provided.

### Notes in Brief

Sir Kingsley Wood has received no notification from the Corporation of Liverpool intend to close certain day centres in that city. He is however in communication with about two complaints he has received in the matter.

In applying to research on chemotherapy an additional grant of £ 0000 provided by Parliament the Medical Research Council will obtain the co-operation of industry. Steps are being taken to ensure that scientific medical men and manufacturing chemists are brought within the scope of the scheme.

The Government of Jamaica is endeavouring to stimulate the local production of milk and other animal and vegetable products of high nutritive value. Practical education on proper nutrition is given at schools throughout the island at which midday meals are provided for the children.

The numbers of ex-Servicemen receiving in-patient treatment in Ministries of Pensions hospitals in 1936 1937 1938 were respectively 5635 5045 and 7855.

## The Services

### HONORARY SURGEON TO THE KING

Major General W B Purdon DSO OBE MC late RAMC, has been appointed Honorary Surgeon to the King. Vice Major General O Jevors CB DSO late RAMC who has retired.

### DEATHS IN THE SERVICES

Lieutenant-Colonel ASHER LEVENTON CIE Bengal Medical Service (ret.) died at Goddaiming on April 6 aged 65. He was born on April 29 1870 the son of the Reverend Israel Leventon Jewish minister Leicester and was educated at Trinity College Dublin and in the Catholic University. During his time in the L.R.C.P. and S.I. in 1894 and subsequently the F.R.C.S.I. in 1906 and the D.P.H. of the Irish Colleges in 1907. He entered the Indian Medical Service as Surgeon Lieutenant on July 29 1895 became lieutenant colonel on January 29 1915 and retired on April 29 1925. He received the CIE on June 2 1922. Most of his service was spent in civil employ in Assam and Eastern Bengal. In 1908 he was appointed Civil Surgeon of Dibrugarh and superintendent of the Berry White Medical School and in August 1913 superintendent of the Campbell Medical School at Calcutta. He had been a member of the British Medical Association for twenty-eight years.

Lieutenant-Colonel HORMANJI DADABHAI MASANI Bombay Medical Service (ret.) died at Cateham on May 12 aged 87. He was born on October 27 1847 and was educated at Bombay University where he took the diploma of L.M.S. in 1873. From 1874 to 1876 he served as a civil assistant surgeon in Bombay. He then came to England and took the M.R.C.S. L.R.C.P. in 1876 and passed for the Indian Medical Service which he entered as surgeon on March 31 1877. He became surgeon lieutenant colonel after twenty years service and retired on January 16 1898. He spent his service in military employ and served in the Afghan War in 1879 (medal) in the 1890 campaign on the North West Frontier of India and in the operations against Mazrui rebels in East Africa in 1896 (medal).

Major DOUGLAS HAMILTON COATS RAMC died in London on April 26 aged 45. He was born on August 28 1892 and was educated at Glasgow University where he graduated M.B. Ch.B. in 1916. He took at once a temporary commission as lieutenant in the Royal Army Medical Corps from May 1916 and became temporary captain after a few days service. He took a permanent commission as lieutenant from November 4 1919 and became a major on May 4 1928. He served for the last two and a half years of the war of 1914-18. He had been a member of the British Medical Association since 1919.

Captain CHARLES FREDERICK MAYO-SMITH IMS died at Razmak on the North West Frontier of India on January 31 aged 50 while serving in the late frontier campaign in Waziristan. He was educated at St. George's Hospital and qualified M.R.C.S. L.R.C.P. in 1931. He took the M.B. B.S. London in 1934 and joined the Indian Medical Service on May 1 1936. He had been a member of the British Medical Association since 1932.

## Medical News

The House of the British Medical Association including the Library will be closed for the Whitsun holiday from 5 p.m. on Friday June 3 to 9 a.m. on Tuesday June 7 (Library 10 a.m.).

Sir William Willcox will deliver the Cavendish Lecture on Toxicology with Reference to its Criminal Aspects before the West London Medical-Chirurgical Society at Kensington Town Hall on Wednesday June 1 at 8.30 p.m. Reception from 8 p.m. and the annual conversazione and medical and surgical exhibition will follow the lecture.

Three public lectures arranged by the National Institute of Industrial Psychology under the Heath Clark bequest will be given on May 25 May 30 and June 1 at 5.40 p.m. at the London School of Hygiene and Tropical Medicine Keppel Street Gower Street W.C. The subject this year is "Industrial Relations in the United States and Great Britain" and the lecturers are Dwight L. Palmer Ph.D. C.H. Northcott Ph.D. and Professor John Hilton. Admission is free without ticket.

The annual dinner of the British Orthopaedic Association will be held at the Langham Hotel on Friday May 27 at 8 p.m.

A joint meeting of the Royal Sanitary Institute and the Royal Sanitary Association for Scotland will be held at the Royal Technical College Glasgow on Friday May 27 at 5.15 p.m. when a discussion on "Air Raid Precautions" will be opened by Lieutenant Fraser Chief Air Raid Precautions Officer Glasgow who will deal with attacks from the air. Mr. Thomas Somers who will describe the city engineer's part in air raid precautions schemes and by Dr. William C. Gunn who will explain the medical services.

A meeting of the Medical Section of the British Psychological Society will be held at the Tavistock Clinic Malet Place W.C. on Wednesday May 25 at 8.30 p.m. for a symposium on "Some Problems Arising in the Adoption of Children".

The annual meeting of the Liverpool Psychiatric Clinic will be held at Liverpool Town Hall on Tuesday May 24 at 4.40 p.m. when the speaker will be Dr. H. Crichton Miller.

The seventeenth international neurological meeting will be held in Paris on May 31 and June 1 at La Salpêtrière when a discussion will be held on the pupil in neurology. The general secretary is Dr. Crouzon 80 b Avenue de Jena Paris 16e.

The third congress of the Italian Society of Gastroenterology will be held at Padua on June 19. The subject for discussion is disorders of the digestive system due to circulatory disturbance. Further information can be obtained from the secretaries A. Allodis Corso Re Umberto 5 bis Turin or A. Bonadico via Crescenzo 19 Rome.

The fiftieth anniversary of the foundation of the German Society of Internal Medicine was celebrated from March 28 to 31 at Wiesbaden where its annual meeting has always been held since 1909.

The first number of the *Harrogate Spa Medical Journal* was published last month under the auspices of the Harrogate Medical Society with a send-off message by Lord Horder.

At the meeting of the Central Midwives Board for England and Wales on May 5 the chairman reported that the National Birthday Trust has decided to award four scholarships each of £12 10s. to candidates attending the residential courses held in 1938 in preparation for the Board's midwife teachers' examination. The cordial thanks of the Board were conveyed to the National Birthday Trust.

Dr. Leonard Findlay has been elected a Corresponding Member of the Société de Pédiatrie of Paris.

A grant of £200 000 has been made available to university institutions towards the capital cost of increased facilities for physical training and recreation. This arrangement is made with the concurrence of the Treasury between the National Fitness Council for England and Wales and the University Grants Committee.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended May 7, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths and of Deaths recorded under each infectious disease, are for (a) The 126 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	21	3	4	1	—	33	9	12	—	—		
		—	—	—	—		4	5	—	—		
Diphtheria Deaths	995	103	194	50	25	985	142	187	52	30	946	160
	27	3	6	1	—	35	5	2	—	—		
Dysentery Deaths	49	13	77	—	—	20	1	17	—	—		
			—	—	—			—	—	—		
Encephalitis lethargica acute Deaths	9	—	2	—	—	—	—	2	1	—		
		—	1	—	—		2	—	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	8	—	41	2	—	36	5	1	7	—	32	—
	1	—	—	—	—	2	1	—	—	—		
Erysipelas Deaths		—	63	3	9			56	6	3		
			1				2	1				
Infective enteritis or diarrhoea under 2 years Deaths	80	13	10	7	4	64	23	9	8	2		
Measles Deaths	32	13	461	2	12*			188		5		
			17		3	19	—	1	—	—		
Ophthalmia neonatorum Deaths	98	9	37	—	—	101	4	21		1		
Pneumonia influenzae Deaths (from Influenza)	1,222	85	9	5	23	949	62	10	4	5	1,021	77
	54	8	3	1	1	31	7	—	2	1		
Pneumonia, primary Deaths		34	273	14	12		21	230	16	8		
				18					13			
Polio encephalitis, acute Deaths	1	—	—	—	—	1	1	—	—	—		
		—	—	—	—		—	—	—	—		
Polomyelitis acute Deaths	4	—	—	—	—	1	—	—	—	—		
		—	—	—	—		—	—	—	—		
Puerperal fever Deaths	5†	5	23	3	1	35	4	20	2	—		
		2‡					1‡					
Puerperal pyrexia Deaths	182	10	17	—	8	99	9	28	—	9		
Relapsing fever Deaths	—	—	—	—	—	—	—	—	—	—		
			—	—	—			—	—	—		
Scarlet fever Deaths	2,078	174	428	92	91	1,662	163	369	97	40	1,854	162
	3	—	1	1	—	4	3	2	1	—		
Small pox Deaths	1	—	—	—	—	—	—	—	—	—		
	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
	—	—	—	—	—	—	—	—	—	—		
Whooping cough Deaths	16	2	68	—	24	12	1	413	4	6		
			—	—	—			14		2		
Deaths (0-1 year)	330	47	64	27	20	392	70	70	34	21		
Infant mortality rate (per 1 000 live births)	55	39				65	58					
Deaths (excluding stillbirths)	4 943	936	652	207	168	4 692	922	612	197	136		
Annual death rate (per 1 000 persons living)	12.2	11.8	13.3	14.0	14.9	11.6	11.5	12.5	13.4	13.0		
Live births	7,276	1 403	1 022	461	290	6 870	1 308	968	382	273		
Annual rate per 1 000 persons living	17.9	17.7	20.9	31.1	25.7	17.0	16.3	19.8	26.0	26.1		
Stillbirths	340	66				291	38					
Rate per 1 000 total births (including stillborn)	45	45				41	28					

\* 12 cases in B. last alone

† At Oxford 1937 puerperal fever was made notifiable only in the Administrative County of London.

‡ Deaths from puerperal sepsis

§ Includes primary form in figures for England and Wales (administrative county) and Northern Ireland

## EPIDEMIOLOGICAL NOTIS

## Small pox

During the week under review a case of small pox was notified at Gravesend and admitted to the Isolation Hospital. No connexion has been traced between this case and the case of small pox which occurred in a liner some weeks ago.

**Nigeria** During the week ended March 26 69 cases of small pox were notified with 170 deaths. Tanganyika 162 cases of small pox with 5 deaths were reported for the week ended April 23. Hong Kong 24 cases of small pox and 35 deaths were notified in the week ended May 7 in the previous week there were 55 cases with 40 deaths. The outbreak in Hong Kong has been attributed to the influx of refugees from Canton and neighbouring ports. From the beginning of the year to April 9 a total of 1925 cases was reported with 1507 deaths. An intensive vaccination campaign has been carried out during the last three months when 600,000 vaccinations have been made. United States During the week ended April 30 471 cases of small pox were notified compared with 417 in the previous week.

## Enteric Fever

Notifications of enteric fever in England and Wales continue to drop there have been 8 cases in the week under review compared with 20 cases in the previous week. The outbreak of paratyphoid fever at Cardiff appears to have ended no cases being notified during the week. On the other hand notifications in Scotland have risen from 7 to 41 among which there were no deaths. Of the 41 cases there were 1 in Glasgow 1 in Edinburgh and 39 in Roxburgh County. The 39 cases belong to an outbreak in Hawick where 73 cases had been notified by May 16 with 1 death in a girl 22 years old. A press report on May 17 under the heading 'Typhoid Spreads' stated that 92 people are now in hospital. Although there is nothing to suggest that water is the source of infection the water supply has been chlorinated as a precautionary measure.

## Diphtheria and Scarlet Fever

Notifications of diphtheria appear to be on the decline in England and Wales. London Scotland, and Northern Ireland. In Eire a slight increase was recorded. With the exception of London where notifications have been about the same as last week there has been a decided increase in the incidence of scarlet fever in England and Wales. Scotland and Ireland. The figure for England and Wales is in excess of the median value for the last nine years while the figure for London is considerably less. Compared with last week and the corresponding week last year the fatality from scarlet fever has diminished in the principal towns of all areas. In Northern Ireland no deaths were recorded during the week under review.

## Primary and Influenzal Pneumonia

The notifications of primary and influenzal pneumonia in England and Wales showed a drop compared with last week—1222 against 1370—and deaths from influenza dropped from 63 to 54. In Warwickshire 111 (115) cases were notified of which 75 (91) were in Birmingham and 15 (9) in Coventry. In the West Riding (Yorks) there were 125 (163) cases of which 39 (26) were in Sheffield and 17 (35) in Leeds. The figures in parentheses denote notifications in the previous week. During the week the deaths from influenza were Birmingham 4 (11) Coventry 3 (0) Sheffield 3 (1) Leeds 2 (0). The figures in parentheses denote deaths in the previous week. In London notifications have risen from 72 to 85 and deaths were the same as last week—namely 8. In Scotland notifications of primary pneumonia were 273, 2 less than in the

previous week there were 9 cases of influenzal pneumonia (the same as last week) and 3 deaths (1 more than last week).

## Measles

In the 126 Great Towns in England and Wales there were 32 deaths from measles compared with 35 in the previous week of these 13 (7) occurred in London 3 (2) in Sheffield and 2 each in Portsmouth (0), Bury (0), Kingston upon Hull (3), Manchester (0). The figures in parentheses refer to the deaths in the previous week. During the week 712 cases were reported from the L.C.C. elementary schools compared with 1825 (the week following Easter vacation) in the previous week. The average daily admissions to the L.C.C. fever hospitals were 45 compared with 60 in the previous week while the number of cases of measles under treatment in these hospitals on Friday May 6 was 1718 compared with 1975 on April 29 and 2123 on April 22. On the same day there were under treatment in the L.C.C. fever hospitals 1076 (1132) cases of diphtheria 808 (775) cases of scarlet fever 295 (287) cases of whooping cough. The figures in parentheses refer to the numbers recorded in the previous week. The notifications in the eleven metropolitan boroughs in which measles is notifiable were for the week ended May 7 406 (581) distributed as follows: Battersea 36 (69) Bermondsey 38 (37) Finsbury 23 (24) Fulham 37 (55) Greenwich 51 (121) Hampstead 17 (20) Lambeth 51 (86) St Pancras 34 (53) Shoreditch 28 (29) Southwark 28 (50) Stepney 31 (59). The figures in parentheses refer to the numbers in the previous week. In Scotland 461 cases of measles were recorded compared with 656 in the previous week the figures for Glasgow were 186 (304) Dundee 96 (126) Aberdeen 71 (94) Edinburgh 26 (67) Falkirk 27 (11). The figures in parentheses refer to the numbers in the previous week. During the week under review there were 17 deaths from measles in the 16 principal towns of Scotland compared with 27 in the previous week of these 6 occurred in Glasgow 4 in Dundee 2 each in Edinburgh Aberdeen and Perth and 1 in Coatbridge. In Northern Ireland there were 12 cases (all in Belfast) of measles with 3 deaths 2 of which occurred in Belfast and 1 in Lurgan. During the week there were 2 deaths from measles in Eire both in Dublin.

## Psittacosis

At Newcastle on April 11 a case of psittacosis was notified in a dealer in budgerigars. The suspected birds have been destroyed.

## Typhus

Typhus continues to be prevalent in Africa although in some districts epidemics are abating. Algeria During the week ended April 23 there were 31 cases compared with 35 reported in the previous week. Of the 31 cases 25 were at Constantine and 6 at Algiers. Egypt During the week ended April 29 there were 177 cases of typhus with 22 deaths compared with 149 cases and 22 deaths in the previous week. The cases were distributed thus: Beheira 59 Minufiya 41 Qena 26 Gharbiya 21 Aswan 14 and smaller numbers in other districts. Morocco During the same week there were 168 cases compared with 198 in the previous week mainly distributed as follows—Chaouia 48 Marrakesh 40 Rabat 24 Casablanca 13. Europe In Poland during the week ended April 23 there were 108 cases of typhus with 8 deaths. The departments with more than 10 cases were Wilno 18 cases with 1 death Polisia 16 cases with 2 deaths Kielce 13 cases with no deaths Wolhynia 13 cases with 3 deaths. In Rumania during the week ended March 15 160 cases of typhus were reported (132 in the previous week) occurring mainly in Orhei 24 Balti 14 Hotin 12 Cahul 11. In Yugoslavia during the week ended April 17 there were 35 cases (43 in the previous week) distributed as follows: Drina 23 Zeta 19 and 1 each in Danube Lit oral and Vardar.

# Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

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## QUERIES AND ANSWERS

### Finger-prints of Twins

Dr R. COTLER (Liverpool) writes: In *Minor Medical Mysteries* (p. 2) Dr Leonard Williams says: "But perhaps the most interesting as it is certainly the most surprising point of similarity in like twins is the fact that not only their finger prints but the whole of what is known as the friction surfaces of their hands and feet are frequently found to be identical." On the other hand Sir James Crichton Browne in *From the Doctor's Notebook* (p. 68) quotes with approval evidence given at Cardiff by Inspector Greville.

In finger print identifications the authorities never make a mistake. A mistake would destroy the whole value of the department. It is impossible to make a mistake even in twins the finger marks are totally different. I have always been under the impression that the finger prints of twins—even of uniovular twins and irrespective of whether the single ovum from which these twins developed originally possessed two nuclei or a single nucleus which after fertilization divided into two blastoderms—have never been shown to be identical. In view of the diametrically opposed contentions of the two high authorities whom I have quoted I should be grateful for the opinions of those who possess more knowledge of this subject than I.

### Sulphanilamide and Breast Milk

J. I. B. writes: I would be glad to learn of any change in the quality of the breast milk or any effect on the health of the infant observed after the administration to the mother prophylactically or curatively of sulphanilamide compounds. In one case in my practice a morbilliform rash appeared on the fourth day following the administration of prontosil album to the mother; no untoward effect on the general health of the infant was noticed. Is this experience general?

### Preparation of Measles Serum

J. S. M. asks for instructions regarding the domestic preparation of serum from a convalescent measles case.

It is unwise for anyone not having at his disposal the services of a properly equipped laboratory to prepare serum on account of the possibility that accidental contamination may occur in the process. Laboratory procedures include addition of disinfectant and filtration to ensure sterility. Where serum is not available whole blood

(double the dose of serum) may be injected immediately after withdrawal into the leg muscles of contacts. Members of the family preferably parents only should be employed as donors, in view of the possibility of transmission of syphilis.

### Menostaxis

"A. H. I." writes: I have a female patient, aged 25, who has been married ten years and is sterile who suffers from almost continuous uterine haemorrhage. Menstruation started at about the age of 15, and was irregular and scanty for three years since when she has had this present trouble. There is apparently no physical abnormality. Curettage has been undertaken three times without any result. I shall be glad of any advice, particularly with reference to endocrine therapy.

### Ill health from Coal-gas Leaks

"R. H." writes: I should be grateful for information of the most recent work on ill health caused by the unsuspected leakage of coal gas in minute quantity from loose taps or erosion of pipes. I have good reason to suspect that a large amount of ill health might be prevented by scrutinizing the gas fittings, especially in old houses. I want to know (1) the most reliable method of proving the presence of CO in the air of living rooms (2) the presence of CO in the blood of living persons suffering from chronic ill health.

## LETTERS, NOTES, ETC.

### Sidelights on Syphilis

In an article on "William Shakespeare Syphilographer" by Walter E. Vest contributed to the March number of the *West Virginia Medical Journal* numerous and appropriate quotations from his works illustrate the poet's familiarity with syphilis, which he discusses frankly under such synonyms as 'malady of France', Neapolitan bone ache, pox and 'the infinite malady'.

To aid the campaign against syphilis, the Société Française de Prophylaxie Sanitaire et Morale has issued a stamp (65+25 centimes light mulberry in colour) depicting the symbolic figure of France holding an infant—the future race—in her arms. The legend reads: 'Pour sauver la race'.

### Medical Postage Stamps

Jean Baptiste Charcot (1867-1936), the French physician and explorer, is strikingly portrayed on a bluish green 65+15 centimes stamp with the legend 'Jean Charcot. Sociétés Œuvres de Mer'. In commemoration of the 10th international leprosy congress at Cairo an artistic set of three oblong Egyptian stamps has been issued: 5 milles brown, 15 violet and 20 blue. The central design shows a branch of hydnocarpus the seeds of which yield an oil used in the treatment of leprosy.

### Medical Golf

The eighth spring meeting of the Sussex Medical and Dental Golfing Society will be held on the links of the Crowborough Beacon Golf Club on Sunday, June 5. In the morning there will be 18 holes medal play under handicap and in the afternoon four ball foursomes against bogey. S. J. D. C. 14.

### Corrigendum

In epitome paragraph No. 405 which appeared in issue of May 14 at p. 81 the reference to F. R. B. A. C. 1 paper on Nicmann Pick's disease was given as F. R. B. A. C. 1 Child October-December 1937 p. 245. It should have read *Brit. J. Child Dis.* October-December 1937 p. 245.

### The Adreno-genital Syndrome

We regret that the footnote in the first column of p. 25 of last week's issue (May 14) gave incorrect full name of L. R. Broster's book *The Adrenal Cortex*, 1937. This work published by Chapman and Hall, 1937, 257 pages, and the price is 15s. net post paid.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 412 Actinomycosis of the Lungs

F. BAUDICH (*Z. Tuberk.* 79 228) describes a fatal case of actinomycosis and tuberculosis of the lungs in a blacksmith of 47, whose mother, brother, and first wife had all died of pulmonary tuberculosis. The disease began in March 1933 with a cough, some sputum, and fever, followed, on a cold, in September the patient began to complain of severe neuralgic pains in the right chest and dyspnoea. In December there was haemoptysis, and tubercle bacilli were found in the sputum for the first time. An abscess in the back also developed and was aspirated many times; no tubercle bacilli were found in the pus but in February 1936 fusiform bacilli and streptothrix were seen. New abscesses on the shoulder and the elbow and numerous fistulous openings made their appearance. The patient's condition became steadily worse and he died on April 4, just one year after the onset of the disease. The diagnosis of pulmonary actinomycosis is extremely difficult. Largely because of the various routes by which the infection may enter the body and reach the lungs the disease does not present a uniform picture in any given case; moreover a coincident active tuberculosis as in the present case may make the diagnosis still more difficult. Cough, dyspnoea, and neuralgic pains associated with fluctuating thoracic tumours should be regarded as highly suspicious but a radiograph may not show any characteristic peculiarities, nor are bacteriological or biological investigations always conclusive. In treatment potassium iodide, x-rays, and possibly operative measures may be tried.

This study, begun in October 1932, was intended as a check on the monograph published by Howard F. Root from Joslin's Hospital in Massachusetts. 100 of the author's patients came from Oslo and the remaining 200 were from rural communities. Surviving as controls were Pirquet investigations of the healthy population at different ages in both town and country in Norway. As the author's tables show, the proportion of positive Pirquet reactions was approximately the same for the diabetics as for the controls. This observation gives no support to Root's statement that diabetics show a comparatively marked susceptibility to infection with tuberculosis. In other respects Hertzberg's findings coincide in the main with those of Root. Hertzberg has studied the records of 400 consecutive cases of diabetes treated in his hospital during the past four to five years, and in this material has found thirteen cases complicated by active pulmonary tuberculosis and one by tuberculosis of the spine and of the glands of the neck. This tuberculosis morbidity among diabetics of 3.5 per cent compares unfavourably with the tuberculosis morbidity of Norwegians in general (at most 1.5 per cent). In as many as ten of the thirteen cases of active pulmonary tuberculosis the signs of the disease appeared after the diagnosis of the diabetes. As for the behaviour of the pulmonary tuberculosis it corresponded in the main with that of pulmonary tuberculosis in persons not suffering from diabetes, and among the author's cases were some in which the tuberculosis ran a mild course and proved amenable to treatment.

## Surgery

### 415 Peptic Ulcer and Cancer of the Stomach

P. E. BLACKERBY and F. W. CALDILL (*Sth. med. J.* February 1938, p. 161) describe an epidemic of 400 cases of cerebrospinal meningitis in Kentucky in 1936. As in previous years most cases occurred in March and April, the industrial area was chiefly affected, and extension along much travelled routes could be traced. Cases were most numerous in the age group 1 to 4, decreasingly frequent from 5 to 50, and thereafter again more frequent. From infancy to 28 years males were nearly twice as commonly affected as females. The mortality rate was 25 per cent; it was greatest in the group over 50, next highest at ages 1 to 4 years, and least from 5 to 9. It was not felt that the general swabbing of throats and subsequent isolation of carriers lessened the incidence. There was little difference in mortality in cases treated by anti-meningococcus antitoxin and by anti-bacterial serum (20.2 and 25 per cent respectively), but in reply to the discussion on his paper Blackerby stated that in a series of forty-two untreated cases, diagnosed on clinical and epidemiological grounds but without bacteriological confirmation, the mortality was 85.7 per cent. In 136 cases in which both bacteriological diagnosis and accurate treatment records were available the fatality rate was twice as great among those treated at home as among those in hospital. Comparison of the date of institution of treatment with mortality gave evidence that early treatment facilitates recovery, but that apart from treatment the chance of survival improves if the patients live beyond the fourth day.

H. B. WILF (*Acta chir. scand.* February 28 1938, p. 433) has investigated the possible relationship to gastric and duodenal ulcer of 609 proved cases of cancer of the stomach observed in the period 1924 to 1933 in a hospital in Lund, Sweden. The diagnosis of cancer was based on the findings at operation in 336 cases and on radiological post-mortem or clear-cut clinical findings in 233 cases. The male and female cases numbered 233 and 186 respectively. In as many as 489 cases (80 per cent) there was no evidence of previous ulceration of the stomach judging by clinical, radiological, operative or post-mortem findings. In the remaining 120 cases there were such findings, but sixty-nine of these cases could be dismissed because the evidence of ulceration was unconvincing (in many cases a history of prolonged dyspeptic symptoms did not tally with the characteristic picture of gastric ulcer). Thus there remained only fifty-one cases (8.3 per cent) in which there was a certainty, or a considerable likelihood of gastric or duodenal ulcer having preceded the cancer. In nine cases (15 per cent) the microscopic examination of the new growths suggested that degenerative changes had taken place in ulcers. The author records in detail five cases in which radiological examinations conducted over a period of two to five years before cancer of the stomach had been diagnosed had made it possible to follow the course of certain ulcers in which malignant disease had ultimately developed.

### 416 Mikulicz's Metaphyseal Osteodystrophy

G. HERTZBERG (*Nord. med. Tidskr.* February 19, 1938, p. 295) has undertaken a study of 300 consecutive cases of diabetes admitted to the Rikshospital in Oslo, testing every patient with the Pirquet reaction, and noting the cases in which clinical evidence of tuberculosis was demonstrable.

G. MORACA (*Riv. Chir.* January 1938, p. 20) records the case of a youth aged 19 on whom he operated for a bony tumour of the shaft of the humerus. The growth consisted of a compact cortex continued into a spongy and vacuolated osteoid trabecular tissue. The dilated medullary cavity was filled with lamellar osteoid tissue like a mass of fine straws. Histological examination showed rarefaction and decalcification of the bony



trabeculae which were replaced by fibrous connective tissue. This histological structure, which resembled that of Recklinghausen's osteitis fibrosa, justified the case being regarded as a circumscribed form of the disease which Mikulicz described under the name of the metaphyseal osteodystrophy of adolescents. These cases are not connected with parathyroid deficiency.

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## Sympathectomy

The arguments against the treatment of peripheral vascular disease by sympathectomy are discussed by GEZA DE TAKATS (*Arch intern Med* December, 1937, p 990). In addition to selected cases of Raynaud's and Buerger's disease certain cases of poliomyelitis and reflex dystrophy make up the total of fifty patients so treated at the author's clinic and chosen out of a total of 180 patients attending the clinic for these disorders. Twenty-four of the patients were observed for periods of from one year to seven years and the evaluation of results is based on this series alone. Although the peripheral vessels will regain their previous tone a short time after operation and will contract and dilate in response to local stimuli, yet, according to the author, they will be relieved of the continuous or intermittent barrage of stimuli conveyed to them before operation by the efferent sympathetic pathways. They will therefore not respond to heat and cold affecting the whole body neither will they contract as a consequence of emotional upsets. The oxygen saturation of the venous blood should be estimated before and after the operation, and no clinical benefit is to be expected in cases in which no post-operative rise in the oxygen saturation has occurred. Post-operative regeneration of fibres is only possible if simple section of the trunk of the sympathetic chain is performed. Should such regeneration occur after removal of the trunk with its ganglionated fibres it must be assumed that some of the post-ganglionic fibres escaped section and not all the excitor ganglia were removed. However the regeneration only concerns the lower centres and does not re-establish connexion with the higher centres. Central and reflex stimulation of the vessels, therefore will not be possible. Recently the author has performed pre-ganglionic section in diseases of the upper extremity to avoid the increased sensitivity to hormones which is said to occur when post-ganglionic degeneration has taken place, lumbar sympathectomies are always pre-ganglionic in type. Sympathectomy was uniformly successful in patients suffering from poliomyelitis with vasospasm and when performed for causalgia and traumatic osteoporosis. The author summarizes his attitude by saying: "Operation on the sympathetic nervous system is worthy of consideration for selected patients with peripheral vascular disease."

## Therapeutics

## 418 Measles Prophylaxis with Placental Extract

F. ROHR (*Dtsch med Wschr* March 18, 1938, p 413) has found in practice that the parents of convalescents from measles are apt to grudge their services as donors of serum to other children threatened by measles. As for adult donors by the time they have been tested with tuberculin and for syphilis, the potential benefits of their sera are liable to be much diminished by the delay. Accordingly the author has made use of a placental extract which he administered to thirty-five children who had not hitherto contracted measles but who had been exposed to infection. In the course of a year small groups of these children had on eleven occasions been exposed to infection. In every case but one 15 cc of the placental extract was injected on the same day that the measles rash appeared in a contact case. In twenty-nine cases no measles developed after the injection and in three cases the subsequent outbreak of measles

was mild. Thus there were only three cases in which the injection appeared to have no effect as a preventive of typical measles. In one of these three failures, the six months-old child was already much debilitated at the time of the injection, which gave rise to a hard swelling, which disappeared completely in due course. Apart from this case, there was no local or general reaction to the injection. The immunity thus conferred was shown in two cases still to exist three and five weeks respectively after the injection, and it is probable that it lasts even longer.

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## Mandelic Acid in Urinary Infections

H. C. GRAM (*Ugeskr Laeg* February 17, 1938, p 172) notes that the widespread enthusiasm for mandelic acid has hitherto been but little tempered by controlled observations with other well-known urinary disinfectants. To make good this omission he carried out controlled tests during 1936 and 1937 with three different urinary disinfectants. In each of three groups he had twenty-seven patients, and the duration of treatment for all three groups was fourteen days. At the beginning and end of this period catheter specimens of urine were taken and were examined both directly and by culture, these laboratory tests were undertaken by persons unfamiliar with the clinical course of the cases. Each patient in the first group received 27 grammes of salol and 81 grammes of calcium chloride in the twenty-four hours, in the second group 127 grammes of hexamethylene tetramine and 89 grammes of ammonium chloride, and in the third group 12 grammes of a palatable preparation of mandelic acid. The recovery rates, as judged by the laboratory reports were 33 per cent and 30 per cent respectively for the first two groups, and 85 per cent for the third group. Judging only by the direct microscopical test, the recovery rates for the three groups were 41, 33, and 93 per cent respectively. A special study was made of the cases of pyelitis of pregnancy, as this is notoriously refractory to treatment with urinary disinfectants. The urine of none of the seven patients with this condition in the first group was sterilized, and the urine of only one of the four patients in the second group was sterilized, whereas this result was achieved in five out of seven cases of pyelitis of pregnancy in the third group. *B. coli* was equally distributed in the three groups, and was numerically the most important of the infecting organisms. As a footnote to this comparison, so strikingly favourable to mandelic acid, the author remarks that in his experience it has given rise to no complications.

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## Insulin Allergy

H. MALTEN (*Munch med Wschr* February 4, 1938, p 166) points out that insulin allergy is a rare but well-defined clinical entity. It is probably not due to the insulin itself but to the proteins present in the various brands on the market. It manifests itself in local urticaria at the site of injection or in subjective symptoms—for example, headache, lassitude, and symptoms resembling closely those of hypoglycaemia. A dirty skin, one in which a small quantity of alcohol has been used, may produce local symptoms, and must therefore be taken out of consideration. Different brands of insulin then be tried in the hope of finding one which does not provoke an allergic response. Since insulin can be dispensed with in the treatment of diabetes the patient in some cases must be desensitized by the administration of small doses of the toxic agent. The author advocates a vegetarian and salt-free diet as an adjuvant in desensitization. Carbohydrates must be increased and, provided that they are kept in quantity and are adequately compensated by the administration of sufficient insulin, no harm results. He describes a case of severe allergy in a patient moribund through lack of insulin. The condition was cured in six weeks by the treatment outlined.

# Dermatology

## 421 Exfoliative erythrodermia from Milk Tern

S. NEUMARK (*Derm. Wschr.* March 19 1938 p. 51) describes the case of a woman aged 6 who after taking filix mas for tapeworm suffered from pyrexia, vomiting, bloody diarrhoea, oliguria, haematuria, mental psychopathy and a generalized exfoliative dermatitis. After discharge from hospital a month later generalized psoriasis developed. Exfoliative dermatitis after filix mas does not appear to have been noted hitherto although psychosis with mania, and in another case sudden death with symptoms suggesting anaphylactic shock have been reported—in both instances following a second treatment by milk tern for worms. In Neumark's case the previous treatment of this sort—at the age of 12—had been followed by exfoliative erythrodermia with shedding of the hair and nails and (later) psoriasis. He inclines to regard the case as being of an allergic rather than a toxic nature and dependent on idiosyncrasy. Later the administration of one thirtieth of the previous dose induced similar symptoms—a cutaneous application of milk tern extract (or to a less extent of filmaron) led to acute general toxic and cutaneous symptoms. An additional factor may have been reinforcement of the sensitization by the tannin for intense local and general reactions followed intra cutaneous injection of an extract of tannin. No castor oil had been taken in this case. Neumark alludes how ever to recent work casting doubt on the belief that castor oil increases the toxicity of filix mas.

## 422 Porphyrins and Actinic Dermatitis

From the absence of porphyrin in the urine in some patients having light dermatoses E. URBACH (*Klin. Wschr.* February 26 1938 p. 704) was led to examine the faeces and in a single summer he noted seven cases characterized by (1) gross stercoporphyria without haematoporphyrinuria (2) profound pathological modifications of the gastro-intestinal flora (3) hepatopathy and (4) light dermatoses of various kinds including moist dermatitis, chronic eczema conditions resembling lupus erythematosus, chronic pigmentations and pellagra-like dermatoses. Porphyrins disappeared from the faeces when animal poisons were withdrawn from the dietary. Disturbed hepatic function was shown by defective deaminization after the administration of amino acids. The pathological flora consisted in atypical *B. coli*, enterococci and yeasts. Normal bacterial conditions were restored and the dermatoses, actinic sensibility and coproporphyrin disappeared after the administration of living normal *B. coli* strains. Importance was attached not only to this vaccine treatment but also to restoration of the impaired liver function by the administration of liver extract and dextrose together with a diet free from animal protein. The usual treatment in darkness or with masks was adopted in the early stages. Stercoporphyria in combination with light sensitiveness has previously been reported in England by Barber and Riffel and also in hydroa vaccinatorum.

## 423 Eczema

A. STÜHMER (*Med. Welt* February 26 1938 p. 302) stresses the importance of preserving the distinction between seborrhoeic eczema in Unna's sense and true eczema in which the primary efflorescence is always accompanied by vesiculation and there is a combination of cutaneous irritation with cutaneous hypersensitivity which may be congenital or more often acquired. Acute eczema is an epidermal disease to which in the chronic stage is added a vascular dermal reaction. The irritant factor may be external—as in occupational or pruritic eczema and in light warmth or cold hypersensitivity—or internal as in dietetic eczema which is infinitely more common in children. In the former group mycotic and other fungi and frankly bacterial causes especially strepto-

cocci are often overlooked. Stühmer remarks that modern therapy by multiplicity of intravenous injections of vitamins and hormones is doomed to failure if the dermatological diagnosis is incorrect; he believes that reducing and dehydrating treatments are sometimes employed unnecessarily and ineffectively. Local treatment should be in the foreground and in Stühmer's practice is invariably carried out in detail by himself. Usually he begins in acute cases with loose moist applications of 3 per cent boracic lotion or a solution of salicylic acid 0.5 part and resorcin 2.5 parts in 200 parts of distilled water. A day or two later 5 to 5 per cent thigenol paste is applied to be replaced after four to five days by thick coal tar dressings applied for five days. A further paste application follows. Ointments are little used. X-ray therapy is useful at the end but not at the beginning of treatment. The intake of food and fluid should be somewhat reduced. A salt free diet is not helpful but other condiments should be avoided. Stimulation of healthy skin function by natural or artificial sunbaths or by swimming is to be recommended in many cases.

## 424 Virus in Pemphigus Vulgaris

J. WERTH (*Arch. Derm. Syph.* Berlin February 14 1938 p. 382) alludes to recent reports by German and Japanese workers of a filterable virus in pemphigus vulgaris transmissible to rabbits. In his own experiments material from the vesicles was inoculated into the anterior chamber of the eye in rabbits or guinea pigs, panophthalmitis eventually occurring. After several passages from eye to eye the fluid ultra filtrate retained its pathogenicity for rabbits and could be cultured by successive inoculations in the chorion allantois of the hen's egg. From the allantois colonies of extremely minute round corpuscular elements staining by Giemsa or Victoria blue were isolated; they were regarded as the pemphigus virus and were also found in sections of the cornea in the experimental animals. There was evidence in these of establishment of immunity. Animal inoculation of the cerebrospinal fluid (or cerebral extracts) from pemphigus patients was ineffective.

## 425 Traumatic Marginal Alopecia

H. RIBEIRO (*Brazil. med.* December 25 1937 p. 1267) records two illustrative cases in women aged 40 and 47 presenting an alopecia of the scalp similar to that termed frontal luminal alopecia by Sabouraud and marginal traumatic alopecia by Ribeiro. This condition is due to continuous or frequently repeated traction of the hair which gives rise to inflammation of the hair follicles. The condition is particularly common among coloured women who wish to imitate the style of hairdressing adopted by white women.

## 426 Dermatitis Atrophicans Lipoides Diabetica

H. GOTTRON (*Med. Klinik* February 4 and 11 1938 pp. 145 and 190) discusses the pathogenesis of a peculiar dermatitis originally described by Oppenheim as dermatitis atrophicans lipoides diabetica and by Urbach as necrobiosis lipoidica diabetica. The author however prefers to call the disease granuloma necroticans lipophilum or lipoidicum. The affection is the outcome of the disturbed diabetic metabolism and may develop even in the absence of a high blood pressure, the appearance of the skin lesions is often determined by injury. The localization and appearance of the lesions vary but microscopically they are all more or less alike. At a certain stage of the evolution of the lesion there is a deposit of isotropic fats exceptionally of crystallized cholesterol in the necrobiotic areas. The deposit of fats is preceded by the necrobiosis of the cutaneous tissues. The distribution of the fat may be diffuse or in the form of rosettes. It is mostly extracellular, rarely intracellular in the form of minute drops. It may also be deposited in concentric layers around anatomically altered blood vessels. Fat is also found in the dilated lymphatic capillaries. In long standing cases there may also be a deposit of calcium.

## Obstetrics and Gynaecology

### 427 Urethral Prolapse

N E BERRY and H GREENE (*J Urol* February, 1938, p 92) say that prolapse of the urethral mucous membrane through the external urethral meatus is a condition usually referred to gynaecologists. Of the recorded cases 60 per cent occurred in children and 28 per cent in women over 40. The symptoms are itching and burning, and sometimes severe and continuous pain with vesical tenesmus and frequent micturition. On inspection there is a small tumour anterior to the vaginal orifice with a slit in the middle corresponding to the urethral meatus. The colour varies from deep red to blue, and there may be ulceration or gangrene with sloughing of the protruded tissues. The condition should be differentiated from a caruncle, which projects from one side of the meatus, and from a urethral polyp, which is encircled by the orifice. One case that of a girl aged 10, is described. It was treated by circular amputation of the prolapsed mucosa, which was strangulated and almost gangrenous. The fulgurating diathermy knife was used. On the second day there was brisk haemorrhage, which was controlled by an indwelling catheter. This was removed two days later and the urethra healed promptly. Post operative stricture may be prevented by occasional timely dilatation of the urethra.

### 428 Acetonuria and Menstruation

H ISELIN (*Schweiz med Wsch* February 19, 1938, p 175) has noted the presence of acetonuria in a number of women just before and during menstruation. It is not known whether this is a constant occurrence and whether it is due to the action of the pituitary as is probable. The importance of acetonuria at the time of menstruation lies in the associated sensitivity of the liver to toxic agents—for example chloroform. Consequently all operative measures under narcosis should be avoided during the menses.

## Pathology

### 429 Hypovitaminosis C in Tuberculosis

P A DELILLE and G URBAIN (*C R Soc Biol* 1938, 127 522) made observations on children under 16 years of age who were suffering from pulmonary tuberculosis. A dose of ascorbic acid of 10 mg per kilogramme of body weight was given by the mouth. The urine was collected for the next twenty four hours in a flask containing 1 ccm of acetic acid in order to avoid oxidation of the vitamin and the ascorbic acid content was determined by methylene blue titration. Normal children eliminated between 10 and 30 per cent of the ingested ascorbic acid. Tuberculous children eliminated none. Ascorbic acid had in fact to be given for some days to these children before they began to excrete it in the urine. Tuberculous children who had recovered under sanatorium treatment had a normal ascorbic acid excretion. It seems clear therefore that in pulmonary tuberculosis in childhood there is an abnormally high consumption by the tissues of ascorbic acid.

### 430 Synovial Fluid in Gonococcal Arthritis

W W SINK and C S KEEFER (*J clin Invest* January, 1938, p 17) have investigated the bactericidal power of synovial fluid and blood in cases of gonococcal and non-gonococcal arthritis. In non-gonococcal cases the fluid was not gonococcidal owing to the absence of specific antibodies and not to the absence of complement. In gonococcal cases when the fluid was infected with gonococci antibodies were absent although they might be

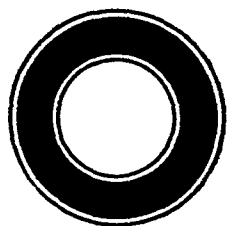
present in the blood, when the fluid was sterile anti-bodies were present in it as well as in the blood, and often in the same concentration. Actively gonococcidal fluids lost their gonococcidal power when heated to 56° C for thirty minutes, their activity could not be restored by adding immune serum, but it was restored on adding complement. Inactive fluids could be made gonococcidal by adding immune serum, but if they had been heated addition of complement was necessary as well. The gonococcidal power of the fluids depended therefore on the presence of both specific antibodies and complement. Complement was found to be present in about the same concentration as in the blood in all three types of fluid tested. When the fluid was infected its gonococcidal power was less than that of the blood, when the fluid was sterile its gonococcidal power was equal to or only slightly less than that of the blood.

### 431 Alcohol Determination at Necropsy

G GULDBERG (*Norsk Mag Laegevidensk*, March, 1938, p 241) has carried out alcohol determinations at necropsies for medico-legal purposes on thirty five men and five women in Oslo between 1931 and 1937, he used Widmark's technique. In seven cases separate examinations were made of the blood, urine, and contents of the stomach. It was found that the concentration of alcohol in the stomach varied widely from 2.67 to 41 parts per thousand. In as many as seven cases the primary cause of death was alcohol poisoning with ethyl alcohol in five cases and a mixture of ethyl alcohol with methylated spirits in two. In most cases alcohol had played only a secondary or contributory part, death being usually traumatic. In one case the examination of the urine in the bladder for alcohol was carried out seven weeks after death, and yet the author succeeded in demonstrating in the urine a reducing body the quantity of which corresponded to 3.21 per thousand of ethyl alcohol. This finding was of considerable medico-legal importance and to the advantage of the motor driver held responsible for the death of the person examined after exhumation. For the evidence to the effect that this person was intoxicated at the time of the accident found confirmation at the post mortem examination. As alcohol present in the stomach at the time of a fatal accident may diffuse through its walls after death, the author recommends taking samples of blood for alcohol determination from some part of the body remote from the stomach. He is very sceptical as to the value of a smell of alcohol as a guide to the alcohol content of a dead body. For a smell of alcohol under these circumstances will depend on many different factors, such as the temperature of the body, other odours proceeding from it, and the nature of the alcohol assumed.

### 432 Tuberculous Spondylitis

A DI NEPI (*Arch ital Anat Istol patol* February, 1938, p 269) describes the following changes encountered in the intervertebral disk at necropsies on ten cases of tuberculous spondylitis. In the first stage there were degenerative changes in the disk, consisting in elongation of cartilage cells in the lamina with fibrosis of the intervertebral substance and the appearance of large irregular areas of degeneration with abnormal coloration of the substance, or of small round amorphous areas of calcification. These zones of calcification were also found in the annulus fibrosus and nucleus pulposus with an increase in the number of cartilaginous cells. In later stage specific changes were found in the disk consisting first of erosions of the lamina with perivascular buds and inflammatory cells in the pulp filling up of the cavity of the nucleus with fibrous tissue and lastly invasion of the whole disk by a specific process with a non-specific reaction of connective tissue proliferation interspersed with and necrosis of the granulation tissue.



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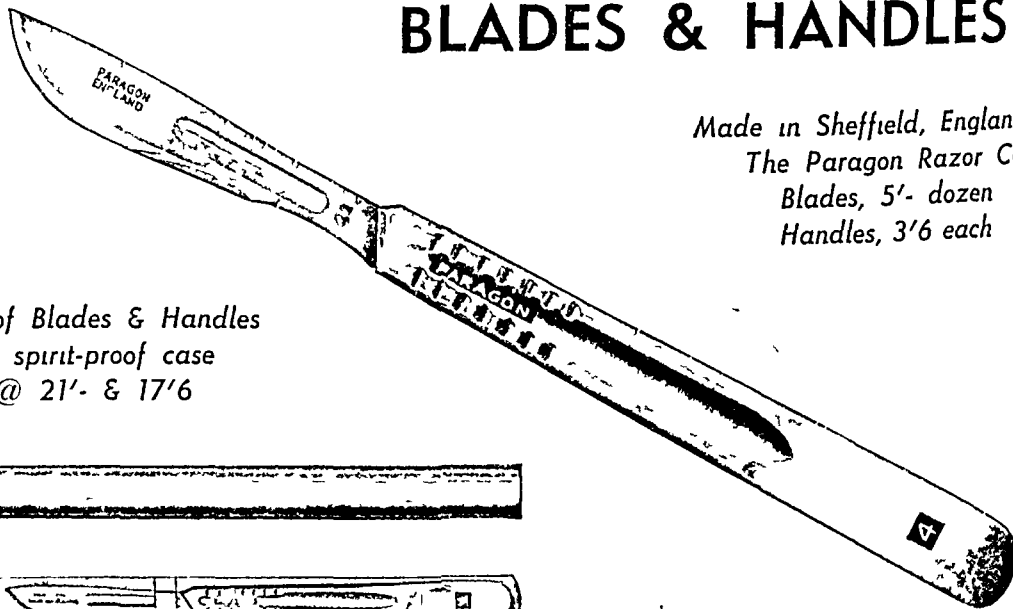
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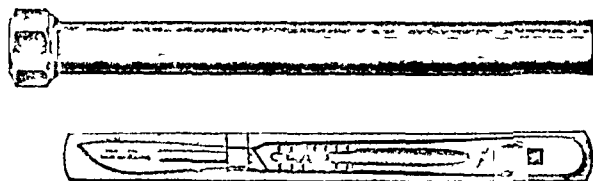
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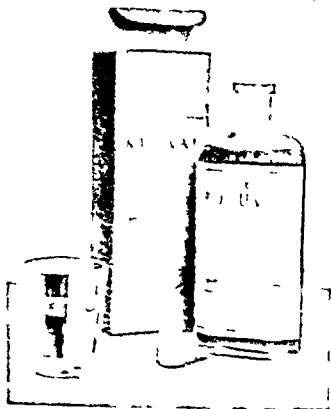
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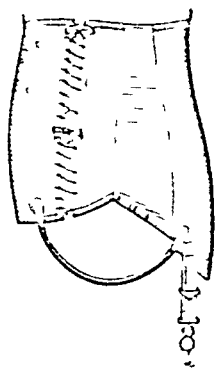


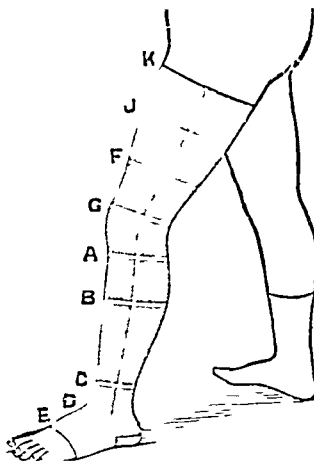
Fig B690

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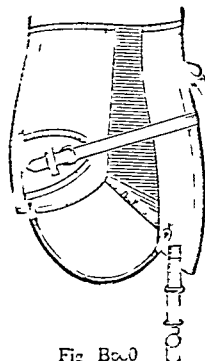


Fig B600

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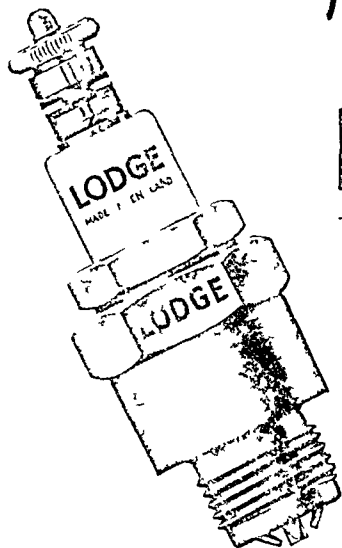
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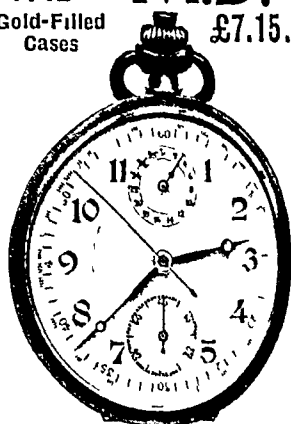
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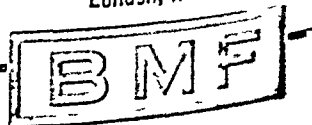
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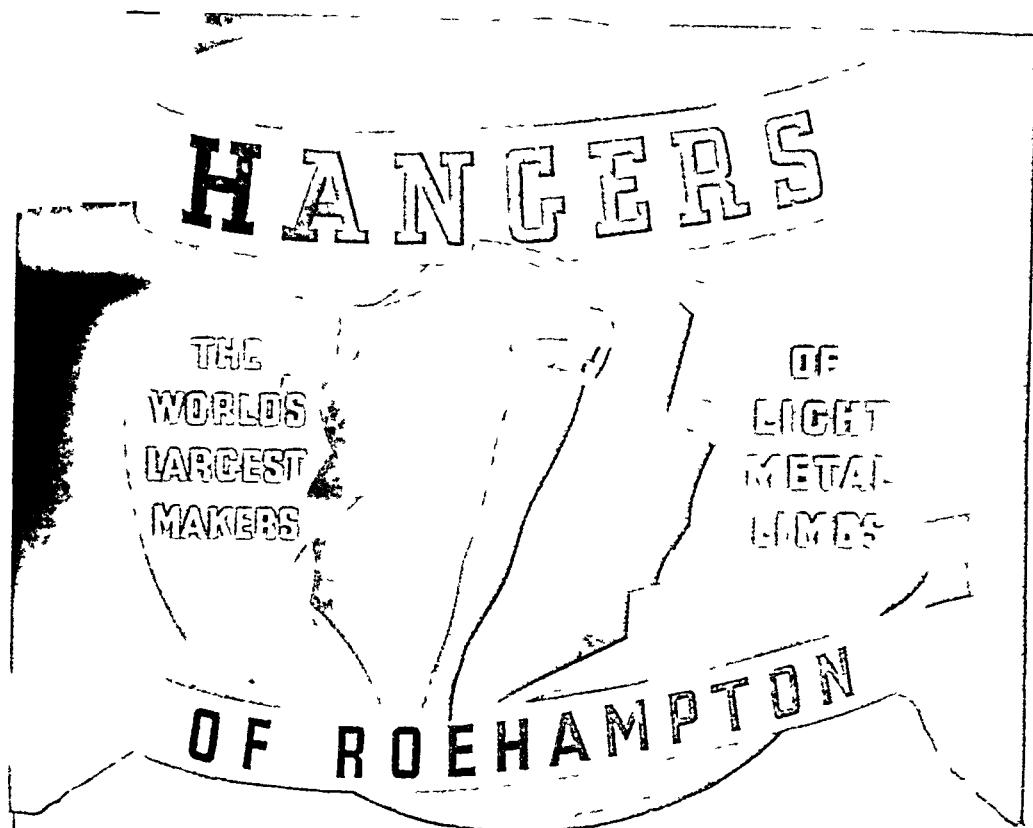
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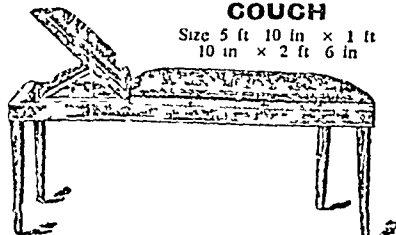
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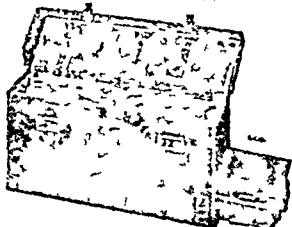


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A PRIVATE MENTAL HOME situated in 11 acres of well wooded grounds. For Ladies and Gentlemen suffering from Nervous or Mental Illness. Voluntary Patients Temporary Patients and Patients under Certificate are admitted for treatment. Fees from 4 guineas a week upwards according to requirements. A few vacancies exist for Ladies and Gentlemen at reduced fees on the recommendation of the Patient's own Physician. Apply to Dr J. A. SMALL. Telephone 01603 11. Telegrams Small 80 Norwich.

## CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone: PINNER 431

A Private Hospital for the Treatment and Cure of Mental and Nervous Illness in both sexes.

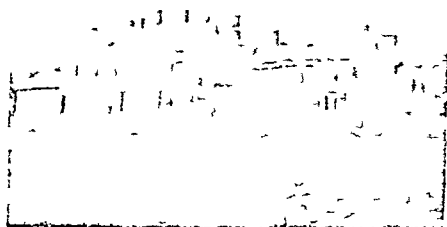
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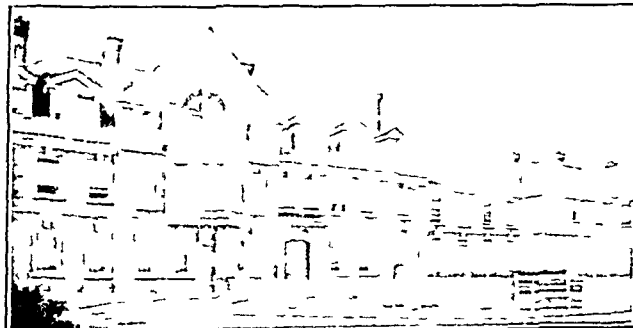
*Illustrated booklet giving particulars as to terms etc. can be had on application to the*

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Proprietors: The Norwood Sanatorium Limited

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A Private Hospital or Clinic for the diagnosis and treatment of Internal Diseases (except Mental or Infectious Diseases). The Clinic is provided with a full staff of doctors, bacteriologists, chemists, radiologists, dietitians, nurses, masseurs and masseuses.

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Address: THE SECRETARY, Ruthin Castle, North Wales.

Telegrams: Castle Ruthin. Telephone: Ruthin 66.

# CHEADLE ROYAL HOSPITAL

CHEADLE, CHESHIRE

This REGISTERED HOSPITAL with a SEASIDE BRANCH at Colwyn Bay N. Wales is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.  
The Hospital is governed by a Committee appointed by the TRUSTEES of the Manchester Royal Infirmary.  
In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational therapy.  
VOLUNTARY TEMPORARY AND CERTIFIED PATIENTS received.  
The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool and 3½ hours from London.  
For terms and further particulars apply to the Medical Superintendent who may be seen in MANCHESTER by APPOINTMENT.  
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Terms very moderate

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Telegrams "Alleviated, London"

Telephone Rodney 2611 2612

The above House which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Keirsey Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis courts. Entertainments, dances and indoor amusements held throughout the year. Terms from £3 3s per week. Illustrated prospectus and further particulars can be obtained from the Medical Superintendent.

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Including Alcoholism and other Addictions  
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Rodney 4742 (2 lines)

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The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea level.

## THE CLINIC

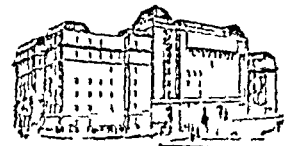
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(for emergencies)  
Patients only received under the supervision of their own Medical Practitioner

Drugs and Dressings free (other than Proprietary Articles)  
Illustrated Brochure on application to Secretary



## WESTON LODGE, BATH NURSING HOME

A country residence with extensive grounds on the outskirts of the City of Bath established by the Mental Treatment Act Committee of the Corporation for the care and treatment of a limited number of women (Voluntary and Temporary patients only) suffering from Nervous and Nervous Disorders.

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A few vacant beds available. Terms moderate.

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Weston (Bath) 7573

## THE MAUDSLEY HOSPITAL,

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Terms include (with rare exceptions) all forms of treatment for which there are exceptional cases. A day's visit of Consultant Specialist and a day's visit of a Lecturer of London County Mental Hospital is attached to the hospital. For further particulars apply to the Medical Superintendent.

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For Mental Defectives of either sex  
Under private management

Apply to Dr. Langdon Down,  
Normansfield, Twickenham

"ECCLSFIELD," Staphurston, Kent  
(Removed from Ashford, Kent)

PRIVATE HOME for the CARE and CURE of ALCOHOLIC PATIENTS (LADIES). Large roomy house beautifully situated in 100 acres of parkland. Extensive views. Home farm. R.C. Chapel. Under the management of the Sisters of the Good Shepherd. Apply to Rev. Father. Tel. Staphurston 61.

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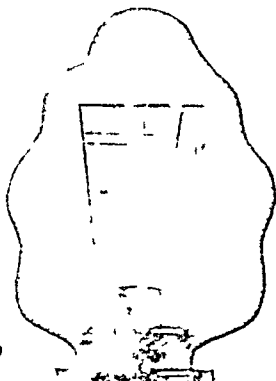
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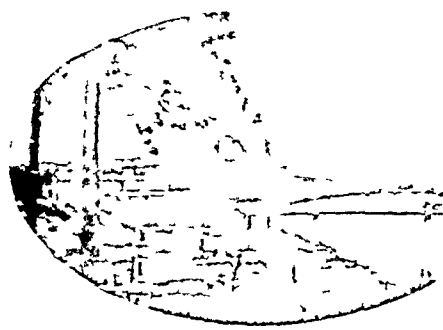
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JUNE 28th	Modern Methods in Diagnosis and Treatment of (a) Diphtheria, (b) Scarlet Fever	Dr J. S. Anderson, M.A., M.D. DPH
JULY 5th	Modern Methods in Diagnosis and Treatment of (a) Typhoid Fever, (b) Measles (c) Puerperal Sepsis	Dr W. Gunn M.A., M.R.C.P., DPH
JULY 12th	Modern Methods in Diagnosis and Treatment of (a) Whooping Cough (b) Enteritis and Dysentery (c) Cerebro-spinal Fever (d) Acute Poliomyelitis	Dr M. Mitman, M.D., M.R.C.P., DPH
JULY 19th at North-Western Hospital	Clinical Examination of Fever Cases and Demonstration of Modern Methods and Apparatus	Dr W. Gunn M.A., M.R.C.P. DPH
* JULY 26th at North Western Hospital	Modern Laboratory Methods in Diagnosis, Therapy and Control of Acute Infectious Diseases	Dr R. Cruikshank, M.D., DPH

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Further particulars may be had on application to the Hon. Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh 8

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MAY 25th	Dr H. HALDIN DAVIS	THE MANAGEMENT OF ECZEMA AND/OR DERMATITIS
JUNE 1st	Dr W. B. WINTON	SEBORRHOEIC DERMATITIS
8th	Dr G. MITCHELL HEGGS	SKIN AFFECTIONS OF THE HANDS AND FEET
15th	Dr F. J. EAGAR	PSORIASIS AND LICHEN PLANUS
22nd	Dr P. M. DEVILLE	SCABIES AND OTHER COMMON PARASITIC DISEASES
29th	Dr S. BLACKMAN	SUPERFICIAL RAY THERAPY
JULY 6th	Dr BEATRICE LEWIS	IMPETIGO AND TUBERCULOSIS
13th	Dr E. SKLARZ	ELEMENTARY CLINICAL PATHOLOGY OF SKIN CASES

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Open only to Members  
Annual Subscription £1 1 0

OBSTETRICS week end (City of London Maternity Hospital, all day, Saturday and Sunday June 11th and 12th), RADIOLOGY, week end (Royal Cancer Hospital, all day Saturday and Sunday, June 18th and 19th), UROLOGY (St Peter's Hospital all day, June 13th to 25th) MEDICINE SURGERY and the Specialities (Prince of Wales's Hospital, all day, June 27th to July 9th), CHILDREN'S DISEASES week end (Princess Elizabeth of York Hospital, all day Saturday and Sunday, June 25th and 26th)

Apply, FELLOWSHIP OF MEDICINE, 1, Wimpole Street, London, W1 (Langham 1266)



# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board.

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty.

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000.

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax).

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances.

Opportunities are available for officers on the permanent list for post-graduate study, to specialise, to take higher examinations and to obtain further qualifications.

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers.

Copies of the regulations for entry and conditions of Service, including rates of pay, allowances and retired pay may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than 31st May, 1938

## MEDICAL STAFF — PRISON SERVICE (ENGLAND AND WALES)

Applications are invited for the post of male Medical Officer Class II in the above Service. Commencing salary £525 per annum rising by annual increments to £800 per annum with unfurnished house (free of rates) or an allowance in lieu. The post is pensionable.

Candidates must be fully qualified and registered. Preference will be given to those who have held House appointments, have had experience in mental diseases and psychological methods and are between the ages of 25 and 35 years. The commencing salary for those holding the Diploma of Psychological Medicine will be £575 per annum.

Of the whole time Prison Medical Officers sixteen are Class II and twelve are Class I. Promotions from Class II to the rank of Medical Officer Class I on a salary scale of £800 per annum rising to £1,000 per annum with unfurnished house (free of rates) or an allowance in lieu are made as vacancies occur. Three of the senior Medical Officers receive an additional allowance of £50 per annum and at certain Prisons Medical Officers receive fees for giving evidence in the Criminal Courts.

Forms of application can be obtained from the Secretary (Staff Branch) Prison Commission Home Office, London S W 1.

## CITY OF SALFORD PUBLIC HEALTH DEPARTMENT

Applications are invited from fully qualified Male Medical Practitioners for the post of Assistant Medical Officer (whole time) in the Venereal Diseases Treatment Centre at which the yearly attendances and new cases treated average 95,000 and 2,000 respectively. The salary will be £500 rising by annual increments of £25 to £700 per annum. Applicants must have had previous experience in the treatment of Venereal Diseases and must possess a certificate of attendance and instruction at a Venereal Diseases Treatment Centre as specified in the Local Government (Qualifications of Medical Officers etc.) Regulations 1929.

Forms of application etc. may be obtained from the Medical Officer of Health 143 Regent Road Salford 5 Lines to whom they should be returned accompanied by copies of not more than three recent testimonials not later than Saturday May 28th 1938.

H. H. TOMSON Town Clerk

## CITY OF COVENTRY ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

The Coventry City Council invite applications from Registered Medical Practitioners under 40 years of age for the post of Assistant School Medical Officer (male) in connection with the medical inspection etc. of schoolchildren. When not engaged in school work the officer will be required to assist in the general work of the Public Health Department.

Applicants must possess a Diploma in Public Health and preference will be given to those with appropriate previous experience.

The salary will be £500 rising by annual increments of £25 to a maximum of £700 per annum.

The post is designated under the Local Government and Other Officers Superannuation Act 1922 as intended in regard to gratuities to widows by the Coventry Corporation Act 1936 and the successful applicant will be required to pass a medical examination as to fitness and to contribute to the superannuation fund. The successful applicant will also be required to contribute to the Coventry Staff Widows and Orphans Pension Fund.

Applications together with copies of three recent testimonials must be made on the prescribed form (which may be obtained from the undersigned) and must be delivered not later than May 25th 1938.

FREDERICK SMITH Town Clerk

The Council House Coventry  
May 10th 1938

## CITY OF BATH DEPUTY MEDICAL OFFICER OF HEALTH AND DEPUTY SCHOOL MEDICAL OFFICER

Applications are invited for the appointment of Deputy Medical Officer of Health and Deputy School Medical Officer at a salary of £700 per annum rising by two annual increments of £50 to £800 per annum.

Candidates must have had experience in the duties involved and must possess the Diploma in Public Health. Age limit 45 years.

The post is designated one for superannuation purposes and the successful candidate will be required to pass a medical examination.

Further particulars and form of application may be obtained from the undersigned to whom applications must be delivered not later than May 25th 1938.

Guildhall Bath  
May 9th 1938

J. BASIL OGDEN  
Town Clerk

## COUNTY BOROUGH OF OLDHAM THE MUNICIPAL HOSPITAL RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £-00 per annum with board residence and laundry.

Candidates should be unmarried. The appointment will in the first instance be for a period of six months. The successful applicant however will be eligible for reappointment for a further period of six months.

The Hospital comprises 350 beds with facilities for gaining experience in medicine surgery and diseases of children.

Application forms may be obtained from the Medical Officer of Health Town Hall Oldham and should be returned endorsed Resident Assistant Medical Officer as soon as possible but not later than Friday May 27th 1938.

Town Hall Oldham  
THOMAS ALKER  
May 9th 1938 Town Clerk

## WEST SUFFOLK COUNTY COUNCIL ASSISTANT COUNTY MEDICAL OFFICER AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above whole time appointment (men or women) which includes duties in School Medical Inspection Maternity and Child Welfare Tuberculosis Venereal Diseases etc. work.

Applicants must be registered Medical Practitioners and not exceed 35 years of age holding the Diploma in Public Health. Salary £500 per annum rising by annual increments of £25 to a maximum of £700 plus travelling allowance.

Particulars of appointment and forms of application may be obtained from the undersigned to whom applications accompanied by copies of not more than three recent testimonials must be received not later than May 28th 1938.

Canvassing in any form direct or indirect will disqualify.

L. G. H. MUNSEY  
Clerk of the County Council  
Shire Hall Bury St Edmunds  
May 7th 1938

**GOVERNMENT OF INDIA**

Applications are invited from registered medical practitioners for the post of **RESIDENT ASSISTANT MEDICAL OFFICER** at the **North Middlesex County Hospital**, Edmonton, London, N. 12. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **North Middlesex County Hospital**, Edmonton, London, N. 12, not later than **Friday, June 3rd**.

**SUDAN MEDICAL SERVICE**

Applications are invited from registered medical practitioners for the post of **RESIDENT ASSISTANT MEDICAL OFFICER** at the **Mount Gold Orthopaedic and Pulmonary Tuberculosis Hospital**, Khartoum, Sudan. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **Mount Gold Orthopaedic and Pulmonary Tuberculosis Hospital**, Khartoum, Sudan, not later than **Friday, June 3rd**.

**CITY OF LYMOUTH**

**MEDICAL OFFICER OF HEALTHS**  
**LEIANTHENT**  
**MOUNT GOLD ORTHOPAEDIC AND PULMONARY TUBERCULOSIS HOSPITAL**  
(S. B. S.)

Applications are invited from registered medical practitioners for the post of **RESIDENT ASSISTANT MEDICAL OFFICER** at the **Mount Gold Orthopaedic and Pulmonary Tuberculosis Hospital**, Khartoum, Sudan. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **Mount Gold Orthopaedic and Pulmonary Tuberculosis Hospital**, Khartoum, Sudan, not later than **Friday, June 3rd**.

Forms of application are not provided and applications, with copies of three recent testimonials, must be sent to the undersigned not later than noon on Friday, June 3rd.

Town Hall, Plymouth. T. PIERSON, Medical Officer of Health

**SURREY COUNTY COUNCIL**

**RICHMOND INSTITUTION (250 Beds)**

**RESIDENT ASSISTANT MEDICAL OFFICER**

Applications are invited from registered medical practitioners for the appointment of **Resident Assistant Medical Officer** at the **Richmond Institution**, Richmond, Surrey. The duties of the post will be to assist the Medical Officer in the management of the institution and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **Richmond Institution**, Richmond, Surrey, not later than **Friday, June 3rd**.

**COUNTY COUNCIL OF MIDDLESEX**

**ASSISTANT MEDICAL OFFICER**  
**WEST MIDDLESEX COUNTY HOSPITAL**  
**Twickenham Road, Twickenham, Middlesex**

Applications are invited from registered medical practitioners for the post of **Assistant Medical Officer** at the **West Middlesex County Hospital**, Twickenham Road, Twickenham, Middlesex. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **West Middlesex County Hospital**, Twickenham Road, Twickenham, Middlesex, not later than **Friday, June 3rd**.

**MIDDLESEX COUNTY COUNCIL**

**RESIDENT CASUALTY MEDICAL OFFICER**  
**HILLINGDON COUNTY HOSPITAL**  
**Uxbridge, Middlesex**

Applications are invited from registered medical practitioners for the post of **Resident Casualty Medical Officer** at the **Hillingdon County Hospital**, Uxbridge, Middlesex. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **Hillingdon County Hospital**, Uxbridge, Middlesex, not later than **Friday, June 3rd**.

Forms of application are not provided and applications, with copies of three recent testimonials, must be sent to the undersigned not later than noon on Friday, June 3rd.

Midsex Guildhall, Westminster S.W.1. May 6th 1935

**COUNTY BOROUGH OF ROTHERHAM**

**AMMA ROAD HOSPITAL**

**JUNIOR ASSISTANT MEDICAL OFFICER**

Applications are invited by the Council for the post of **JUNIOR ASSISTANT MEDICAL OFFICER** (res. den.). The applicant will be for a period not exceeding twelve months, to be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is at the rate of £150 per annum to which is added the local emoluments. The person approved will be required to act under the general direction of the Medical Superintendent. Forms on which application must be made may be obtained from the Medical Superintendent, Amma Road Hospital, Rotherham, and must reach the undersigned not later than **Wednesday, May 22nd**.

CHAS. L. DES FORGES, Town Clerk, Municipal Office, Rotherham.

**MIDDLESEX COUNTY COUNCIL**

**JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER**  
**North Middlesex County Hospital, Silver Street, Edmonton, N. 12**

Applications are invited for the post of **Junior Resident Assistant Medical Officer** at the **North Middlesex County Hospital**, Silver Street, Edmonton, N. 12. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **North Middlesex County Hospital**, Silver Street, Edmonton, N. 12, not later than **Friday, June 3rd**.

**COUNTY BOROUGH OF TYNDRICH**

**PUBLIC ASSISTANCE COMMITTEE**

**PRESTON HOSPITAL, NORTH SHIELDS**  
(N. B. S.)

**ASSISTANT MEDICAL OFFICER**

**(NON RESIDENT)**

Applications are invited from registered medical practitioners for the post of **Assistant Medical Officer** at the **Preston Hospital**, North Shields. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **Preston Hospital**, North Shields, not later than **Friday, June 3rd**.

**SOUTH WEST YORKSHIRE JOINT BOARD**

**FOR THE MENTALLY DEFECTIVE**

**RESIDENT MEDICAL SUPERINTENDENT**

The Joint Board of the **South West Yorkshire** is invited to receive applications from registered medical practitioners for the post of **Resident Medical Superintendent** at the **South West Yorkshire Joint Board**. The duties of the post will be to assist the Medical Officer in the management of the hospital and to be responsible for the medical treatment of the patients under his charge. The successful candidate will be required to pass a medical examination as to physical fitness. The salary is £100 per annum with board and lodging. Applications should be sent to the **Public Assistance Committee** of the **South West Yorkshire Joint Board**, not later than **Friday, June 3rd**.

CHAS. L. DES FORGES, Town Clerk, Municipal Office, Rotherham.

# **DRAFT ADMINISTRATION OF THE COUNTY OF KENT THE ISLE OF SHEPPEY JOINT (MEDICAL OFFICER OF HEALTH) COMMITTEE**

## **APPOINTMENT OF MEDICAL OFFICER OF HEALTH MATERNITY AND CHILD WELFARE OFFICER AND ASSISTANT COUNTY MEDICAL OFFICER**

The Kent County Council and the above named Joint Committee invite applications from duly qualified gentlemen for the whole-time appointment of Medical Officer of Health and Assistant County Medical Officer (for school medical work) for the combined Districts of the Borough of Queenborough the Urban District of Sheerness and the Rural District of Sheppey and Maternity and Child Welfare Officer for the autonomous area of Sheerness Urban District.

Every candidate must be a duly qualified medical practitioner not exceeding 40 years of age and must be the holder of a Diploma in Sanitary Science Public Health or State Medicine.

The area of the Joint Districts is approximately 27,351 acres with a population of approximately 26,000 of which about 800 acres and 16,000 population are in the Urban District of Sheerness.

The salary offered is £800 per annum plus traveling allowance of £70 per annum of which £600 salary and £50 allowance will be paid by the Joint Committee and £200 salary and £20 allowance by the Kent County Council.

The appointment will be subject to the Sanitary Officers (Outside London) Regulations 1935 to Section 110 of the Local Government Act 1933 to the provisions of the Local Government and Other Officers Superannuation Act 1922 to the approval of the Minister of Health and the Board of Education and to any other statutory regulations and orders affecting the office.

The successful candidate will be required to pass a medical examination.

Fuller particulars of the duties together with a form of application may be obtained from the undersigned on receipt of a stamped addressed foolscap envelope.

Applications accompanied by copies of not more than three recent testimonials must be received by the undersigned not later than noon on June 7th 1938.

Dated this 11th day of May 1938  
Council Offices H V STALLON  
Trinity Road, Sheerness, Kent  
Clark to the Joint Committee

# **CITY OF LEEDS ASSISTANT MEDICAL OFFICER**

Applications are invited from qualified and registered medical practitioners for the post of ASSISTANT MEDICAL OFFICER for maternity and child welfare. Applicants must have had not less than three years postgraduate experience including experience in general medicine and surgery and special experience in obstetrics and ante-natal work and in the treatment of children's diseases and disease of women. Preference will be given to candidates possessing the D.P.H.

Under the present grading scheme of the Council the commencing salary for the post is £500 per annum and the maximum salary £700 with annual increments of £25 subject to satisfactory service and the first increment will take effect on April 1st following the completion of twelve months service.

The Council may at its discretion take into account previous experience in a similar appointment in determining the amount of the commencing salary.

The person appointed will be required to pass a medical examination and to contribute to the superannuation fund established under the Local Government and Other Officers Superannuation Act 1922. The appointment will be terminable by one month's notice on either side.

Form of application and particulars as to the duties of the appointment may be obtained from the undersigned.

Applications endorsed Maternity and Child Welfare Officer together with copies of three recent testimonials must be delivered at the Health Department 12 Market Buildings Vicar Lane Leeds 1 not later than 10.30 a.m. on Wednesday May 25th 1938.

Canvassing in any form either directly or indirectly will be a disqualification.

J JOHNSTONE JERVIS  
Medical Officer of Health

# **LONDON COUNTY COUNCIL**

**ASSISTANT DISTRICT MEDICAL OFFICER**  
required for Area IX District H (North West Lewisham). Provisional salary £240 (inclusive of payment for use of doctor's surgery for Council's patients). Person appointed required to reside in or near district.

Application form with further particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2 (A) County Hall S.E.1 returnable by June 4th 1938.

Canvassing disqualifies.

# **COUNTY BOROUGH OF SUNDERLAND**

**CHERRY KNOWLE**  
(Sunderland County Borough Mental Hospital)  
Ryhope near Sunderland

## **APPOINTMENT OF MEDICAL SUPERINTENDENT**

Applications are invited from duly qualified and registered Medical Practitioners for the appointment of Medical Superintendent of Cherry Knowle. The salary will be £1,000 per annum increasing subject to satisfactory service by annual increments of £50 to £1,050 per annum plus emolument valued for purposes of superannuation at £200 per annum.

In addition to the usual duties devolving upon him as Superintendent of Cherry Knowle the person appointed will be required to advise the Committee on all the mental health services of the Borough such as mental clinics outpatient and after-care treatment and child guidance and to carry out the other duties set out in the terms and conditions of appointment.

At Cherry Knowle a general and diagnostic block and in early treatment block are being built and other improvements are being carried out. The work will be completed next year when the accommodation of the Hospital will be for approximately 700 patients.

Form of application and particulars of the terms and conditions of appointment may be obtained from me and applications addressed to me and endorsed on cover Medical Superintendent Cherry Knowle together with copies of three recent testimonials must be delivered to my office not later than Friday June 10th next.

Canvassing either directly or indirectly until after the first selection of candidates by the Committee will be a disqualification.

G S MCINTYRE  
Town Clerk and Clerk to the  
Sunderland Visiting Committee  
May 16th 1938

# **COUNTY BOROUGH OF IPSWICH**

## **APPOINTMENT OF AN OFFICER OF HEALTH MEDICAL OFFICER MEDICAL OFFICER HOSPITAL**

The Council invite applications for a whole-time Assistant Medical Officer of Health Assistant School Medical Officer and Resident Medical Officer Ipswich Isolation Hospital. Applicants may be of either sex but must be fully qualified medical practitioners possessing a Diploma in Public Health and under 40 years of age.

The salary will be at the rate of £450 per annum rising subject to satisfactory service by annual increments of £25 to a maximum of £550 and in addition the person appointed will enjoy the usual residential emoluments valued at £150 per annum.

A car allowance of £36 will be paid for the use of the officer's own motor car.

The successful candidate will be required to live at the Ipswich Isolation Hospital and to pass a medical examination.

The officer will work under the direction of the Medical Officer of Health who is also School Medical Officer.

The officer will be required to contribute to the Superannuation Scheme with effect from April 1st 1939.

Forms of application may be obtained from the Medical Officer of Health Public Health Department Elm Street Ipswich and applications with copies of not more than three recent testimonials must be delivered to the undersigned not later than June 1st 1938 in an envelope marked Appointment of Assistant Medical Officer of Health.

Canvassing directly or indirectly will be a disqualification.

A MOFFAT  
Town Clerk  
Ipswich  
May 10th 1938

# **BEXHILL HOSPITAL BEXHILL ON SEA**

Applications are invited for the following honorary appointments for the Hospital and the new Out-patient Department shortly to be opened.

**CONSULTING PHYSICIAN**  
Candidates must be Members of the Royal College of Physicians of London. At present it is proposed to hold out-patient clinics twice monthly.

**CONSULTING PHYSICIAN—SKIN DEPARTMENT**

Candidates must possess special experience in the treatment of diseases of the skin.

**CONSULTING GYNAECOLOGIST**

Candidates must hold the qualification of F.R.C.S. and/or M.C.O.G. and have had special experience in the practice of obstetrics and gynaecology.

Applications for the above appointments should be sent to the undersigned from whom further information may be obtained as soon as possible.

P L WINDO  
Secretary  
May 16th 1938

# **BOROUGH OF HILSTON AND ISLEWORTH**

## **Appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER**

The Council invite applications from duly qualified Medical Practitioners registered in the Medical Register as holders of a Diploma in Sanitary Science Public Health or State Medicine and who are not over 45 years of age for the appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER of the Borough. The appointment is subject to the approval of the Minister of Health and to the provisions of the Local Government Act 1933 the Sanitary Officers (Out of London) Regulations 1935 and the Local Government and Other Officers Superannuation Act 1922.

The person appointed will be required to undertake in addition to the duties of Medical Officer of Health the administration of the school medical service and maternity and child welfare service and will also be required to carry out such other duties as the Council may with the consent of the Minister of Health (where necessary) from time to time direct.

The person appointed must reside within the Borough and will not be allowed to engage in private practice or to hold any other appointment without the consent of the Council.

The commencing salary will be £1,000 per annum rising by annual increments of £50 to £1,300 per annum. Travelling expenses will be paid by the Council.

Further particulars and form of application will be supplied on application to the undersigned.

Applications on the prescribed form accompanied by copies of not more than three recent testimonials and endorsed Appointment of Medical Officer of Health must be delivered to the undersigned not later than May 25th 1938.

Canvassing either directly or indirectly will be deemed a disqualification.

HAROLD SWANN  
Council House, Hounslow  
Treaty Road, Hounslow  
Town Clerk

# **COUNTY BOROUGH OF CROYDON**

## **JUNIOR RESIDENT ASSISTANT MEDICAL OFFICERS**

Applications are invited from registered Medical Practitioners for the post of Junior Resident Assistant Medical Officer (two appointments) at the Mayday Hospital a general hospital of 565 beds. The persons appointed will have charge in one appointment of medical beds and in the other appointment of surgical beds and will be required to act as Anaesthetists when necessary. They may also be required in emergency to act as Assistant Medical Officers of Health. The appointments are for a period of twelve months.

Salary £300 per annum with furnished quarters and board at the Hospital.

Applications must be made on forms to be obtained from the Medical Officer of Health Town Hall Croydon and returned to him together with copies of three recent testimonials not later than 11 a.m. on Monday May 30th 1938 endorsed Assistant Medical Officer.

E TABERNER  
Town Hall  
Croydon  
May 13th 1938  
Town Clerk

# **CITY OF NOTTINGHAM EDUCATION COMMITTEE**

Applications are invited for the post of PART-TIME MEDICAL PSYCHIATRIST to the Committee's Child Guidance Clinic. Candidates must be registered medical practitioners who have had ample experience in child guidance work. The Officer appointed will be required at first to give two sessions a week preferably on the same day. It is anticipated that sooner or later the work will have to be extended.

Remuneration will be at the rate of three guineas per session plus travelling expenses (not to exceed £1.15 per week) and the appointment will be terminable by three calendar months notice in writing from either side.

Further particulars of the post may be obtained from the undersigned to whom applications for appointment should be sent not later than June 4th 1938.

A H WHIPPLE  
Central School Clinic  
28 Chaucer Street  
Director of Education

# **KING EDWARD VII HOSPITAL WINDSOR (200 Beds)**

**HOUSE SURGEON** required July 1st. Applicants must be fully qualified men or women registered and unmarried.

Salary at the rate of £120 per annum together with board residence and laundry.

Applications stating age qualifications and experience accompanied by testimonials should be sent to the undersigned not later than June 6th.

The appointment is recognized by the Royal College of Surgeons of England for the six months training required of candidates before admission to the final examination for the Fellowship.

A E CHURCHER  
Secretary

**CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL**  
(Gray's Inn Road, W.C.1)

RESIDENT HOUSE SURGEON (Males)

The following vacancies are available for the post of Resident House Surgeon (Males) in the Central London Throat, Nose and Ear Hospital. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, Central London Throat, Nose and Ear Hospital, Gray's Inn Road, W.C.1, not later than June 1st next.

**DREADNOTCH HOSPITAL, C. LEWIS**  
(St. John's Road, S.W.1)

RECEIVING ROOM OFFICER (Males) - £100 per annum with board and lodging. Applications should be sent to the Secretary, Dreadnotch Hospital, C. Lewis, St. John's Road, S.W.1, not later than June 1st next.

**ALL SAINTS HOSPITAL (FOR GENITO-URINARY DISEASES)**  
(Aldershot, Hants)

RESIDENT HOUSE SURGEON (Males) - £100 per annum with board and lodging. Applications should be sent to the Secretary, All Saints Hospital, Aldershot, Hants, not later than June 1st next.

**CHELSEA HOSPITAL FOR WOMEN**  
(Amber Street, S.W.3)

Applications are invited for the post of Surgeon to the Chelsea Hospital for Women. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, Chelsea Hospital for Women, Amber Street, S.W.3, not later than June 1st next.

**CHELSEA HOSPITAL FOR WOMEN**  
(Amber Street, S.W.3)

**JUNIOR HOUSE SURGEON (MALE)**  
Applications are invited for the post of Junior House Surgeon (Male) in the Chelsea Hospital for Women. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, Chelsea Hospital for Women, Amber Street, S.W.3, not later than June 1st next.

**EVELINA HOSPITAL FOR SICK CHILDREN**  
(Southwark, S.E.1)

Applications are invited for the post of House Physician (male) for six months from June 1st (first two months in the Casualty and Out Patient Department). Salary at the rate of £100 per annum with board and lodging. Applications should be sent to the Secretary, Evelina Hospital for Sick Children, Southwark, S.E.1, not later than June 1st next.

**CHARTERHOUSE RHEUMATISM CLINIC**  
(94 Hallam Street, W.1)

In view of the opening of the new building, an increase of staff is necessary. Immediate applications are invited for FOUR HONORARY CLINICAL ASSISTANTS. Appointments will be for 12 months (renewable). Applications to be addressed to the Secretary, CRC, 94 Hallam Street, W.1.

**CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL**  
(Gray's Inn Road, W.C.1)

ASSISTANTS IN THE OUTPATIENT DEPARTMENT

SECOND ASSISTANT to Mr. J. H. Young, M.D., on Mondays and Wednesdays.  
THIRD ASSISTANT to Mr. J. H. Young, M.D., on Fridays and Saturdays.  
Applications should be sent to the Secretary, Central London Throat, Nose and Ear Hospital, Gray's Inn Road, W.C.1, not later than June 1st next.

**ST. JOHN'S HOSPITAL FOR RECTAL DISEASES**  
(Aldershot, Hants)

RESIDENT SURGEON (Males) - £100 per annum with board and lodging. Applications should be sent to the Secretary, St. John's Hospital for Rectal Diseases, Aldershot, Hants, not later than June 1st next.

**QUEEN CHARLOTTE'S MATERNITY HOSPITAL**  
(Maryland Road, N.W.1)

HONORARY ASSISTANT PHYSICIAN (Males) - £100 per annum with board and lodging. Applications should be sent to the Secretary, Queen Charlotte's Maternity Hospital, Maryland Road, N.W.1, not later than June 1st next.

**PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN**  
(St. Queen Anne's Avenue, N.W.10)

HOUSE PHYSICIAN (Males) required for a month from June 1st. Salary at the rate of £100 per annum with board and lodging. Applications should be sent to the Secretary, Princess Louise Kensington Hospital for Children, St. Queen Anne's Avenue, N.W.10, not later than June 1st next.

**LONDON HOSPITAL, E.1**

Applications are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, London Hospital, E.1, not later than June 1st next.

**METROPOLITAN HOSPITAL**  
(Kingsland Road, London, E.5)

Applications are invited for the post of CASUALTY OFFICER AND RESIDENT ANAESTHETIST (Male). Salary at the rate of £100 per annum with board and lodging. Applications should be sent to the Secretary, Metropolitan Hospital, Kingsland Road, London, E.5, not later than June 1st next.

**NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM**  
(Queen Square, W.C.1)

HOUSE PHYSICIAN  
The Board of Management invite applications for a post of House Physician which should be sent to the undersigned accompanied by copies of three recent testimonials not later than Monday June 10th 1935. The salary is £100 per annum with board and lodging.  
GODFREY H. HAMILTON  
Secretary

**THE HOSPITAL FOR SICK CHILDREN**  
(Great Ormond Street, London, W.C.1)

AN ASSISTANT RESIDENT SURGICAL OFFICER is required to commence on June 1st. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, The Hospital for Sick Children, Great Ormond Street, London, W.C.1, not later than June 1st next.

**WOLVICH AND DISTRICT WAR MEMORIAL HOSPITAL**  
(St. John's Road, S.W.1)

GENERAL HOSPITAL (Males) - £100 per annum with board and lodging. Applications should be sent to the Secretary, Wolvich and District War Memorial Hospital, St. John's Road, S.W.1, not later than June 1st next.

**ST. MARY'S HOSPITAL**

NOTICE  
ANAESTHETIST IN THE DENTAL DEPARTMENT  
Applications are invited for the post of Anaesthetist in the Dental Department. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, St. Mary's Hospital, W.2, not later than June 1st next.

**ST. MARY'S HOSPITAL W.2**

THIRD ASSISTANT PATHOLOGIST  
Applications are invited for the post of Third Assistant Pathologist. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, St. Mary's Hospital, W.2, not later than June 1st next.

**ROYAL FREE HOSPITAL**  
(Gray's Inn Road, W.C.1)

Applications are invited for the post of SECOND HOUSE PHYSICIAN. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, Royal Free Hospital, Gray's Inn Road, W.C.1, not later than June 1st next.

**ROYAL FREE HOSPITAL**  
(Gray's Inn Road, W.C.1)

Applications are invited for the post of RESIDENT CASUALTY OFFICER. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, Royal Free Hospital, Gray's Inn Road, W.C.1, not later than June 1st next.

**ROYAL FREE HOSPITAL**  
(Gray's Inn Road, W.C.1)

Applications are invited for the post of INPATIENT OBSTETRIC ASSISTANT. The successful candidate will be required to hold a B.Sc. or M.B. and to be a member of the Royal College of Surgeons in England. The salary is £100 per annum with board and lodging. Applications should be sent to the Secretary, Royal Free Hospital, Gray's Inn Road, W.C.1, not later than June 1st next.

### THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E1  
(Formerly East London Hospital for Children)  
(135 Beds)

A HOUSE PHYSICIAN is required on July 1st 1938 by the above Hospital. Candidates are invited to send in their applications addressed to the Secretary by first post on Wednesday June 1st accompanied by copies of not more than three recent testimonials and evidence of having held a responsible hospital appointment. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry.

Candidates must be properly registered in this country. Forms of application and copies of the rules can be obtained from the Secretary Superintendent.

### THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E1  
(Formerly East London Hospital for Children)  
(135 Beds)

An OUTPATIENT MEDICAL OFFICER is required on July 1st 1938 by the above Hospital. The appointment is for six months and is renewable for another six months subject to agreement by both parties. The holder of this post will be the official deputy for the Resident Medical Officer. Salary at the rate of £175 per annum with board residence and laundry.

Candidates who must be properly registered in this country are invited to send in their applications addressed to the Secretary by first post on Wednesday June 1st with copies of not more than three recent testimonials and evidence of having held a responsible hospital appointment. Forms of application and copies of the rules can be obtained from the Secretary Superintendent.

### THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E1  
(Formerly East London Hospital for Children)  
(135 Beds)

A HOUSE SURGEON is required on July 1st 1938 by the above Hospital. Candidates are invited to send in their applications addressed to the Secretary by first post on Wednesday June 1st accompanied by copies of not more than three recent testimonials and evidence of having held a responsible hospital appointment. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry.

Candidates must be properly registered in this country. Forms of application and copies of the rules can be obtained from the Secretary Superintendent.

### THE SALVATION ARMY THE MOTHERS HOSPITAL LOWER CLAPTON ROAD CLAPTON E5

Applications are invited from Medical Women for the post of SENIOR RESIDENT MEDICAL OFFICER vacant July 1st 1938. Salary £150 per annum with board residence and laundry. The appointment is for twelve months but under special circumstances an appointment of six months might be considered.

Applications with testimonials must be sent to the Secretary on or before Tuesday June 7th 1938.  
FRED HAMMOND  
Secretary

### THE SALVATION ARMY THE MOTHERS HOSPITAL LOWER CLAPTON ROAD CLAPTON E5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant July 1st 1938. Salary £50 per annum with board residence and laundry. The appointment is for six months.

Applications with testimonials must be sent to the Secretary on or before Tuesday June 7th 1938.  
FRED HAMMOND  
Secretary

### THE MARIE CURIE HOSPITAL

(Centre for Treatment of Cancer in Women by Radium and X Rays)

Applications are invited from qualified medical women for the post of RESIDENT MEDICAL OFFICER. Previous hospital experience desirable. Salary £100 per annum.

Applications to be sent with copies of not more than three recent testimonials to the Secretary 2 Fitzjohn's Avenue NW3.

### ANNIE McCALL MATERNITY HOSPITAL

London

MEDICAL WOMAN (Obstetrician) required on Honorary Staff. Also Children's Specialist. Post stipendium welcomed (£10 10s monthly). Operative midwifery class—Secretary 165 Clapham Road.

### WILLSDEN GENERAL HOSPITAL

Hillesden Road NW10

#### OUTPATIENT DEPARTMENT CLINICAL ASSISTANTS (HONORARY)

Applications are invited for appointment to the following sections—

EAR, NOSE AND THROAT—Wednesday after noon.

GYNAECOLOGICAL—Thursday mornings.

SKIN—Saturday mornings.

Applications should be forwarded to the Secretary from whom further details of the appointments may be obtained and should be received not later than first post on Monday June 6th 1938.  
May 10th 1938.

### WILLSDEN GENERAL HOSPITAL

Hillesden Road NW10

Applications are invited for the appointment of BIOCHEMIST (part time). Candidates must have either a registered medical qualification or a University Science Degree. The successful candidate will be expected to attend the Hospital on two half-days each week. Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than Monday May 23rd 1938.

### WESTERN OPHTHALMIC HOSPITAL

Mary bone Road NW1

MEDICAL OFFICER IN CHARGE OF DIABETIC CLINIC required. Applications are invited for the post of Medical Officer in charge of the Diabetic Clinic. Previous experience essential. The appointment is for one year but the successful applicant will be eligible for re-election. Honorarium twenty five guineas per annum.

Applications giving details of qualifications and experience together with copies of three testimonials should reach me by May 30th 1938.  
H W BURLINGH  
Honorary Secretary

### CHARING CROSS HOSPITAL

ASSISTANT OBSTETRIC PHYSICIAN

Applications are invited for the post of Assistant Obstetric Physician to the above Hospital. Candidates must be graduates of a University and possess the Diploma of M.R.C.O. or I.R.C.S.

Applications accompanied by copies of three recent testimonials should reach the undersigned not later than June 13th 1938.

GEORGE J JONLS  
Charing Cross Hospital WC2 Secretary

### GENERAL LYING IN HOSPITAL

York Road Lambeth SE1

Applications invited for the post of JUNIOR RESIDENT MEDICAL OFFICER AND ANAESTHETIST. Salary at the rate of £100 per annum with board residence and laundry. Appointment for three months commencing July 1st 1938. The successful candidate will be subject to satisfactory service be required to succeed to the Senior Medical Officer's post for a further three months.

Applications stating age and qualifications with copies of three recent testimonials to be sent to the Secretary not later than Monday June 6th 1938.

### NUNEATON GENERAL HOSPITAL

Applications are invited from duly qualified medical women for the post of HOUSE SURGEON to the Nuneaton General Hospital (100 beds). The appointment is for six months in the first instance and the salary at the rate of £150 per annum together with board lodging laundry and certain other emoluments. The vacancy will arise on June 3rd next and applications should be sent to the Secretary of the Medical Board Nuneaton General Hospital as soon as possible. Two copies of recent testimonials may be enclosed with the applications.

### ST MARYS HOSPITALS MANCHESTER

Two HOUSE SURGEONS for the Whitworth St West Hospital (Maternity) and three for the Whitworth Park Hospital (two Gynaecological Dept and one Children's Dept) each for a period of six months from August 1st next. Salaries at the rate of £50 per annum with board and residence.

Applications with copies of three testimonials to be sent to the undersigned on or before June 13th.

A R WISE  
Secretary

### MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL CHEETHAM

(Non Sectarian) (102 Beds)

Applications are invited for the post of HON. GYNAECOLOGICAL SURGEON to the above Institution. Applications in triplicate marked 'Honorary Gynaecological Surgeon' stating age qualifications and experience together with copies of at least three testimonials to be forwarded to the Chairman by June 2nd 1938.

### WINFORD ORTHOPAEDIC AND HEART HOSPITAL near BRISTOL

(110 Beds)

Applications are invited from registered Medical Practitioners for the post of MEDICAL OFFICER (non resident) duties to commence on July 1st 1938. The appointment is tenable for two years with the option of a third year (subject to termination at any time by three months notice on either side). Previous orthopaedic experience an advantage. Salary £3.5 per annum.

Applications stating age and qualifications together with full details of experience and copies of three testimonials should be forwarded to the undersigned as soon as possible.

L R HARVEY RACE,  
Winford Orthopaedic Hospital Secretary  
46 Park Street Bristol 1  
May 10th 1938.

### WEST END HOSPITAL FOR NERVOUS DISEASES

In Patient Department  
Gloucester Gate Regents Park NW1

The Committee of Management invites applications for the post of RESIDENT HOUSE PHYSICIAN (male). Duties to commence June 1st 1938. Salary at the rate of £125 per annum with board residence and laundry.

Preference will be given to candidates who have held a resident appointment in a General Hospital. Applications with copies of three recent testimonials must be received by the undersigned not later than Wednesday May 25th 1938.

J I WEENHALL  
Secretary and House Governor  
71 Wellbeck Street W1

### ROYAL BERKSHIRE HOSPITAL

Reading

Application are invited for the following resident appointments which fall vacant on August 1st 1938.

One HOUSE SURGEON (male)

One CASUALTY OFFICER (male)

Both appointments are for six months and candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum with board residence and laundry.

Applications stating age and experience with copies of testimonials to be sent to the undersigned.

H E RYAN,  
Secretary and House Governor

### MONTAGU HOSPITAL MENBOROUGH

(113 Beds)

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (lady) commencing salary £1.5 per annum with the usual residential emoluments. The successful candidate who will be required to commence duties on June 16th will also act as Ante-natal Officer to the Maternity Department and should have some obstetrical experience. The appointment is for six months and is subject to renewal. Applications stating age, nationality, qualifications and experience accompanied with copy testimonials to be sent to the Secretary-Superintendent.

### ST GEORGES HOSPITAL SW1

Applications are invited for the post of RESIDENT ANAESTHETIST. Remuneration at the rate of £100 per annum with board and residence.

Applicants should have some experience of administration of Anaesthetics. Applications accompanied by copies of not more than two recent testimonials should be sent to the Dean of the Medical School on or before June 1st. The appointment commences on July 1st 1938 for four months.

JAMES M CHURCHFIELD  
Secretary

### THE LONDON CHEST HOSPITAL

Victoria Park E2

(Bus Tram and Rail Cambridge Heath L and NE Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st. Six months appointment. Salary at the rate of £100 per annum. Board residence and laundry provided.

Applications with copies of testimonials (three) should be sent to the Secretary on or before Wednesday June 8th 1938.

### THE NATIONAL TEMPERANCE HOSPITAL

Hampstead Road NW1

Applications are invited for the following post: HOUSE PHYSICIAN (male). Salary £100 per annum board residence and laundry allowance being provided. The appointment is for a period of six months from June 1st. Preference will be given to those who have held resident posts. Candidates must submit applications stating qualifications and experience together with copies of not more than three testimonials by May 27th addressed to the Secretary.

(Asymmetric 12 cc injected on 3 5)



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WANTED ASSISTANT MIXED PRACTICE. Lan.shire town. Hospital facilities. View to PARTNERSHIP. £150/£400 for married man free unfurnished house. Car allowance. Dispenser kept—Address No 5514 B.M.A. House Tavistock Square W.C.1

WANTED YOUNG ENERGETIC MEDICAL ASSISTANT (male) with view to PARTNERSHIP for practice in seaport town North East Coast. For particulars write—Address No 5505 B.M.A. House Tavistock Square W.C.1

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Premium £1750—Peacock and Hadley Ltd  
(7) Chindos Street Strand W.C.2

**NORTH EAST COAST—VERY GOOD**  
middle class private PRACTICE. Panel 300  
Little midwifery. About £150 gross. Premium  
1 year. House with surgery £1650—GARRORTH  
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up in Tyne 1

**NORTH OF ENGLAND—FOR SALE OLD**  
established country PRACTICE £1200 p.a.  
Income 11 years. Good house price £1200  
Excellent education—Address No 5737 BMA  
House Tavistock Square W.C.1

**NUCLEUS AND ATTRACTIVE DETACHED**  
HOUSE N. London close to new tube rail-  
way station. Well situated six bed and three recep-  
tion rooms. Separate surgery entrance. Brick carriage  
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including fitted kitchen. Panel £175 per  
annum with well established nucleus of 1350 rec-  
innum including panel of 200. The advertiser  
with other interests. Ample scope for family  
any night work. Suitable for resident patients.  
min or one desiring to take Premium £600—  
Open to any investment. Address No 5524 BMA  
House Tavistock Square W.C.1

**OLD ESTABLISHED COLLEGE PRACTICE**  
north east coast for the new. New style  
upon fine Club and panel 1 mile 750. Income  
over £100 per annum. Price £500—Address No  
5559 BMA House Tavistock Square W.C.1

**PADDINGTON—OLD ESTABLISHED PRACTICE**  
TICE. Scheme all health. Receipts nearly  
£1000 p.a. 1 mile panel. Beautiful house for sale.  
Premium Practice two years purchase—Peacock  
and Hadley Ltd 67-68 Chindos Street Strand  
W.C.2

**PLEASANT COMPACT SUBURBAN PRACTICE**  
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700 receipts £700-£800. Good house with open  
view. No clubs or night work. Price £1500  
house £1000 or rent £54—Address No 5722  
BMA House Tavistock Square W.C.1

**SALL—HANTS TOWN PRACTICE PANEL**  
1000 club private dispensing no midwifery  
little night work. Income £1000. House charm-  
ing garden. Price £2000 house £500 and custom-  
mortgage. Sport—Address No 5713 BMA  
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**SALL—SMALL MIXED PRACTICE**  
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valuable lease. Rent of whole £16 p.a.—Address  
No 5531 BMA House Tavistock Square W.C.1

**SUSSEX COAST SIXTY MILES OF TOWN**  
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including residence and grounds—Address No  
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near London increasing. Good house pre-  
ferably for sale. Address No 5733 BMA  
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in small town near coast resort. Attractive  
house in own grounds. 1 mile. Small panel.  
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# **NORTHAMPTON GENERAL HOSPITAL** (351 Beds)

The Board of Management invites applications for the appointments of **HONORARY PHYSICIAN** and **HONORARY ASSISTANT PHYSICIAN** in the Department of Psychological Medicine. Candidates must be Graduates in Medicine of the Universities of the United Kingdom or Members of the Royal College of Physicians of London and shall not be connected with any dispensary nor engaged in private practice.

Further particulars may be obtained from the undersigned to whom formal applications accompanied by copies of a recent testimonial should be sent on or before June 1st 1938.

The present Temporary Honorary Physician will be succeeded by the post of Honorary Assistant Physician and the present Honorary Assistant Physician will be succeeded by the post of Honorary Physician.

**CORDON S. STURDRIDGE MB**  
Superintendent

May 17th 1938

# **CROYDON GENERAL HOSPITAL**

Applications are invited from qualified and registered Medical Men for a post of **HOUSE PHYSICIAN**. Salary £125 per annum with board residence and laundry.

Application stating age, qualifications, accompanied by copies of testimonials (which will not be returned) of three recent testimonials to reach the undersigned not later than Saturday June 4th 1938.

The candidate appointed will be required to take up duties on July 1st 1938.

**GEORGE H. DAMS**  
House Governor and Secretary

May 11th 1938

# **DERBYSHIRE HOSPITAL FOR SICK CHILDREN** (54 Beds)

Wanted July 1st 1938 a **RESIDENT HOUSE SURGEON** (male). Salary £130 p.a. The appointment is for six months but may be extended by mutual arrangement. Applicants must be fully qualified.

Applications with three testimonials to be sent to the undersigned on or before June 4th. The Hospital is recognized by the Conjoint Board for the purposes of the Diploma in Child Health.

25 St. Mary's Gate  
**ARTHUR N. WHISTON**  
Secretary

Derby

# **HERTFORD COUNTY HOSPITAL** (169 Beds)

Applications are invited for the post of **HOUSE SURGEON** (male) (three Residents). Salary £201 per annum with board residence and laundry. The appointment is for six months in the first instance and duties commence on June 7th.

Applications with three recent testimonials should be sent to the undersigned not later than Monday May 30th instant.

**PERCY G. BROOKS**  
Secretary

# **CLAYTON HOSPITAL**

Applications are invited for the post of **HOUSE SURGEON** for six months (renewable) from June 13th 1938. Candidates should be of British nationality, male and single. Salary at the rate of £200 per annum together with board residence and laundry.

Applications stating age, qualifications, and experience, together with three recent testimonials, should be sent to the undersigned by May 28th 1938.

**F. F. W. MACKEOWN**  
Supt and Secy

# **AYR COUNTY HOSPITAL**

The Directors invite applications for the position of **OPHTHALMIC SURGEON**. Applicants must be attached to a recognized teaching Infirmary and must be on the staff of a recognized Ophthalmic Institution. Terms of appointment with copy testimonials to be lodged with the subscriber not later than May 28th 1938.

**JOHN J. GOUDIE**  
Secretary and Treasurer

# **CITY MENIAL HOSPITAL HUMBERSTONE** Leicester

Wanted **LOCUM TENENS ASSISTANT MEDICAL OFFICER** from Mid June 1938 for routine Menial Hospital duties and to assist with the in-patient treatment of Schizophrenia. Experience of Menial Hospital practice is desirable. Terms £8.5s per week together with board lodging, washing and attendance.

Apply giving particulars and three references to Medical Superintendent

# **COUNTY MENTAL HOSPITAL** Rainhill near Liverpool

**ASSISTANT MEDICAL OFFICER** (female) four locum tenens required for approximately four months. Light duties per week with board lodging and laundry. Apply immediately giving full particulars of experience etc. to the Medical Superintendent County Mental Hospital Rainhill near Liverpool

# **MANCHESTER ROYAL INFIRMARY** **BARNES CONVALESCENT HOSPITAL**

The Board of Management of the Manchester Royal Infirmary invite applications for the above post vacant on June 1st 1938. Applicants must hold a Medical and Surgical qualification and be registered and have held a hospital appointment for six months. The appointment is for six months renewable for a further period of six months subject to the provision of the By-laws as to notice etc. Salary at the rate of £150 per annum with board residence and allowance for laundry.

Application stating age with testimonials to be sent to the Chairman of the Medical Board not later than 9 a.m. May 25th 1938.

By Order  
**J. J. CAHILL**  
General Supt and Secretary

# **NORTH STAFFORDSHIRE ROYAL INFIRMARY** Stoke on Trent (50 Beds)

The Committee invite applications for the above post.

Salary at the rate of £150 per annum with board residence and laundry.

The appointment will be made for six months renewable.

Previous hospital surgical experience desirable and Orthopaedic experience desirable.

Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned in a strictly confidential manner.

By Order  
**W. STEVENSON**  
Secretary and House Governor

# **NOTTINGHAM GENERAL DISPENSARY** **HYSON GREEN BRANCH NOTTINGHAM**

Wanted **RESIDENT MEDICAL OFFICER** (male or female) unmarried. Must have Medical and Surgical qualifications. Salary £360 with £25 increase per year up to £450. House with attendance lights and fuel (not board). Ultra-violet Ray Clinic. This Institution is a non-provident one. No beds. No midwifery. Applications stating age and accompanied by copies of recent testimonials to be sent by May 25th 1938 to —

Thurland Street  
Nottingham  
**R. H. WILLATT**  
Secretary

# **HUDDERSFIELD ROYAL INFIRMARY** (321 Beds)

**MALE HOUSE SURGEON** required to be attached to Eye, Ear, Nose and Throat Department. Duties which include the administration of anaesthetics to commence on May 1st 1938. Salary will be at the rate of £150 per annum with board residence and laundry.

Appointment for six months subject to renewal for a similar period.

Applications with copies of three recent testimonials to be addressed to the undersigned immediately.

**H. J. JOHNSON**  
Gen Supt and Secretary

# **LINCOLN COUNTY HOSPITAL**

Wanted **JUNIOR HOUSE SURGEON** (male) unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service. Board residence, and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Acts.

Applications stating age and other particulars with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

Lincoln  
April 29th 1938  
**ARTHUR MOORE**  
Secretary Superintendent

# **NOTTINGHAM GENERAL HOSPITAL** (389 Beds)

A **HOUSE PHYSICIAN** (male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry.

Applications stating age, qualifications, and experience together with copies of testimonials to be sent to the undersigned not later than May 26th.

Duties to commence on July 1st 1938.

**P. M. MacCOLL**  
House Governor and Secretary

# **LIVERPOOL HEART HOSPITAL** 34 Oxford Street Liverpool 7

**HOUSE PHYSICIAN** required (male or female) July 1st for six months. Facilities for research and for M.D. thesis. Salary at rate of £100 per annum with board residence and laundry. Applications to Secretary

# **ROYAL SOUTH HAMPS AND SOUTHAMPTON HOSPITAL** (296 Beds)

Applications are invited for the following appointments —

**ONE HOUSE PHYSICIAN**  
**TWO HOUSE SURGEONS**  
**ONE RESIDENT ANAESTHETIST**  
**ONE CASUALTY OFFICER** who shall have had some experience in the reduction and treatment of fractures.

For the six months commencing July 1st 1938 each at a salary of £150 per annum with board lodging and laundry.

Applications accompanied by not more than three testimonials should be sent to the undersigned not later than Friday May 27th 1938.

**S. W. BARNES**  
House Governor and Secretary

# **PENBROKE COUNTY WAR MEMORIAL HOSPITAL** Haverfordwest Pembrokeshire (64 Beds to be increased to 100 Beds)

# **RESIDENT HOUSE SURGEON**

Applications are invited for the post of Resident House Surgeon (male unmarried) from daily qualified registered Medical Practitioners with previous resident experience to commence on June 1st 1938. Salary £200 per annum with board residence (Bunsalaw) board and laundry.

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned at the above address.

**B. GLANVILLE DAVIES**  
Secretary

# **THE ROYAL INFIRMARY** Surfeland (250 Beds)

**CASUALTY OFFICER AND HOUSE SURGEON** to Ear, Nose and Throat Department to be required immediately. Salary £150 per annum with board residence and laundry.

Applications stating age and qualifications and accompanied by copies of testimonials to be sent to the undersigned. The Infirmary possesses modern equipment and has up-to-date Pathological and X-ray Departments. The Resident Medical Staff consists of a R.S.O. and six others. The surgical appointments are recognized by the Royal College of Surgeons of England for the six months training required of candidates before admission to the Final Examination for the Fellowship.

**M. J. HUNTLEY**  
House Governor and Secretary

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(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(Incorporated 1930)

Tele Address  
Triform, Westcent—London

TAVISTOCK HOUSE SOUTH  
TAVISTOCK SQUARE, W C 1

Telephone Luston {1644  
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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical, Scholastic, and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent. Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

## REDUCTION IN FEE

In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill, book debts, furniture, drugs, fittings and other effects (excluding sales of any freehold or leasehold property or of practice effects etc., outside Great Britain) is limited to a maximum fee of Fifty Pounds.

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### Practices and Partnerships for Disposal

### Full Particulars sent free

1 MIDLANDS—Old established PRACTICE in country town Receipts 1937 £4,510 Panel over 3,500 Small detached house (3 bedrooms) for sale or rent (another available) Eminent suitable for two friends Premium one and three quarter years purchase.

2 HOME COUNTY—FOURTH PARTNER required in Practice in growing town Panel 3,000 Incoming partner must be energetic aged about 30 (married preferred) with a leaning towards medicine Initial share about £1,250 p.a. Premium £3,000 Preliminary Assistantship.

3 SW OF ENGLAND—Non dispensing PRACTICE averaging £1,745 p.a. in favourite watering place. Small panel. Semi detached house for sale. Good hospital. Premium two years purchase.

4 KENT—PARTNERSHIP in country Practice, about £1,900 p.a. in very beautiful neighbourhood Panel 1,050 House (4 bedrooms) in own grounds for sale or rent Premium two fifths (possibly half) share two years purchase.

6 LONDON, W 6—Non dispensing PRACTICE, doing about £1,150 p.a. in pleasant suburb No panel House (5 bedrooms) double garage and garden, for sale. Scope. Premium £1,000.

7 CORNWALL—PRACTICE averaging £655, in market town on West coast Panel 200 House (5 bedrooms) garage and garden, for sale. Scope. Premium one and a quarter years purchase.

8 LONDON, SE 22—PRACTICE in suburban district Receipts past year, £1,284 Panel 700 Good house with garage and nice garden for sale or rent Premium two years purchase.

9 NEAR MARBLE ARCH—Old established PRACTICE about £1,900 p.a. Panel about 1,300 offering ample scope in near future also midwifery Well built detached double fronted leasehold house with garage and garden, for sale. Premium two years purchase.

10 HOME COUNTY—PARTNERSHIP in Practice, averaging £3,500 p.a. in beautifully situated country town Panel about 1,350 Choice of house Incoming partner must be experienced and aged about 35/40 Premium one half share two years purchase. Hospital.

11 LONDON, N 7—PRACTICE averaging about £2,000 p.a., including valuable appointments and panel 1,200 Small house (3 bedrooms), garage and small garden, for sale or rent Premium £4,400 or near offer.

12 SW OF ENGLAND—PARTNERSHIP in Practice averaging about £3,200 in market town Panel over 3,000 Well built house (6 bedrooms etc.), garage and acre of garden. Price £2,200 One third share at first at two years purchase. Hospital.

13 LONDON, SW—PARTNERSHIP in mixed-class Practice about £4,350 p.a. in residential suburb Panel 2,500 Very nice house with garage and quarter acre garden, for sale. Two fifths share at first at two years purchase.

14 S OF ENGLAND—PARTNERSHIP in Practice over £3,600 p.a. in market town about 80 miles from London Panel 1,700 Very charming old world house Price about £1,350 freehold Modern hospital Premium one half share two years purchase. Partner should be aged about 35.

15 MIDDLESEX—PARTNERSHIP in steadily increasing town Practice about £2,000 p.a. Panel 1,600 House with 5 bedrooms, garage and garden to rent Premium one half share two years purchase Applicant should be English or Scottish.

16 N MIDLANDS—PARTNERSHIP in Practice in residential district near progressive town Attractive modern house (4 bedrooms) with large garage and good garden, for sale. Share of £1,100 p.a. for disposal Premium £1,600 Good reason for special terms.

17 LONDON SW 9—Non-panel PRACTICE averaging over £1,550 p.a. House on main road to rent on lease Premium one year's purchase.

18 S Lincs—Country PRACTICE, nearly £800 p.a., in agricultural district. Rent of private house (4 bedrooms), £50 p.a. Surgery about £40 p.a. Premium £1,500, to include surgery furniture Morris & Saloon car etc.

19 LONDON, WC—PRACTICE, doing about £310 p.a., in thickly populated area. Panel about 500 Rent of surgery 12/6 or flat and surgery £70 p.a. Premium £450.

20 SOUTHERN IRELAND—PRACTICE, worth £1,000 p.a. in seaport town Appointments worth about £130 Small house with garage and garden Rent £120 Hospital Premium £900 or nearest offer.

21 S COAST—Non-dispensing PRACTICE, £1,250 p.a. in health resort No panel but ample scope. Commodious well built residence with garage and garden for sale. Premium £2,500.

22 CORNISH COAST—PARTNERSHIP in non-dispensing Practice, nearly £3,000, in favourite resort Panel 1,200 House obtainable. One third share at two years' purchase. Good anaesthetist required. Short Assistantship.

23 LONDON, SW—PARTNERSHIP in sound Practice in suburban district Small panel Flat available at £75 p.a. Share about £1,600 p.a. at two years' purchase. Young, energetic man with speciality preferred.

24 S MIDLANDS—PARTNERSHIP in country Practice, £2,660 p.a. Panel about 1,550 Choice of two houses to rent Small well equipped hospital Premium two fifths share, £1,800 Partner should be aged 30/35, with leaning towards medicine.

25 LONDON, N 12—PRACTICE doing about £400 in growing district Panel 158 Attractive modern double fronted, labour saving house (4 bedrooms etc.) for sale. Premium £750.

26 DEATH VACANCY—LONDON, N 16—Receipts last year £1,730, including appointment worth over £400 and panel £375 Semi detached non basement house to rent.

27 ESSEX—Good middle class non-panel PRACTICE about £2,000 p.a. in outlying suburban district Detached corner house (6 bedrooms etc.) garden and garage Price £1,000 Excellent scope for panel Premium—best offer.

28 S COAST—PARTNERSHIP in Practice, £4,770 p.a. in residential town and health resort Panel 6,000 Semi-detached house (5 bedrooms) garage and garden, to rent Premium one fourth share £2,800.

29 W OF ENGLAND—PARTNERSHIP in Practice about £2,800 in first rate residential town Panel about 3,000 House obtainable Good scope One third share at first at two years purchase.



# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1893)

Tel. Address  
Triform Westcent—London.

**TAVISTOCK HOUSE SOUTH**  
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## Practices and Partnerships for Disposal (continued)

- 30 LONDON—RESIDENTIAL SUBURB S** of the THAMES—Well established middle class PRACTICE averaging £1595 p.a. with small fleet panel. Minimum visiting fee 5. Modern detached non-basement residence (6 bedrooms) and 3 professional rooms with separate entrance large garage and garden for sale. Scope. Premium one and three quarters years purchase.
- 31 MIDLANDS—PARTNERSHIP** in old established Practice £1270 p.a. in manufacturing town. Panel 1520. Modernized house (4 bedrooms) and professional accommodation. Good garage and garden for sale or rent. Premium one half share £270.
- 32 LONDON S.W.—Good class PRACTICE** about £1000 in residential part near West End. Fees £1.1 upward. Rent of consulting room £200 p. or less. Premium two years purchase.
- 33 N.E. SEAPORT—Old established PRACTICE** £1657 p.a. Panel 1275. Price of house £1500 freehold. Premium two years purchase.
- 34 LONDON E.C.—Old established City PRACTICE** averaging about £1700 p.a. Panel 16. Premium rent on lease. Good scope. Premium one and a half years purchase.
- 35 HOME COUNTIES—PARTNERSHIP** in increasing middle-class Practice about £1600. Panel about 100. Modernized house for sale or rent. Scope. Cottage hospital. Premium one half share £1600.
- 26 S. OF ENGLAND—PARTNERSHIP** in Practice over £500 p.a. in growing seaport town. Panel 100. One fifth share at two years purchase. Premium Assistantship.
- 37 SUSSEX—Country PRACTICE** near coast. Receipts last year £270. Panel about 100. Attractive modern house, garage and garden. Price £1500. Premium 2 years.
- 38 FRENCH RIVIERA—Old established PRACTICE** M.D. or M.R.C.P. necessary.
- 39 S. MIDLANDS—PARTNERSHIP** in good-class Practice nearly £5000 p.a. in first rate town. Panel over 1500. Applicant should be about 28-30 years of age and well qualified. One fourth share at two years purchase after Assistantship. Favourably known and strongly recommended by the Bureau.
- 40 LONDON S.E.—PARTNERSHIP** in Practice nearly £4300 p.a. in rapidly growing district. Panel about 3000. Modern labour saving house (4 bedrooms) to rent. Hospital. Premium one fourth share £220.
- 41 MIDLANDS—PARTNERSHIP** in Practice averaging £2880 p.a. in manufacturing town. Panel 210. Suitable house. Premium two fifths or one half share two years purchase. Succession in about two years.
- 42 INLAND HEALTH RESORT—Old established SPA PRACTICE** about £1400 p.a. Fee £2.25 and 2.5. Good house in excellent position for sale. Annual income Premium one and a half years purchase.
- 43 ESSEX—THIRD PARTNER** required in middle-class Practice in outlying district. Panel 1400. (6 bedrooms) garage and garden. Price £1500. £1000 opportunity for one doing general practice. £1000 for two years (for two years) £1000. £1000 for two years (for two years) £1000.
- 44 SURREY—PRACTICE** about £300 p.a. on outskirts of larger town. Panel 776. House 17 bedrooms. Price £600. Premium one and a half years purchase.
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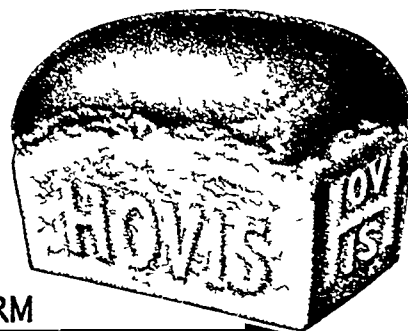
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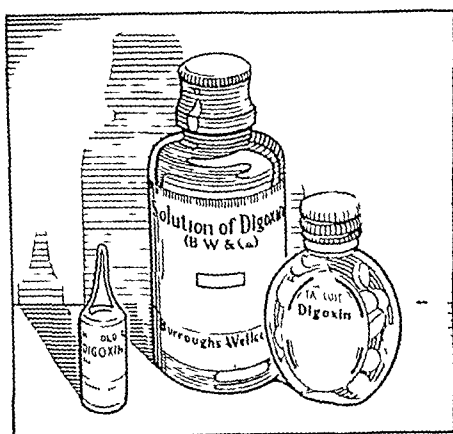
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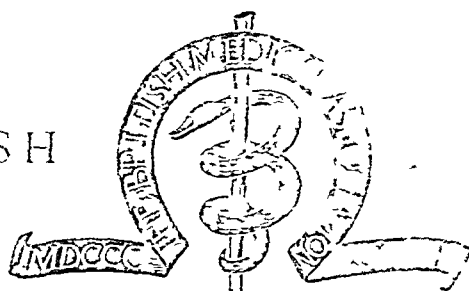
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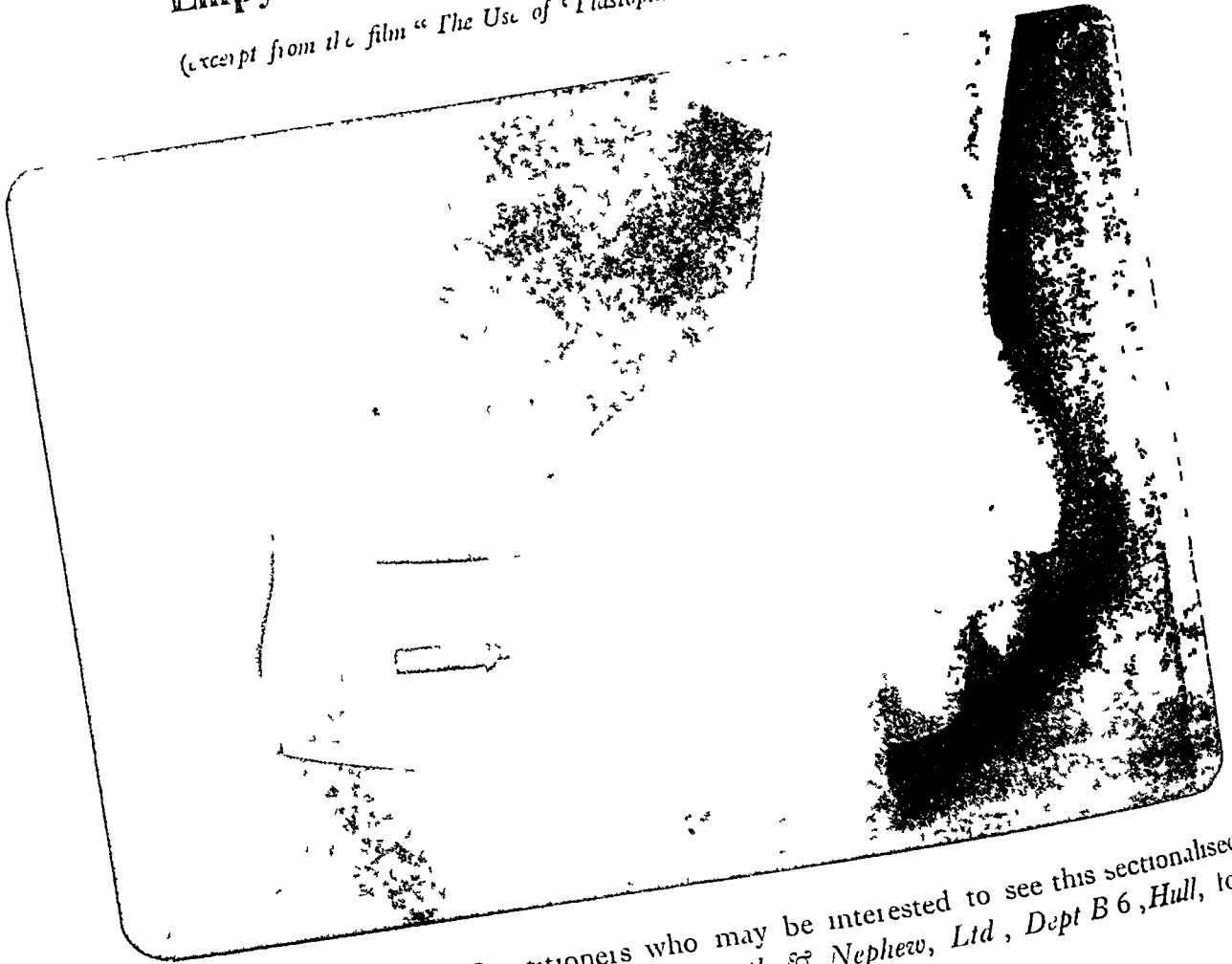
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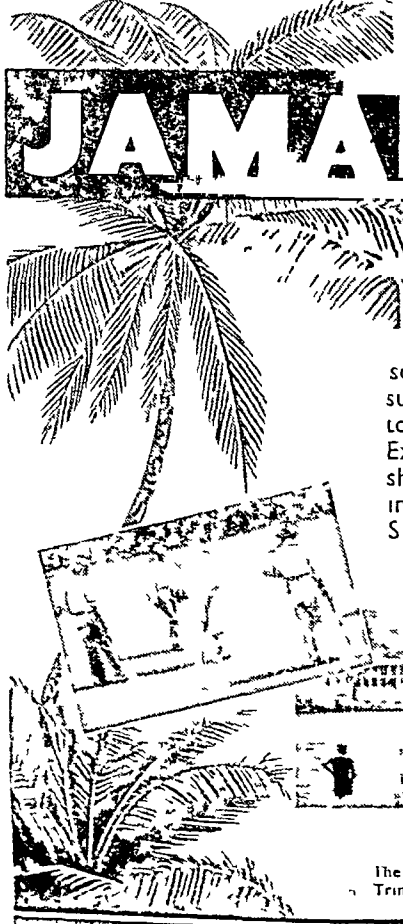
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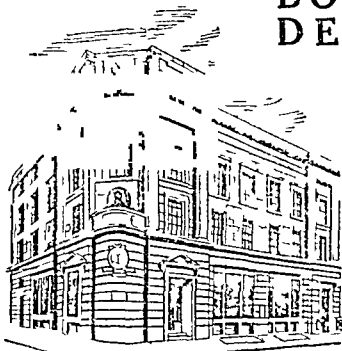
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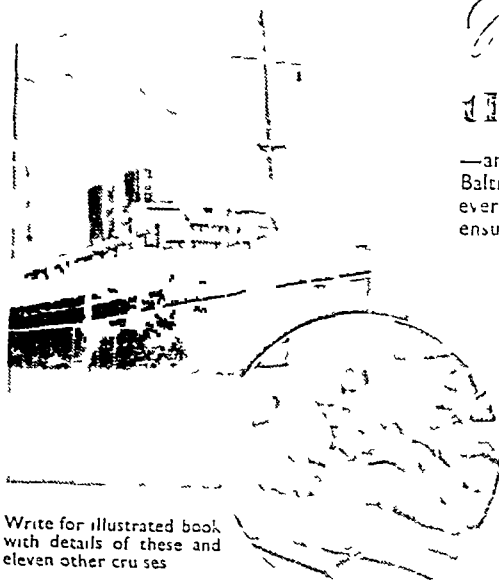
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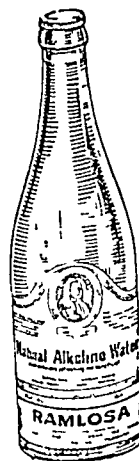
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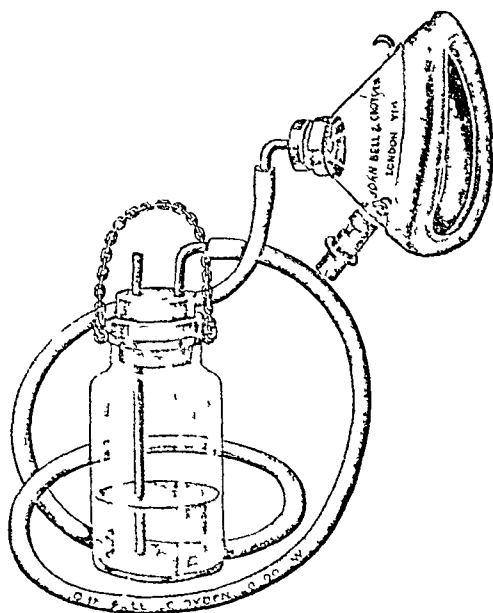
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The apparatus illustrated can be safely used for Analgesia or Anaesthesia during labour, or for Anaesthesia during any surgical procedure with or without a pre anaesthetic. A Surgeon writes: "The apparatus was designed for INTRODUCING PAINLESS LABOUR, and none of the patients on whom I have used it remember anything of the labour afterwards. I have not found it check the pains or prolong the labour. It can safely be left in the hands of a nurse under medical supervision."

DESCRIPTIVE PAMPHLET ON REQUEST FROM SOLE MAKERS

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ARNOLD & SONS

**SURGICAL INSTRUMENT DEPT**  
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Phone Welbeck 5555 Grams Instruments Wcdo London



### PRICES.

Apparatus (as illustrated)	£2 7s 6d
Rubber Headband for use with same	6s 9d
Rubber Bag for short Vincethene Anaesthesia	2s 0d
Leather Carrying Case	12s 6d

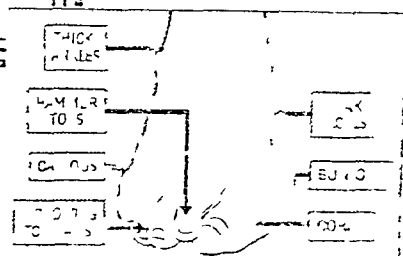
# FOOT COMFORT

By wearing  
**'APTERNA' HEEL-LESS SHOES**

These shoes are designed in the common sense knowledge that the majority of foot troubles are due in large measure to faulty footwear which aggravates the trouble and does not permit the natural exercise and freedom which is essential to foot health.

*Charles H. Baber*

LANGHAM HOUSE, UPPER REGENT ST, W 1



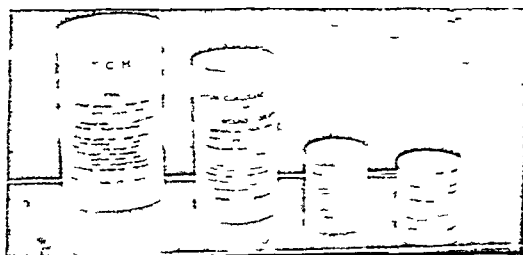
Any of the common foot ailments mentioned in the above diagram can be successfully prevented and relieved by wearing the corrective series of Apterina Heel-less shoes.

Apterina Shoes are available for men, women and children.

## THROMBIN-COAGULANT-MAW DRESSINGS FOR THE MAJOR OPERATION OR THE MINOR CUT

Some time ago we announced the production of Thrombin Coagulant-Maw, a preparation of remarkable efficiency for clotting blood.

We now offer a range of Surgical Dressings known as Thrombin-Coagulant Maw Dressings to which this preparation has been applied with such regard for the scientific principles concerned both chemical and physiological that we venture to suggest a new method of treatment has been found.



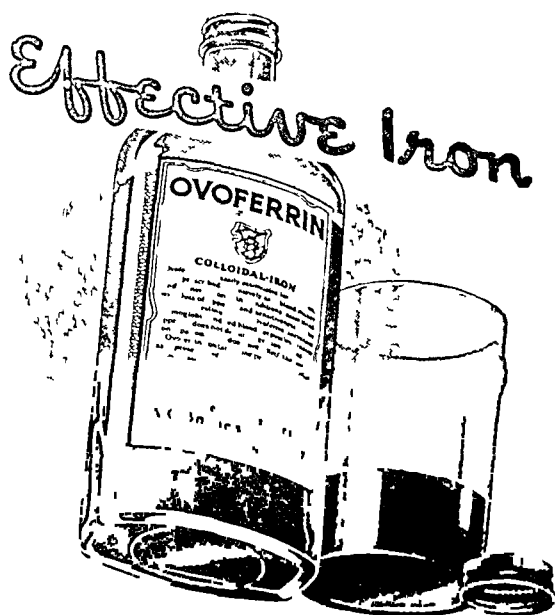
THE PHYSIOLOGICALLY CORRECT FIBROGEN

Whenever a wound is accessible to the application of a Dressing TCM Dressings will be found of great value in all cases requiring hæmorrhage control. They are very reasonable in price and represent a true economy of your own time and money whenever hæmorrhage has to be treated.

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*biological non-toxic*

## SEDATIVE

### Formula

Campho Sulphonate of sparteine	60 grains
Campho Sulphonate of ephedrine	5
Extract of boldo	100
Extract of crataegus	100
Extract of salvia	100
Tincture of marrubium	100
Glycine extract of thyroid (it equals 1 of fresh gland)	0.10
Valerian	100
Hexamethylene tetramine	100
Excipient q.s.	ad 1,000 grains

PRICE 7/6 per 4 oz. bottle  
Sample and Literature on request

*Serenol* is a sedative with action on the centres of the nervous vegetative system, sympathetic and parasympathetic, and on the cortical centres. Recent knowledge has shown the interaction of nervous vegetative system and endocrine system and on this knowledge *SERENOL* is based. It is thus a biological, not a symptomatic, sedative, and unlike many other sedatives has not a direct depressant action on the cortical cerebral centres.

*Serenol* is indicated in conditions of anxiety and general instability, insomnia, hyperthyroidism, hyperadrenalism (as in neurocirculatory asthenia, effort syndrome), the so-called nervous palpitations of the heart, etc.

*Serenol* is given in the following dosage: For mild cases one to two dessertspoonfuls on retiring. For more severe cases one dessertspoonful 3 to 4 times a day, one dessertspoonful 4 or 5 times a day and two dessertspoonfuls on retiring.

*Serenol*, being a biological sedative containing no habit-forming substances, is no habit-forming.

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'Dettolin' is obtainable from Chemists and Medical Dispensaries.  
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Recovery from hypnosis is prompt and unaccompanied by disturbing after effects

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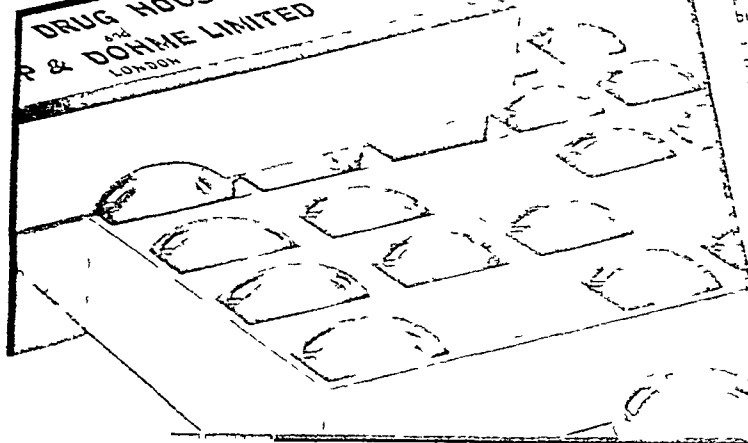
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YEAST EXTRACT

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(British Medical Journal May 21st 1938 p 1032)

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(Lancet May 11th 1938 p 142)

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(VITAMIN C)

A suboptimal intake of Vitamin C may result in the onset of such subscorbutic symptoms as certain types of secondary anæmias, defective deposition of calcium in bones and teeth, disturbed water metabolism and, in premature or under-developed infants, a delay in growth

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with consequent risk of onset of symptoms of deficiency, may be detected following the administration of a test dose (70 mg per stone body weight)

In prophylaxis 12.5 to 50 mg (250 to 1000 international units) of Ascorbic Acid B D H (Vitamin C) should be given daily

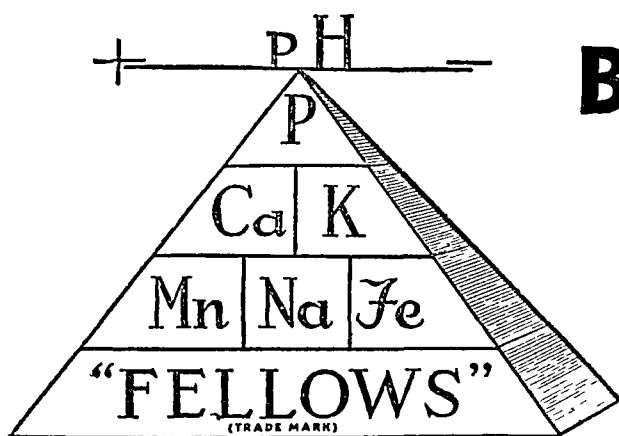
In treatment doses of 150 to 250 mg (3000 to 5000 international units) should be given daily, and in febrile conditions similar doses should be given to meet the increased demands of body metabolism

Ascorbic Acid B D H is generally, and most conveniently, given orally in the form of tablets, but in cases of gastric dysfunction and hypochlorhydria it is injected intravenously in the form of a solution

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Alasil is a very definite advance on ordinary compound of salicylic or acetyl salicylic acid both in therapeutic efficiency and in freedom from the risk of unpleasant gastro-intestinal sequelae. This high tolerability is due to the fact that Alasil is composed of calcium acetyl salicylate—the least irritating of the salicylate compounds—and Alocol (Colloidal Hydroxide of Aluminium) a powerful gastric sedative and antacid.

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Alasil can be pushed or prolonged to a much greater extent than ordinary salicylate compound and that it can be given with safety to children, aged, and patients with finely balanced digestive capacities. An antacid and purgative and sedative of established value.

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Each fluid drachm contains  
Caffein Iodid 5 grs  
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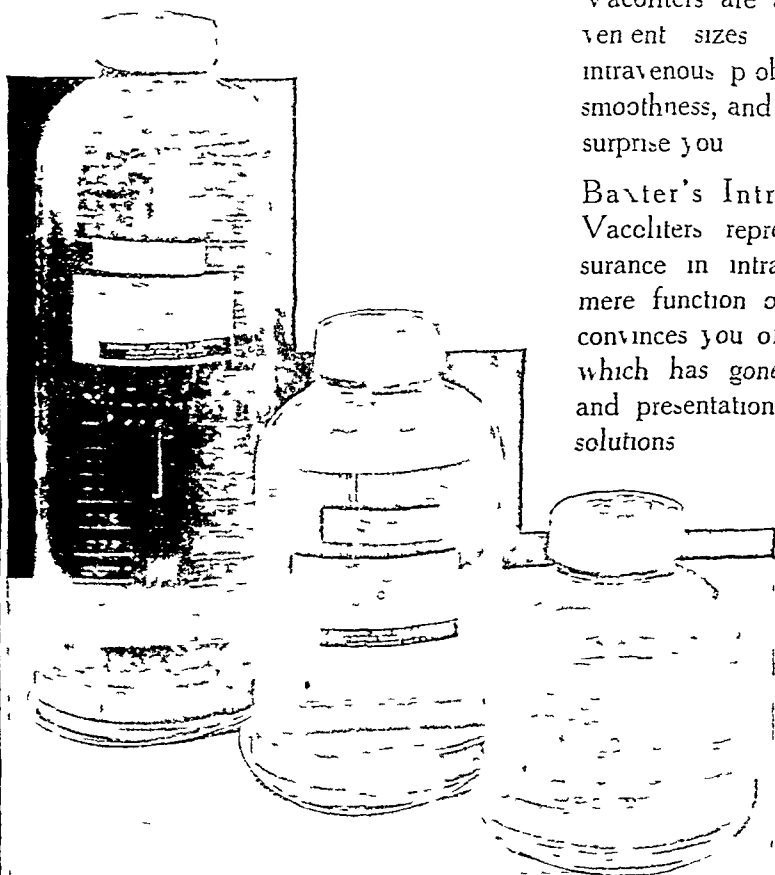
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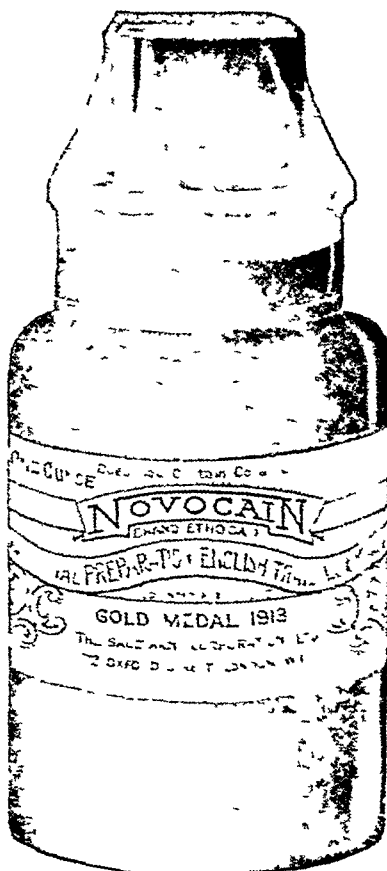
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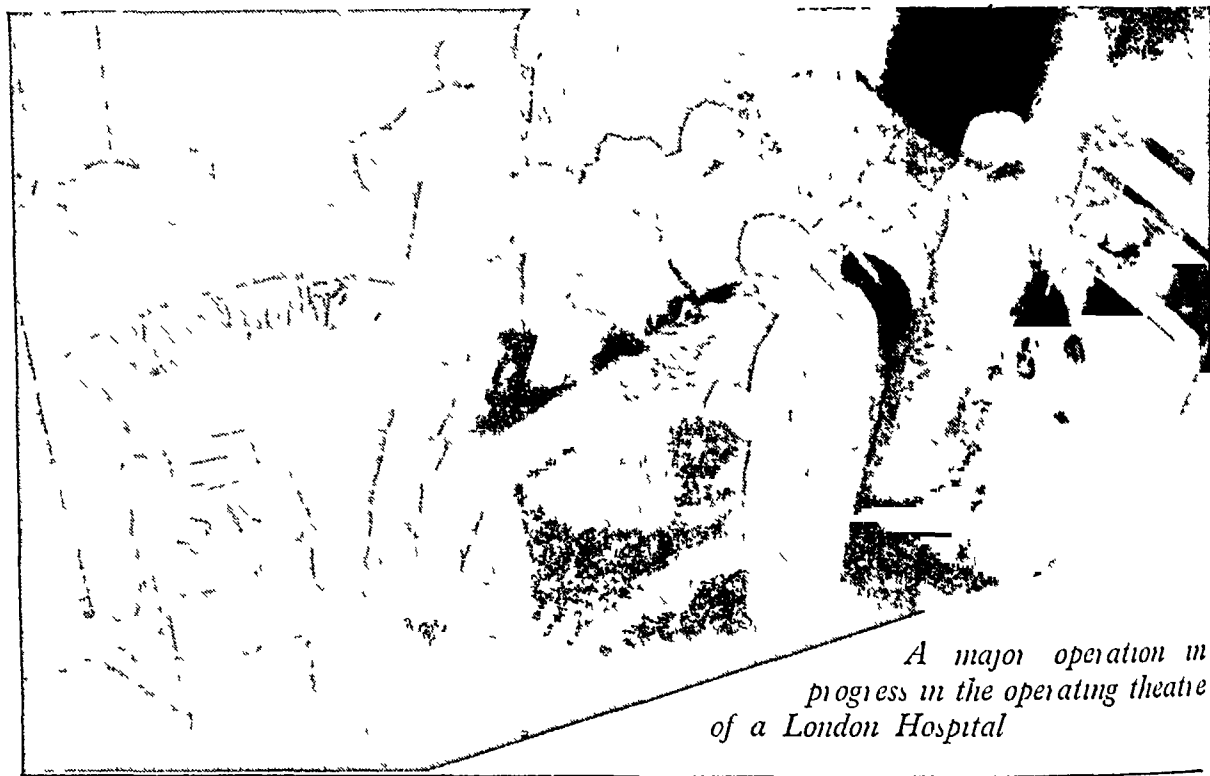
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THE most elaborate precautions against every possible chance of germ infection are of course essential in the operating theatre. It would be ridiculous, however, to expect anything approaching this meticulous attention to antiseptic cleanliness in everyday hygiene and in the home treatment of superficial wounds.

The general public is nevertheless beginning to realise the importance of germ-free cleanliness. Hygienic standards to-day are higher than they have ever been. It is generally agreed by medical men that although regular use of antiseptics is not desirable or really necessary for ordinary toilet purposes, the use of a reliable antiseptic soap can play a very valuable part in the prevention of infectious disease. Face and hands are continually exposed to infectious germs, and require washing with Wright's Coal Tar Soap.

Wright's has substantial antiseptic and antipruritic qualities. For over 70 years it has enjoyed the confidence of the medical

profession, and to-day more doctors use Wright's than any other brand of toilet soap. Wright's Coal Tar Soap is prepared from materials selected after stringent tests. It is the only soap in the world to contain 'liquor carbonis detergens' (Wright's), the valuable dermatological therapeutic recommended by skin specialists the world over. In surgeries, hospitals, nursing homes and private households Wright's meets all the requirements of modern everyday hygiene. You can use it and recommend it to your patients with complete confidence.

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**COAL TAR SOAP**  
*The Safe Soap*

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# Disease-emaciation

"EVERY medical practitioner knows how difficult it is to nourish a patient suffering from disease. Do we not all recognise the fact that the starving tissues are fed not only by food swallowed by the patient, but by the amount of nutriment absorbed by the gastric and intestinal mucous membrane? If we could ensure the absorption of nutriment into the blood the problem of nutrition in disease would be reduced to a matter of mere chemistry and mechanical feeding. Judging from clinical results Sanatogen appears in many cases to possess some power of readily absorbing nutriment from the richest foodstuff represents so much nutriment in the 'cells' and intestines. My own experience of Sanatogen in the treatment of emaciated—ten or twelve months old—are often reduced to a mere skeleton—feeding, and it improves general condition of the child, and eventually leads to a normal weight."

NUTRITION IN WASTING DISEASES OF CHILDREN AND ADULTS  
(Lancet, 1937, 1, 1000)

"THIS condition will result from imperfect diet or absorption of which may follow stomatitis, pyloric stenosis, diphtheria of the pharynx, tuberculous or syphilitic is not infrequently associated with improper feeding. In such cases are not well tolerated but the contrast is true in reference to food. The use of Sanatogen, in these cases, proved to be the best method of feeding. I am encouraged to try it in other cases of intestinal weakness and have had a most encouraging results in a number of patients suffering from this condition. It is quite apparent that 'Sanatogen' has considerable power in influencing nutrition."

'INFANTILE ATROPHY'  
(Practitioner, 1937, 1, 1000)

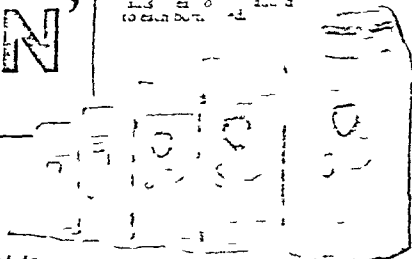
"I HAVE before me the records of forty cases fed with Sanatogen. They show what was obvious to myself and the nurses when watching the cases—their babies wasted less during the acute stage and picked up more rapidly during the convalescent stage than patients who did not have Sanatogen. This fact indeed was soon recognised by the ward sister without my having in any way drawn her attention to it. I am firmly convinced that it is a most valuable food for the emaciated patient."

THE TREATMENT OF TYPHOID FEVER  
(Lancet, 1937, 1, 1000)



5 to 10 c.c.s.  
per 3 to 199

DOSEAGE: For children and adults who are unable to take food, 5 to 10 c.c.s. of Sanatogen should be given 4 or 5 times a day, and gradually increased as the patient improves.



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*The Keep Fit Campaign at Bournville*

# HOW CADBURY WORKERS TAKE TIME OFF FOR 'RHYTHM CLASS'



'Keep Fit' has been a slogan in use for many years at Bournville. Employees have wonderful facilities for exercise and healthy recreation of all kinds. Here you see a girls' 'Rhythmic "Keep Fit" Class'. All employees under 18 years of age enjoy gymnastics during working hours.

*Study your patients' pockets as well as their health*  
**Recommend**

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**BOURN-VITA**

THE IDEAL FOOD  
DRINK

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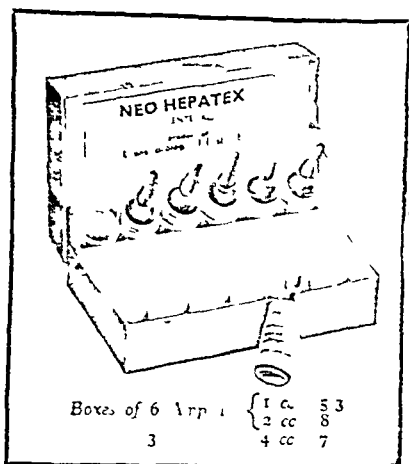


For adult and junior employees recreational gymnastics are also held in the evenings—these being voluntary, of course. The gymnastics as a whole are organised more for general development than with any idea of spectacular display.

So they're fit to make fine products at

# CADBURYS of Bournville

THE FACTORY IN A GARDEN



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# NEO-HEPATEX

(Parenteral)

Intravenous and Intramuscular  
Clinically tested

# HEPATEX

(Oral)

Palatable and efficiently fractionated  
Contains the full therapeutical efficiency  
of 16 times its weight of fresh liver

The most active liver extract

Made at

The Evans Biological Institute

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The Vitamin B<sub>1</sub> potency of Bemax is assured by biological assay of every day's output, and is from 12-15 International Units per gramme, about 400 units per ounce.

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A unique natural source of accessory nutritional factors

Vitamin B <sub>1</sub> —400 International Units per ounce	Vitamin E—the richest natural source
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Vitamin A—250 International Units (as Carotene)	Magnesium—99 mg. per ounce
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Complimentary carton sent on request

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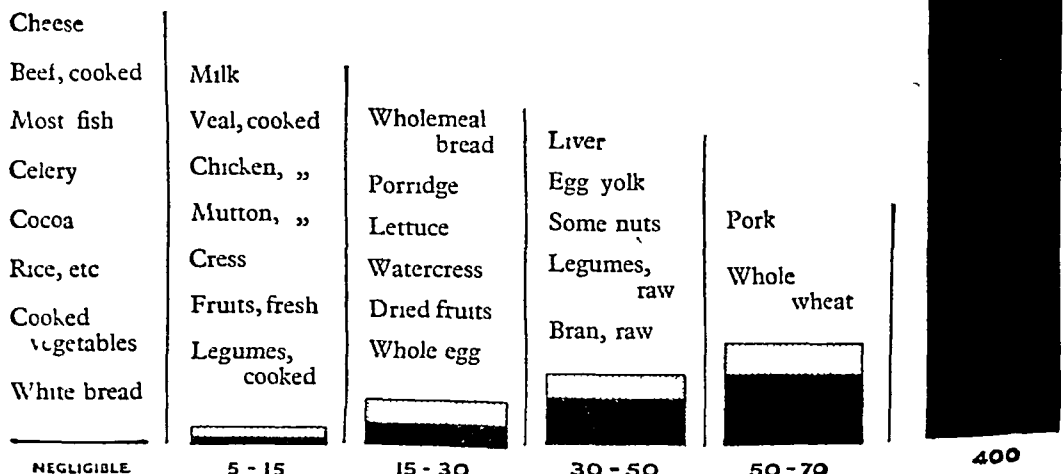
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Biochemical J, 1935, and other sources



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B.D.H.

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*in the Treatment of Threatened Abortion**also of Habitual and Missed Abortion*

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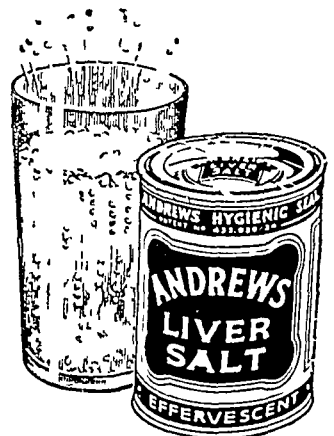
- 1 The dosage is easily adjusted according to age
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# BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 28 1938

## SOME RECENT ADVANCES IN MEDICAL DIAGNOSIS AND TREATMENT\*

By

A. H. DOUTHWAITE M.D. F.R.C.P.

Physician to Guy's Hospital

Medicine has made such gigantic strides in the last few years that to cover the field would be a task beyond my powers. I shall limit myself to those recent advances with which I am chiefly familiar. Most of these relate to the digestive tract.

### Sialography

The radiographic demonstration of the ducts of the parotid and submaxillary glands has been made possible by the injection into them of substances opaque to x-rays. Payne (1931) described in detail the introduction of lipiodol into the parotid duct. By this means the outline of the main duct and its branches can be demonstrated and, when infection occurs various abnormalities such as spherical dilatation comparable to that seen in bronchiectasis of the lung can be demonstrated. The same writer (1933), describing nineteen cases of *recurrent pyogenic parotitis* fully investigated by examination of the saliva and also by sialography summarizes the symptoms and signs of this by no means uncommon disease. It usually starts with a feeling of fullness in the region of one parotid and then slight swelling. Attacks may be initiated by a meal. The gland gradually enlarges reaching its maximum within a few hours up to twenty-four and subsides over a course of several weeks. During subsidence a foul taste may be experienced and examination may reveal mucopus oozing from the duct. After a period of relief the whole process is repeated. It is interesting to note that the ratio of females to males is 8 to 1. So far as physical signs are concerned the gland is easily palpable not uncommonly tender and with acute exacerbation of the disease fever, increase of swelling and well marked tenderness are present. The saliva instead of being clear contains numerous flakes consisting of shreds of mucus with pus cells, epithelial cells and micro organisms. I have notes of seven patients whom I have seen with this disease and five of them have apparently recovered completely as the result of massage to the parotid directed especially along the line of the duct and also diathermy. In one case of submaxillary gland infection its removal resulted in entire disappearance of symptoms. In the submaxillary gland case and three of my parotid patients the outstanding symptom was in point of fact that of *soreness of the tongue* and owing to the great frequency with which one meets this

most troublesome symptom in practice the possibility of a chronic infection of one or other of the salivary glands should certainly be borne in mind.

### Gastric and Peptic Ulcer

One cannot obtain a clear idea of the advances made in the diagnosis and treatment of these conditions without briefly reviewing the last twenty years or even more. It was Mowbray who was responsible for describing the symptoms of duodenal ulcer and placing that condition on the medical map as a diagnosable entity. In 1921 Bennett and Ryle published the result of their investigations of a hundred healthy students by means of a fractional test meal, and thus applied a further stimulus to gastro-enterology. They showed that 20 per cent possessed a degree of free acidity which fell outside the mean curve. Of this 20 per cent half were hyperchlorhydric and half were hypochlorhydric or achlorhydric. It was about this time that they and other workers popularized the alkaline treatment of gastric and duodenal ulcers. MacCallan, Jones and Fildes (1928) wrote on the cure of gastric and duodenal ulcers by intensive alkaline treatment. They referred to the already well known action of soluble alkalis, rest and diet would cause a disappearance of symptoms and produced various radiographs showing the disappearance of ulcer craters. The investigations of these patients were not, however, repeated after a long enough interval to justify the assumption that they were cured.

We now know that a great number of methods of treatment will result in the apparent cure of an ulcer if judged purely by x-ray appearances. I have produced equally striking effects with histidine in patients who have had no other treatment but am quite satisfied that in spite of the relief of symptoms the ulcers were not cured. This drug which has been used largely in the form of a preparation called *larostudin* is injected intramuscularly daily for fifteen to twenty doses. Numerous and conflicting reports have appeared as to its value. The general opinion of critical observers is that it seems to have some effect in aiding the healing of ulcers but it is not permanent and certainly the preparation cannot replace the more orthodox methods of therapy. I began to doubt its efficacy when I followed up hundreds of treated patients for a few weeks subsequent to the discontinuation of treatment. In every case a relapse was not caused not only from recurrence of symptoms but also from x-ray

\* A British Medical Association Lecture delivered before the Lincoln Division March 10 1938.

appearances within five weeks. No doubt the mere fact of relapse is a strong point in favour of the histidine having done some good, but, on the other hand, it is highly improbable that anything approaching healing could have been produced with such an early return of all the signs and symptoms. There is no evidence that ulceration in the human being is due to a deficiency of histidine, and there seems, in point of fact, no convincing experimental work to justify its use. If a series of patients are treated with an intensive alkali and dietetic regime and compared with those treated with histidine it will be found that there is very little difference in the immediate recovery percentage. On the other hand, the histidine treated patients relapse more readily and far more rapidly than those treated by diet and alkali. Gastroscopy has already taught us that large craters as seen by x rays seldom seem so deep when observed by direct vision. The apparent depth is produced not only by swelling of the mucosa but by contraction of the underlying muscularis.

### Associations of Gastro-intestinal Disease

The remarkable discoveries of Minot and Murphy relative to the treatment of pernicious anaemia, and the more recent work of Castle in explaining the association of achylia with this hitherto fatal disease and with sub-acute combined degeneration of the cord, have given a tremendous forward impulse to the study of gastro-intestinal disease and its relation to more remote systems of the body. I drew attention (Douthwaite, 1936) to an interesting group of hitherto unexplained cases of polyneuritis sometimes of extreme severity, all of which appeared to be associated with disease of the stomach leading to achlorhydria or achylia, and termed these gastrogenous polyneuritis. In view of Castle's recent work it may well be that they are actually examples of European beriberi for it has been shown that in conditions of gastritis and achylia the absorption of vitamin B<sub>1</sub> may be deficient and that an adequate supply of this substance is capable of curing certain types of neuritis, especially alcoholic neuritis, even though the original aggravating factor is still operative.

Fiber (1927) preached unheeded for many years the doctrine of chronic gastritis. He studied stomachs preserved by the injection of 10 per cent formalin solution through the abdominal wall into the peritoneal cavity and into the stomach, and, following that investigation, he advanced the study of gastric pathology by the recognition of chronic gastritis and also of the acute variety. Whether one has to assume that all cases of achylia are the result of chronic gastritis is to my mind quite another matter. This has been accepted as a teaching during the last few years on incomplete evidence, for although it is clear that chronic gastritis might well be expected to produce atrophy of the mucosa in time it is by no means certain that all conditions in which gastric atrophy is present have been preceded by an inflammatory state—in short, by gastritis. One must be cautious before jumping to this conclusion particularly when it is borne in mind that the incidence of achlorhydria and achylia rises steadily with age. It seems on the face of it unlikely that an inflammatory condition of the stomach would attack the populace with such regularity. On the other hand, it is understandable. The point is of importance because it Hurst's view is correct that gastritis is the precursor of achylia and gastritis always precedes the

development of carcinoma of the stomach, except in ulcer cancer, it should be possible materially to reduce the incidence of stomach cancer. If on the other hand, achylia is frequently not the result of inflammatory changes, the whole supposed association between achylia, gastritis, and carcinoma becomes at once subject to considerable doubt. Morley (1937) quotes Robertson's and Wilkinson's cases of cancer of the stomach where test meals taken at intervals have shown the presence of a carcinoma and a free acidity which has steadily diminished. This would suggest that the cancer was responsible for the fall of acid. The most that can be said at present is that, although on theoretical grounds it is probable that the gastritis-cancer sequence is true in a proportion of cases, it must not be regarded as an invariable association, even apart from those cases of cancer which do sometimes arise in chronic gastric ulcer.

### Non-ulcerative Haematemesis and Melaena

In using the term "non-ulcerative" I mean to imply that the cases about to be described are those in which profuse haemorrhage has occurred and shown itself either as melaena or as haematemesis, or both, and in which there has been no preceding history of ulcer and where the most careful investigations have completely failed to reveal the presence of an ulcer after the haemorrhage. Furthermore, the subsequent history of these patients has been quite unlike that generally associated with peptic ulcer.

My attention was first drawn to the possibility of severe haemorrhage occurring in the absence of a readily demonstrable disease in the stomach or duodenum by a patient under my care at Guy's Hospital who had been twice admitted on account of recurrent severe haematemesis. He gave no history of indigestion. Melaena persisted for two or three days only and then cleared up. Several x-ray examinations revealed no disease. A fractional test meal showed achlorhydria and a great excess of mucus in every specimen. The case was presumably one of gastritis. With rest in bed, a non-irritant diet and gastric lavage he rapidly improved. A further test meal revealed a return of free hydrochloric acid and no excess of mucus. There has been no recurrence of symptoms after five years.

A man aged 50 was seen by me three years ago on account of severe haematemesis and melaena again with no preceding history of indigestion. Physical examination was negative except for haemoglobin of 52 per cent and heavily infected teeth. He was treated with soft diet and rest in bed, but had a further severe melaena. His doctor then called in a surgeon who performed a laparotomy and found no abnormality. The patient recovered in spite of this. A test meal revealed exactly the same state of affairs as in my previous case.

A third man, 60 years old was under my care in hospital with recurrent small haematemeses but no pain. A fractional test meal again showed a picture of severe gastritis and absence of free hydrochloric acid and blood in every specimen. In fact it looked very much like the test meal of a carcinoma of the stomach. Repeated x-ray examinations were negative. Stomach washouts were heavily tinged with blood for four or five weeks but ultimately complete recovery took place.

The next three patients were those with hyperchlorhydria. In one there was a history suggesting a duodenal ulcer, but this was not demonstrated by the most careful and repeated x-ray investigations and the profuse melaena for which he came in cleared up in two days. The other two patients are of considerable interest since both of them were doctors and reliable witnesses. The first consulted me because he had noticed black stools and had felt giddy. He said that he had been perfectly well until a few hours after being at a cocktail party where he had had only one cocktail but had eaten a large number of salted almonds. His theory was that these had scratched his mucosa. Investigation in a nursing home revealed the hyperchlorhydria so common in doctors. A x-ray

examination four days after the melanin showed a normal stomach and duodenum. Occult blood had left the stools in three days. The patient has been back at his busy practice for over two years since and has taken no precautions, he has smoked and has taken alcohol without any further trouble.

The last example was that of a doctor who on account of supra orbital neuritis kept himself going in his practice by taking aspirin. This had been proceeding for ten days when one morning he awoke with pain and took two aspirin tablets without water or milk as had been his custom hitherto. A quarter of an hour later he felt a slight epigastric pain, the same day four or five hours later he felt faint and had colic and soon passed stools containing a little visible blood and a large amount of tarry material. The value of this instance is that he had his alimentary tract examined by x rays and a fractional test meal and a blood count done four or five days before this occurred and apart from a hyperchlorhydria he was shown to be normal. The investigations were purely precautionary as he had reached middle life (41 years). After the melanin which lasted for three days his haemoglobin was 58 per cent. In spite of this he carried on at work and made a complete recovery. When radiographed twelve days after the bleeding again no abnormality was found. He had never had any symptoms of indigestion and has had none since although two years have elapsed.

The last two cases I believe illustrate the susceptibility of the gastric or duodenal mucosa especially in the presence of a high acid to what are regarded as minor sources of irritation—in the one alcohol or possibly salted almonds in the other free acid liberated from aspirin.

Clearly it is of practical value to realize that profuse haemorrhage may occur as the result of chronic gastritis on the one hand or comparatively slight trauma in the presence of hyperchlorhydria on the other hand otherwise these patients might well be condemned to irksome and superfluous restrictions. The more our knowledge of the stomach increases the greater does the value of special methods of investigation increase. It is only by these that we can be certain of such diagnoses as gastritis and mucosal atrophy. Many people presenting test meals of a type suggesting gastritis have no symptoms whatsoever. In the past it has been assumed that gastritis was present if there was hypochlorhydria or achlorhydria associated with an excess of mucus. On the other hand the finding of hyperchlorhydria which is seldom associated with an excess of demonstrable mucus was not thought necessarily indicative of gastritis. Too much importance has been attached to what has been regarded as an excess of mucus in the past. The less the acid secreted the more will the mucus appear to be although there may be no true absolute increase. Conversely in highly acid specimens mucus when present is masked and is very difficult to detect. The most obvious appearances of gastritis as seen through the gastroscope are usually to be found in a hyperchlorhydric stomach in which test meals reveal no mucus. In short a hypertrophic gastritis that is very liable to superficial erosions and bleeding will give a test meal of hyperchlorhydria more often than not. In cases of achlorhydria or hypochlorhydria there is apparently a great excess of mucus so much so that it is difficult to obtain specimens through the tube and it in addition blood or pus cells are detected microscopically in the test meal deposits and again if the test meal has an unpleasant smell it is probably correct to assume that chronic gastritis is indeed present.

The value of the gastroscope lies mainly in three directions. (1) Giving a clear view of the gastric mucosa from which one can say with some degree of certainty that gastritis is or is not present. (2) Indicating whether an ulcer which has apparently healed according to occult

blood tests and x ray examination has in fact healed or not. Usually it has not and it requires many more weeks of treatment after the signs are absent before sound healing has occurred. (3) To determine whether an ulcer is malignant. A malignant ulcer can occasionally be recognized as such when x rays have failed to observe it on its irregular edge.

**X Rays**—The combination of the use of small quantities of barium emulsion smeared over the stomach and duodenum and the development of apparatus which allows of aimed exposures if necessary with compression makes such an advance in radiographic technique that given enough experience in interpretation there is seldom any possibility of error in the diagnosis of peptic ulcer or genuine as opposed to imaginary disease of the appendix. The only common mistake is to diagnose gasitis too readily but this aspect will gradually be checked by the extended use of the gastroscope.

The most important contribution to gastroenterology which has been made in recent years is provided by Magnus and Unglev (1933). Immediately after death from peritonitis and in the stomachs were fixed the introduction of formalin through a stomach tube. The autopsy showed that the characteristic lesion was one of atrophy of all the stomach coats in the region of the fundus and the body mucosa. The pyloro-duodenal region which was hitherto supposed to be responsible for the production of the intrinsic factors necessary to the health of blood and spinal cord was quite normal. Furthermore there was nothing to suggest the proposition—that is gastritis—had preceded the atrophy. Gastroscopy confirms the localization of the trouble.

Fifteen years ago when the orthodox treatment for gastric and duodenal ulcer was prolonged rest in bed and two hourly feeds of milk and milk foods until the stools became free of occult blood I abandoned this procedure in favour of a liberal though soft diet allowing milk cereals bread and butter honey fish and egg and plenty of fruit and vegetable after one week of rest in bed on milk only. I have had no reason to regret it. I had not the strength of my convictions when dealing with cases of haematemesis until reading of the most impressive series produced by Meulengracht (1933) who gave test meals exhibiting haematemesis and melæna a liberal diet including even meat provided the food was soft and the solid food was served as purée with the most excellent results. He points out quite rightly that it is desirable that the stomach should not be empty of food and thus contain free gastric juice which may be highly acid and therefore detrimental to the ulcer which is bleeding. Furthermore the prolonged starvation of the patient and even deprivation of an adequate amount of fluid when was so common in the past could only give rise to anxiety restlessness and diminishing recuperative powers. His method of feeding has now become fairly general in our hospitals, and the claims have been fully vindicated.

#### Regional Ileitis

Localized inflammation of the small intestine has recently been holding the centre of medical attention. Crohn Ginzburg and Oppenheimer (1932) reported thirteen cases in which it was in the terminal foot of the ileum. It appeared to begin in the ileo-caecal valve and produced ulceration and destruction of the mucosa with thickening and inflammation of the outer coats and considerable narrowing of the lumen. Abscesses and fistulae were reported. Since that time it has become clear that the condition may occur not only in the ileo-caecal region

but also at other points in the course of the ileum. Microscopically the lesion is seen to consist of a benign granuloma often presenting giant cell systems, and thus giving rise to the mistaken assumption that the condition was one of tuberculosis. This has been disproved not only by microscopical examinations but also by guinea-pig tests. The symptomatology is a varied one, but with adequate care it is probable that many cases can be diagnosed before operation. The picture may be like that of ulcerative colitis, with diarrhoea, pain, and fever, or again perhaps more frequently, there is central abdominal pain and recurrent distension of the abdomen, gradually giving rise to a permanent picture of chronic intestinal obstruction. By this time a mass can often be palpated in the right iliac fossa or elsewhere in the abdomen. Loss of weight and anaemia are also fairly constant features. A sudden attack of pain, with tenderness and some rigidity in the right iliac fossa, has often led to the removal of a completely harmless appendix. This should be taken as a warning against the employment of minute incisions for the removing of an appendix, when a larger one would have brought into view the diseased area of the bowel. If found in the early stages the treatment is satisfactory, and consists of resection of the affected portion. X rays will help in the later stages by showing a filling defect and partial obstruction of the ileum.

#### Intrathoracic Disease

The biggest advance in the diagnosis of pulmonary disease is due to the more general appreciation of the value of the bronchoscope. The discovery of a small carcinoma of a bronchus is thus made possible, it may explain the presence of a lung abscess, the persistence of a cough or even the sudden development of auricular fibrillation or flutter in a hitherto healthy patient. Why this remarkable association exists is still a matter of doubt. Now that surgery no longer shudders at the removal of a lung such early diagnosis is of very real importance.

Tomography allows of the taking of x-ray pictures of the lungs in different planes, while the other planes are sufficiently suppressed as not to interfere with a clear visual examination of the area inspected. This is particularly helpful in relation to cavities, whether tuberculous or those arising from non-tuberculous abscesses.

O Shaughnessy's cardio omentopexy for angina pectoris and persistent disability from cardiac infarction is the outstanding achievement of present day surgery. The balanced judgment of physician and surgeon in choosing suitable cases of coronary disease is an essential to success.

#### Pharmacological Advances

Of *prontosil* and its derivatives so much has been written lately that it would be pointless for me to do more than pay homage to this remarkable drug, the uses of which I have summarized in a recent paper (1937a). The haemolytic streptococcus, the *Bacillus coli* the gonococcus and probably the meningococcus are all susceptible to its influence the first, however far and away the most constantly so. Likewise of *gold* in the treatment of rheumatoid arthritis I shall say little, except to emphasize the fact that it is of much greater value in treatment than any preparation used hitherto, but it also carries with it many dangers, to which I have already made reference (Douthwaite, 1937b).

*Eumydrine* (atropine methylnitrate), the dose of which is a sixteenth to a thirtieth of a grain, is a valuable anti-

spasmodic, and less poisonous than atropine sulphate. It appears to have revolutionized the treatment of congenital pyloric stenosis in infants and converted it into a medical rather than a surgical problem to the benefit of the infants.

A valuable addition to our pharmacological resources is *zinc-protamine-insulin*. The object of this preparation is to produce an insulin which is absorbed slowly and will therefore have its action spread out more evenly throughout the day, and thus approximate as closely as possible to the normal production of insulin by the pancreas. The action starts in about nine hours and reaches its maximum in fifteen to twenty hours after injection. A single administration of ordinary insulin and the zinc preparation in the morning may thus suffice for daily treatment.

The success of *measles convalescent serum* was so great that in an epidemic it was often impossible to obtain supplies. This difficulty has been overcome in the most surprising way by the finding of an effective anti-measles *placental extract*. A dose of 5 ccm at the first sign of pyrexia, headache, or Koplik's spots will either prevent the rash entirely or render the disease of trivial severity. Smaller doses given earlier in the incubation period will have a similar effect. When we think of the frequency and severity of complications and sequelae of measles it is clear that this discovery is of the greatest benefit to mankind.

*Endocrines*—The development of endocrinology has already led to therapeutic results that are little short of startling. One can safely predict the profound effect it will have on medicine of the future, for we are no longer employing foreign substances to influence body activities but rather the very essences of the mysterious life forces. Already we can alleviate the mental and physical disturbances of the menopause with oestrin, we read of virility given to eunuchs with testosterone, and before long I hope we shall have means to control the obesity of pituitary or hypothalamic dysfunction. Yet we must progress cautiously and sift the evidence of efficacy with care lest endocrinology fall into the disrepute so justly meted out to wholesale vaccine therapy and other vagues. Nowhere is this more important than in dealing with male impotence acquired after a period of normal function. So often the cause lies in the mind, and its cure is suggestion. Parkes (1938) clearly summarizes the work on the efficacy of hormones in relation to absorption rate, and reveals the remarkable fact that the more complete purification of the essential extract results in reduced effectiveness on administration. This is due to the hormone being too rapidly absorbed. To counteract this tendency such combinations as testosterone propionate or oestradiol benzoate have been devised.

#### REFERENCES

- Bennett, I, and Ryle, J A (1921) *Guys Hosp Rep* 71 286  
 Crohn, B B, Ginzburg L, and Oppenheimer, G D (1937) *J Amer med Ass* 99, 1323  
 Douthwaite, A H (1936) *British Medical Journal* 2 535  
 — (1937a) *Practitioner* 139, 661  
 — (1937b) *Med Annu* 392  
 Faber, K (1927) *Lancet* 2, 901  
 MacLean H, Jones, I, and Fildes, G (1928) *Ibid* 1, 14  
 Magnus, H A and Ungley C C (1938) *Ibid* 1, 420  
 Meulengracht, E (1935) *Ibid* 2 1220  
 Morley J (1937) *British Medical Journal* 2, 949  
 Parkes, A S (1938) *Ibid* 1, 371  
 Payne R T (1931) *Brit J Surg* 19, 142  
 — (1933) *Lancet* 1, 348

# SEROLOGICAL EXAMINATION OF HAEMOLYTIC STREPTOCOCCI FROM ACUTE RHEUMATIC AND CONTROL GROUPS

BY

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The association between inflammation of the upper respiratory tract and the rheumatic state has long held clinical recognition. The evidence on which this has been based was supported by the frequency with which tonsillitis occurred in rheumatic patients; statistical data being supplied by the work of St Lawrence (1920) Ingberman and Wilson (1924) Poynton (1925) Bertram (1925) and McCulloch and Irvine Jones (1929). In these investigations the incidence of throat infections was found to vary from 22.4 per cent to 77 per cent. Additional proof of the prevalence of repeated infection was found in the condition of the fauces. Thus the St Thomas's Hospital data in the Medical Research Council (1927) Report on rheumatism showed that the proportion of healthy throats in children of non-rheumatic families was greater than that in rheumatic families. In a similar controlled investigation Lambert (1920) found that in 1000 consecutive cases of rheumatism the proportion of unhealthy tonsils was 25.3 per cent as compared with 17 per cent in 250 cases of acute pneumonia. Active infection as indicated by inflammation of the throat was present in 22.4 per cent and 0 per cent of rheumatic and control groups respectively. Perhaps a more striking demonstration of the connexion between the two conditions is supplied by the occurrence of outbreaks of rheumatism mainly of recurrent attacks but sometimes primary after epidemic tonsillitis. Many examples of this sequence are described in the literature by Raven (1923) Boas and Schwartz (1926) Huler and Graef (1927-8) Glover (1930) Schlesinger (1930) Glover and Griffith (1931) Collis (1931) Sheldon (1931) Bradley (1932) and Coburn and Pauli (1933).

While there is thus considerable evidence for the occurrence of tonsillitis in rheumatism the bacteriological examination of the throat flora in such cases has yielded divergent results. Although the streptococcal genus has attracted most attention many species within the genus have been incriminated by different observers. Thus the work of Poynton and Paine (1900) stressed the importance of the alpha haemolytic or *viridans* streptococci. On the other hand Small (1927) and Birkhaug (1927) separately claimed aetiological significance for gamma or indifferent streptococci. Within recent years however beta haemolytic strains have gained increasing recognition in the reports of Glover (1930) Coburn (1931) Glover and Griffith (1931) Collis (1931) and Bradley (1932). Similar investigations such as that described by Schlesinger (1930) have led to the view that no single type of organism could be recognized as responsible for all infections but that many species were involved. It may be noted that in the majority of investigations in which beta haemolytic streptococci have appeared important the type of nasopharyngeal infection has been of the epidemic variety in enclosed populations such as those of schools, hospitals and training quarters. Thus the importance of Mantle's observation in 1885 at the beginning of the bacteriological era that rheumatism was a more common complication of infectious sore throat than of sore throat of a non-infectious nature becomes manifest. Even in sporadic

cases of rheumatism such as in the series of Gibson Thomson and Stewart (1933) beta haemolytic streptococci were isolated from the throat secretions of 43 per cent of patients as compared with 20 per cent of controls. It is commonly recognized that haemolytic streptococci from human sources differ greatly in pathogenicity as determined by virulence tests in experimental animals but the method is not suitable for extensive investigations nor does the pathogenicity in man and animal always concur. Lancefield (1933) by means of a precipitation reaction claimed that haemolytic streptococci could be divided into groups each of which possessed a common group specific carbohydrate fraction (M). Furthermore Group A represented the important pathogens in the human subject. An important practical application of this test was the demonstration by Lancefield and Hare (1935) that the majority of strains causing puerperal infection of the uterus were Group A in character. But as the majority of strains in the birth canal during a normal puerperium were not A, Lancefield (1935) suggested the main source and habitat of Group A strains is probably the human nasopharynx but not all commensal strains in this site belong to Group A. Hare (1935) for instance examining the nose and throat of normal human beings noted that only about one-third of haemolytic streptococci isolated were Group A, the carrier rate of this type in a normal population being estimated to be approximately 7 per cent. The relatively low proportion of commensal Group A strains in normal persons has been confirmed by Davis and Guzzard (1936) who recorded a carrier rate of 3 per cent. Again Plumier (1935) classified all but two of 415 strains from human infections in Group A but found that many strains from healthy subjects were not of this group. However a much higher proportion of carriers has been recorded by Kodama (1937) who found that 68 per cent of fifty normal subjects were in this category.

Clearly this method of examination may yield information concerning the part played by haemolytic streptococcal infection of the nasopharynx in rheumatic subjects and the present paper records data obtained by its application.

## Methods

### ISOLATION OF STRAINS

On admission to hospital with rheumatic manifestations a throat swab from every patient was plated on 5 per cent horse blood agar. Incubation was maintained at 37°C for twenty-four hours under aerobic conditions. If colonies of haemolytic streptococci appeared save all were replated and from the second plate if a pure growth resulted stock cultures were prepared by inoculation of a tube of cooked meat medium. After twenty-four hours incubation at 37°C the stock culture was stored at 0°C. Throat swabs from control subjects were similarly treated.

### PRECIPITIN REACTIONS

Rabbit antisera against representative strains of Lancefield groups A to H were prepared by serial inoculation of formalized cultures over a period of six to ten weeks. The carbohydrate antigen required for the test was prepared by inoculating a 5 ccm horse digest medium from the stock culture of the strain under investigation. After twelve hours incubation at 37°C the 5 ccm broth culture was added to 50 ccm of the same medium. The heavy growth after eighteen hours incubation was deposited by centrifugation and washed four times in sterile normal saline. After the final washing 2 ccm of sterile saline containing hydrochloric acid to a concentra-



tion of N/20, was added to the deposited cells, and the mixture transferred to a water bath at 100° C for ten minutes. After rapid cooling and centrifugation the supernatant extract was removed and neutralized by the addition of sodium hydroxide. The clear supernatant fluid after further centrifugation was the antigen used in the test.

### Results

For this investigation two groups of subjects were selected, each numbering 200 and constituted as follows:

**Group R**—Patients admitted to hospital with one or more symptoms of acute rheumatism, including arthritis, carditis chorea, etc. This group included subjects with both initial and recurring attacks.

**Group NR**—Patients in the same hospital wards as members of Group R, but without existing or previous manifestations of rheumatism. This group included all types of diseases, and no discrimination was made as to the presence or absence of nasopharyngeal infection, as will be seen hereafter.

#### HISTORY OF THROAT INFECTIONS

At the time when a throat swab was taken every patient was questioned as to the occurrence of any symptoms of nasopharyngeal infection during the preceding six weeks. As indicated in Table I, in 156, or 78 per cent,

TABLE I—Results of Throat Swab Examination in Rheumatic Group (R) and in Control Group (NR)

	Rheumatic Group (R)	Non Rheumatic Group (NR)
History of recent nasopharyngeal infection	156 (78%)	93 (46%)
Haemolytic streptococci isolated	95	26
No history of recent nasopharyngeal infection	44 (22%)	107 (54%)
Haemolytic streptococci isolated	21	33
Total number from whom haemolytic streptococci were isolated	116 (58%)	59 (30%)

of the rheumatic group R a history of such an infection was obtained. On admission to hospital with rheumatic manifestations the throat symptoms had entirely subsided in the majority of cases, although enlarged tonsils were often found. Turning to the control group NR, a high figure of recent infection was also found—namely, in 93, or 46 per cent.

#### INCIDENCE OF HAEMOLYTIC STREPTOCOCCI IN THROAT SECRETIONS

From the throat swabs taken on admission from Group R haemolytic streptococci were isolated in 116, or 58 per cent of patients. In the case of the control group NR, fifty-nine or 30 per cent were found to be carriers. Considering the results in respect of recent throat infection, ninety-five or 60 per cent, of the 156 rheumatic patients with a positive history gave positive cultures of haemolytic streptococci whereas twenty-one, or 47 per cent of the remaining forty-four with a negative history yielded positive cultures. In the control group NR the haemolytic streptococcal carrier rates in these patients with and without known recent infection were 28 and 30 per cent respectively.

#### SEROLOGICAL TYPES OF STRAINS

Applying the precipitin test in the examination of all strains of haemolytic streptococci isolated from the two groups of patients the results detailed in Table II were

TABLE II—Serological Grouping of Haemolytic Streptococci Isolated from Throat Swabs of Both Groups

Lancetfield Group	Rheumatic Group (R)				Non Rheumatic Group (NR)			
	No. of Strains from Patients with Recent Nasopharyngeal Infection	No. of Strains from Patients with no Recent Nasopharyngeal Infection	Total	Percentage of Total No. of Strains (116)	No. of Strains from Patients with Recent Nasopharyngeal Infection	No. of Strains from Patients with no Recent Nasopharyngeal Infection	Total	Percentage of Total No. of Strains (59)
A	81	17	101	87	18	7	25	42
B	2	1	3	3	2	7	9	15
C	4	2	6	5	3	13	16	27
D	0	0	0	0	0	1	1	2
E	0	0	0	0	0	0	0	0
F	0	0	0	0	0	0	0	0
G	5	1	6	5	2	4	6	11
H	0	0	0	0	1	1	2	3
Total	95	21	116	100	26	33	59	100

obtained. The most important of the data secured was the high proportion of Group A strains isolated from Group R patients as compared with Group NR. Whereas the difference in incidence of haemolytic streptococci—namely, 58 per cent and 30 per cent respectively—in these two groups was notable, the difference in the incidence of Group A infection was even more significant, the respective incidences being 50.5 and 12.5 per cent. Further, it was found that although the majority of persons in the control group with a history of recent infection were Group A carriers, only seven of thirty-three persons without recent symptoms were carriers. On the other hand, rheumatic subjects irrespective of subjective symptoms of infection yielded Group A strains in the majority of instances where haemolytic streptococci were isolated.

#### Commentary

The number of subjects in each of the two groups examined was considered large enough to enable reasonable comparison to be made. A high incidence of sore throats in the rheumatic group—namely, 78 per cent—was not unique, but approximated to that found by St Lawrence (1920) and Ingerman and Wilson (1924). In the unselected control group it was surprising to find the incidence of recent sore throats to be as high as 46 per cent, but for purposes of comparison in regard to the bacteriological investigations this was a fortunate circumstance. As haemolytic streptococci were recovered from 58 per cent of all rheumatic subjects on admission to hospital in indication was obtained of the extent to which this type of organism was responsible for the preceding throat infection noted in many of the series examined. It is recognized that tonsillar infections with this organism, as in scarlet fever, are followed by the carrier condition for indefinite periods, and it was reasonable to assume the same sequence in the present investigation. Of rheumatic patients with subjective symptoms of preceding infection 60 per cent yielded haemolytic streptococci, whereas in the symptomless the carrier rate of 44 per cent was still high. On the other hand, in the control group, despite the prevalence of apparent recent infection, only 30 per cent yielded haemolytic streptococci, and approximately the same proportion of carriers was found in those with and without a recent history. This would suggest with

that in the control group many of the throat infections were due to organisms other than haemolytic streptococci or that the carrier condition after faucial infection was less persistent than in rheumatic subjects.

Regarding the Lancefield grouping of the isolated strains it was interesting to find that 57 per cent of those from rheumatic subjects were of the important pathogenic Group A whereas only 42 per cent of strains from controls were of this type. Nevertheless even in the control group the majority of carrier strains from persons with a definite history of recent infection were also members of Group A.

### Conclusions

1 Of a group of 200 subjects with acute rheumatic manifestations 75 per cent gave a history of antecedent throat infections, 46 per cent of a non-rheumatic control group gave a similar history.

2 Throat swab cultures for haemolytic streptococci were positive in 58 per cent and 30 per cent of the rheumatic and control groups respectively.

3 Of the strains of haemolytic streptococci from throat swabs of rheumatic subjects 57 per cent were serologically classified in Lancefield Group A, 42 per cent of strains from non-rheumatic controls were of this group. Group A strains were therefore isolated from 50.5 per cent and 12.5 per cent of the rheumatic and control groups.

4 The evidence supports the relationship between infection with haemolytic streptococci and the rheumatic state.

I am indebted to the physicians of the Royal Hospital for Sick Children, the Royal Infirmary and the Municipal City Hospitals of Edinburgh for granting access to cases under their charge. It is a real pleasure to acknowledge the co-operation of Dr John G. Sclater in the collection of specimens.

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### REFERENCES

- Bertram M (1925) *British Medical Journal* 1 496  
 Birkhaug K E (1927) *J infect Dis* 40 349  
 Boas E P and Schwartz S P (1926) *Amer Heart J* 2 375  
 Bradley W H (1932) *Quart J Med* n.s. 1 79  
 Coburn A F (1931) *The Factor of Infection in the Rheumatic State* Williams and Wilkins Baltimore  
 — and Pauli R H (1935) *J exp Med* 62 137  
 Collis W R F (1931) *Lancet* 1 1341  
 Davis L J and Guzdar J S (1936) *J Path Bact* 43 197  
 Gibson H J, Thomson W A R and Stewart D (1933) *Arch Dis Childh* 8 57  
 Glover J A. (1930) *Lancet* 1 499  
 — and Griffith F (1931) *British Medical Journal* 2 521  
 Hare R (1935) *J Path Bact* 41 399  
 Hiller R I and Graef I (1927-8) *Amer Heart J* 3 271  
 Ingram E and Wilson M G (1924) *J Amer med Ass* 82 759  
 Kodama T (1937) *Kitasato Arch exp Med* 1\* 29  
 Lambert A (1920) *J Amer med Ass* 74 993  
 Lancefield R C (1933) *J exp Med* 57 571  
 — and Hare R (1935) *Ibid* 61 335  
 McCulloch H and Irvine Jones E I M (1929) *Amer J Dis Child* 37 252  
 Mantle A (1935) *British Medical Journal* 2 960  
 Medical Research Council (1927) *Special Report Series* No 11, London  
 Pummer H (1935) *J Bact* 30 3  
 Poynton F J (1925) *British Medical Journal* 2 788  
 — and Paine A (1900) *Lancet* 2 861  
 Raven M O (1923) *Ibid* 2 1227  
 St Lawrence W (1920) *J Amer med Ass* 75 1033  
 Schlesinger B E (1930) *Arch Dis Childh* 5 411  
 Sheldon W (1931) *Lancet* 1 1337  
 Small J C (1927) *Amer J med Sci* 173 101

## ACUTE EPIDURAL ABSCESS

BY

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Recorded cases of acute epidural abscess are still uncommon and even more rare are reports of recovery. Hence I feel justified in describing one further successful case.

Dandy in 1926 collected twenty-five cases from the literature of these four were diagnosed during life two ending in recovery, the mortality therefore being 90 per cent. Abrahamson, McConnell and Wilson in 1914 were able to collect records of sixty cases. Operation had been performed in thirty of these with survival in twenty—a total mortality of 66 per cent. In many of his operations on the recovery was incomplete. Craig and Doyle who in 1932 reported a case in which operation was successful came to the conclusion that up to that time Pott's abscess was the only authentic case of complete recovery. Incorrect as this statement appears to be in view of MacDonald's case report in 1928 it shows how extremely small must be the number of cases where full recovery has followed operation. It will thus be seen that the prognosis in the untreated case is uniformly fatal. There is no recorded instance of recovery without the aid of surgical intervention.

### Pathology

The epidural space exists only on the dorsal aspect of the dura and is present from the seventh cervical to the second lumbar vertebra. It contains a quantity of loose areolar tissue which in common with similar tissue elsewhere is slow and ineffective in combating infection. The dura anteriorly is in close apposition to the canal throughout its length. Infection therefore is usually found in the dorsal space except where osteomyelitis of a rib or vertebra or extension from an extrapleural abscess is the cause. Once the infection has entered the epidural space rapid spread would be expected and in most of the published cases the space was widely infected necessitating removal of many laminae. However sometimes a circumscribed form of abscess occurs and it is reasonable to suppose that most cases go through a stage where infection is localized and therefore more amenable to surgery.

Softening of the cord is a common finding in cases which come to necropsy and it has been suggested that this is due to toxins travelling in one way or the nerve roots or to ischaemia following on a thrombosis of the vessels as the changes are much more than can be explained by mere mechanical compression. The organism in the reported cases has been either *Staphylococcus albus* or *Staphylococcus aureus*.

### Aetiology

Cases fall into three groups: (1) those where extension from a neighbouring source of infection can be traced; (2) those arising by metastasis from a distant infection; (3) those in which no primary focus can be demonstrated. Trauma is mentioned by several writers as an inciting agent but it is difficult to prove that it is.

### Diagnosis

Diagnosis may present difficulties but writers are unanimous in stressing the appearance of early and persistent pain localized over the site of the abscess or radiating along the nerve roots. Temperature varies but

it is usually indicative of an infective process. Motor symptoms may take several days to appear and then develop slowly or, on the other hand, a complete paralysis of the lower limbs may occur in a few hours. In some cases the toxæmia seems to have so overwhelmed the patient that paraplegia has not had time to develop before death. The paralysis may be partial or complete, and of flaccid or spastic type. Probably most cases go through a stage of spasticity with increased tendon reflexes and extensor plantar responses. Sensation in the reported cases varies from widespread anaesthesia to little or no disturbance at all. It has, however, in several instances given the clue to the position of the abscess. Localized oedema over the tender area is mentioned by a few and is probably found more often than reports would indicate. Usually the sphincters are affected, and retention of urine may be a comparatively early sign.

Clinically, therefore, the diagnosis is based on (a) pain over and in the spine, with or without root radiation, (b) variable signs of toxæmia, (c) a variable degree of cord lesion. Of these, the first-named is the most constant, but the case may present itself with any one of the three signs as the outstanding feature. Radiographs are of no value unless there is an accompanying osteomyelitis of a rib or vertebra.

Lumbar puncture at the usual site should be performed, this may reveal pus from the abscess, xanthochromia and increased protein, or a normal fluid which may or may not be under tension. Puncture at the site of maximum tenderness, while it may yield valuable information, is not without danger. It should be borne in mind that if the subarachnoid space is not obliterated by the abscess pressure it will be very easy to introduce infection and start a purulent meningitis. Lipiodol is advocated as an aid to diagnosis but its value seems limited, and it may serve only to prolong the pre-operative period and so prejudice the patient's chance of recovery. The more severe pain and tenderness with the evidence of spinal block, differentiates acute epidural abscess from myelitis, thrombosis, and embolism. Examination of the cerebrospinal fluid, and the different type of pain, eliminate meningitis and poliomyelitis. Stiffness of the neck and a positive Kernig sign are found in many spinal conditions, and help very little with the diagnosis.

### Treatment

Treatment consists in early and adequate drainage by laminectomy. Where the infection is widespread the extensive removal of laminae, as done in some of the published cases, seems hardly justified in view of the extremely poor prognosis. In the case of local collections of pus the removal of one lamina is probably sufficient.

### Complications and Prognosis

All writers emphasize the extreme acuity of the condition and the rapid deterioration of the patient where surgery is either not employed or is delayed until the infection is generalized and septicaemia established. Without operation all the patients die of extreme toxæmia, septicaemia, or meningitis in one to three weeks.

Prognosis obviously depends on (1) the virulence of the infection, (2) the resistance of the patient, and (3) the stage at which operation is performed. Where the operation is done early and the infection is found to be localized full and complete recovery may be expected.

### Case Report

The patient, a girl aged 15, was admitted to hospital on September 15, 1937, complaining of pain in the back and

headache. She was at work on September 12, but had to leave on account of pain low in the back and a feeling of weakness in the legs. Appetite was poor, the bowels were constipated, and when admitted she was unable to void urine.

**Examination.**—On admission her temperature was 101° F and pulse 90. There was no demonstrable focus of infection and nothing abnormal was found in the heart and lungs. The pupils were equal and reacted to light and accommodation. The cranial nerves were normal, as were the upper arms. Abdominal reflexes were absent. The lower limbs showed marked rigidity. Kernig's sign was positive, knee and ankle jerks were very exaggerated on both sides, and there was a bilateral extensor plantar response. No hyperaesthesia or loss of sensation was observed. The abdomen was distended and the bladder well above the pubis. Tenderness was present over the second lumbar vertebra, with some redness and oedema of the overlying skin. The bladder was catheterized and 40 ounces of urine were drawn off. Lumbar puncture between the second and third lumbar vertebrae resulted in 3 c.cm. of pure pus.

A few hours later, as pain and paralytic symptoms seemed to be on the increase, a diagnosis of acute epidural abscess was made and operation decided upon. In order to eliminate a purulent meningitis, cisternal puncture was performed after the patient was anaesthetized, and as the fluid was quite clear, though under considerable tension, it was decided to proceed with the laminectomy.

**Operation.**—This was performed under open ether anaesthesia, and consisted in removal of the first, second, and third lumbar spinous processes and the second lamina only. Pus welled up immediately the extradural space was opened, and seemed to come from under the third lumbar lamina rather than from under the second. At this stage it was thought that the third lumbar lamina should be removed as well, but when the forceps broke under the considerable pressure needed it was decided to be content with the drainage already provided. The dura was thickened and was covered by granulation tissue, and all subarachnoid space seemed to have been obliterated by the abscess pressure. No pulsation of the dura was noticed. A thick rubber tube of one inch diameter was inserted, resting on the cut-off laminar processes, the muscles and skin being sutured loosely around it.

**Subsequent History.**—The patient was nursed on her face on a water bed and the bladder catheterized twice daily for five days. Cystitis was prevented by the use of cystopurine and full aseptic precautions in catheterization. On the day following the operation the patient was completely comfortable, and remarked that her previous pain had gone. Incontinence of urine took the place of retention on September 20, and this was accompanied by incontinence of faeces as well. The latter ceased on September 28, and normal bladder control was resumed on October 5. Spasticity of the legs with exaggerated jerks and extensor plantar responses continued till December 14, and on discharge from hospital the reflexes were normal and the patient walked with a normal gait. Massage and electrical stimulation of the muscles prevented gross loss of muscle tone, and enabled the patient to walk six weeks after operation. Discharge from the wound was considerable at first, but soon ceased, and the drain was removed on the sixth day. Temperature was never above 101° F, and fell to normal sixteen days after operation. The pulse varied from 90 to 100, but settled with the temperature.

The patient was discharged on January 6, 1938, with a small granulating wound and slight serous discharge. When last seen on January 20 there was still a small granulating area, but the patient felt well and had resumed her full activities.

### Pathological Examinations

**Urine.**—Acid, specific gravity 1010, no albumin, sugar or organisms.

**Pus from Abscess.**—Pus cells and numerous Gram positive cocci were present, but *B. tuberculosis* was not found. A pure growth of *Staph. aureus* was obtained after aerobic cultivation at 37° C.

**Cerebrospinal Fluid from Cisternal Puncture**—White cells 23 per cmm red cells nil Differential count small mononuclears 20 per cent large mononuclears 80 per cent polymorphs nil *B. tuberculosis* was not detected and no growth was obtained after aerobic cultivation at 37° C

The Wassermann reaction was negative and the blood sedimentation rate 22 mm per hour on October 26 1937 and 11 mm per hour on January 1 1938

### Summary

1 A short review of the literature and an account of the condition are given

2 A case is described in which early operation was followed by complete recovery

3 The importance of full investigation in cases presenting severe and persistent pain in the back with motor symptoms in the lower extremities is stressed in order to eliminate a diagnosis of myelitis or poliomyelitis which would prevent an operation that might be the means of saving the patient's life

### BIBLIOGRAPHY

- Abrahamson L McConnell A A and Wilson G R (1934) *British Medical Journal* 1 1114  
 Allen S S and Kahn E A (1932) *J Amer med Ass* 98 87  
 Craig W McK and Dowl J B (1932) *Ann Sur* 95 53  
 Dandy W E (1926) *Arch Sur* 13 477  
 Hamato M (1937) *Zbl Chir* 64 139  
 MacDonald N S (1928) *J Amer med Ass* 90 1114  
 Mintzman J (1934) *British Medical Journal* 2 593

## SULPHONAMIDE CHEMOTHERAPY IN GENITO-URINARY (NON-GONOCOCCAL) INFECTIONS

BY

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During the past year I have treated with the recently introduced compounds containing the sulphonamide (NH SO<sub>2</sub>) and aniline (C<sub>6</sub>H<sub>5</sub>NH) chemical chains upwards of 900 cases infected by various organisms. A preliminary report (Cokkinis 1937) described my experiences in the treatment of gonorrhoea below are recorded the results obtained with these preparations in non gonococcal genito-urinary conditions. Experiences in their use for acute abdominal lesions and other surgical infections have also been extensive but are not reported in this paper. They have however, been of considerable interest and although there have been enough failures and disappointments to show the limitations and difficulties of this form of treatment the successes have been sufficiently numerous and striking to convince me that the new chemotherapy has very definite surgical possibilities which are worthy of further exploration.

### The Drugs Employed

**Sulphanilamide** (syn prontosil album streptocide sulphonamide etc.)—In my hands this appears to have the widest range of use and to offer the greatest bacteriostatic activity. Unfortunately it is much the most toxic of all these compounds and although haemolytic anaemia and agranulocytosis have not been my experience the less serious toxic manifestations have proved extremely common often troublesome and occasionally alarming

In surgical cases and after major operations (particularly abdominal and genito urinary) the most troublesome toxic effects have been prostration (sometimes severe) gastric irritation and cyanosis. I am now developing the conviction that sulphanilamide should not be given to debilitated patients or to major operation cases if a less toxic chemotherapeutic substance can be used, even though it may be of slightly lower bacteriostatic potency.

**Prontosil Soluble**—This azo dye compound which I have given by deep subcutaneous injection has so far in itself especially useful in operation cases for it causes neither gastric irritation nor prostration. The only toxic effect I have seen with it is a slight cyanosis and this in a very small proportion of cases. To obtain bacteriostatic action comparable to that of sulphanilamide it has to be given in rather large doses—for example 20 to 30 ccm of the 5 per cent solution daily.

**Prontosil Rubrum**—Of this I have as yet had little experience.

**Proseptasine and Soluseptasine**—These are remarkable free from toxic effects but in my experience their bacteriostatic action has proved somewhat disappointing and I have used them in only a few of my surgical cases.

**Uleron**—This new disulphonamide product which I am now trying extensively has shown a bacteriostatic potency in infections by several bacteria which include gonococci streptococci and coliform bacilli. In 100 cases of gonorrhoea (not reported here) and in a smaller number of surgical cases it has been extremely well tolerated and has shown no immediate toxic effects. The absence following its use of such symptoms as prostration cyanosis gastro intestinal irritation and cardio vascular effects makes it particularly suitable for debilitated and seriously ill patients—for example after major operations. One disadvantage however should be mentioned. This is the possibility of the appearance of toxic peripheral neuritis of a curiously constant and symmetrical motor distribution (adductors and opponens pollicis interosseous muscles of the hand and flexors and extensors of the toes and toes). This has occurred in less than 4 per cent of my cases and only when the drug was continued over a period of weeks. There is good reason for supposing that its administration is limited to a few days and once effect will not make its appearance even when large enough doses are used to obtain a rapid bacteriostatic action. Though uleron for the reason given above should not be used for long periods I believe that employed judiciously it may prove to be the non-toxic substitute for sulphanilamide which I have been looking for although on the whole it appears to be less potent.

In debilitated cases and those suffering from a severe surgical illness or recovering from a major operation when rapid bacteriostatic effect is required over a short period the drug used should not add in the way of toxic manifestations to the strain already imposed on the patient. For this purpose I have employed prontosil soluble in the past but I am now combining it with uleron with promising results. When however a bacteriostatic action is required for longer periods—that is more than a week or ten days—I still believe that sulphanilamide however toxic it may be is the best and safest substance to employ in most infections by sulphonamide susceptible organisms.

A total of fifty seven genito-urinary cases have been treated. These can be divided into three main groups:  
 (a) non gonococcal genital infections (thirty cases)  
 (b) primary urinary infections (five cases) and  
 (c) secondary urinary infections (fifteen cases)

## (a) Non-gonococcal Genital Infections

In this group are twenty-six cases of urethritis (males) and four of acute epididymitis. All gave negative tests for gonococci and complement fixation. One was an unmixed infection of *Strep viridans*, while ten were proved cases of mixed infection with various bacteria. Organisms were found in the other cases, but their exact nature was not proved by culture.

The following five cases were treated with uleron

improvement at all. One of the relapsed cases gave on culture a growth of *Strep faecalis*. *Staph albus* and diphtheroids one week after 40 grammes of sulphanilamide in sixteen days, the other two failures had no cultures taken.

## DISCUSSION

This group thus shows four cases of epididymitis with one failure and twenty-six cases of urethritis with three failures. It is interesting to observe that all five cases treated with uleron were successes, although the average

Case	Condition	Duration Before Uleron	Organisms Found	Total Uleron	Period of Uleron	Result	Follow up
1	Left epididymitis. Anterior and posterior urethritis	Seven days. No previous treatment	Coliforms on culture	16 grammes	Four days	Discharge ceased in two days. Testis normal in nine days	Still well three weeks later
2	Anterior and posterior urethritis	Nine days. Resisted previous treatment	Various organisms in smear. No culture	36 grammes	Six days	Discharge ceased in four days. Urine clear in seven days	Still well five weeks later
3	Anterior urethritis	Fifteen days. Resisted previous treatment	Strepts and diphtheroids in smears. No culture	18 grammes	Six days	Discharge ceased in five days. Urine clear in five days	Still well two months later
4	Anterior urethritis	Twelve days. Resisted previous treatment	Strepts coliforms and diphtheroids in smears. No culture	18 grammes	Six days	Discharge ceased in four days. Urine clear in three days	Still well three weeks later
5	Anterior urethritis	Twenty three days. Resisted previous treatment	Coliforms and <i>Strep faecalis</i> on culture	28 grammes	Seven days	Discharge ceased in one day. Urine clear in five days	Still well six weeks later

The other twenty-five cases were treated with sulphanilamide, and can be divided into two subgroups

## SUBGROUP I

This subgroup comprises three cases of acute epididymitis

*Case 1*—Right epididymitis with anterior and posterior urethritis of five days duration. Streptococci and diphtheroids in smears. Thirty three grammes sulphanilamide were given in fifteen days. Discharge ceased in one day, urine was clear in three days, and the testis normal in nine days. Patient still well two months later.

*Case 2*—Left epididymitis, with anterior and posterior urethritis of eighteen days duration. Resisted ordinary treatment. Coliforms and *Strep faecalis* on culture. Forty grammes of sulphanilamide were given in ten days. Discharge ceased and the urine was clear in two days and the testis normal in ten days (apart from small residual hydrocele). Still well two weeks later.

*Case 3*—Left epididymitis of twelve days duration with no signs of urethritis. Coliforms streptococci, and staphylococci in prostatic head. Twenty six grammes of sulphanilamide were given in seven days. No appreciable improvement.

## SUBGROUP II

This comprises twenty-two cases of urethritis, fourteen anterior and eight anterior and posterior, which are summarized as follows

The duration of symptoms (mostly intermittent) varied from three days to four years (average eight and a half months), and nearly all had resisted ordinary treatment. One case was a pure *Strep viridans* infection. Five were proved mixed infections with two or more of the following organisms: streptococci, staphylococci, coliforms and diphtheroids, in the remainder some of these organisms were seen in smears, but no cultures were made. The patients were given an average total quantity of 37 grammes of sulphanilamide over an average period of thirteen days.

Seventeen of the twenty-two cases were quite clear in one to seven days from the beginning of chemotherapy (average of just under three days) and were still well at an average period of nine weeks later.

Three cases failed to clear up. Two of them showed temporary improvement but relapsed later, one showed no

period before clinical cure was slightly longer than with sulphanilamide (approximately five days instead of approximately three days). It is also of interest to note that in two of the sulphanilamide failures staphylococci were found with other organisms.

The following case is worthy of special mention in view of the infecting organism

A man aged 24 had an intermittent urethral discharge and pyuria for four years, following repeated instrumentation for a congenital defect of the urethra. Examination revealed a purulent anterior urethritis, and two separate cultures gave an abundant growth of *Strep viridans*. Thirty five grammes of sulphanilamide were given in ten days with complete success: the discharge ceased after one day, the urine was clear in two days, while cultures taken on the fourth and seventh days showed no growth of *Strep viridans*.

## (b) "Primary" Urinary Infections

This group comprises nine cases of acute or subacute pyelitis and three of acute cystitis in which no other lesion was found in the urogenital tract.

## SUBGROUP I

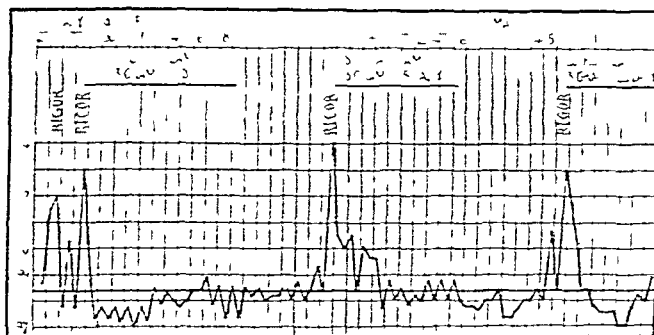
All the pyelitis cases had an acid urine at the start of treatment. Two were reported as *B. coli* infections, four as coliform infections, and one as a mixed infection of "coliform and other organisms", the remaining two cases had no bacteriological examination.

One case (subacute pyelitis) was treated with uleron (16 grammes in four days). She was symptom free, with clear urine, after two days, and was still clear ten days later.

The other eight cases were treated with sulphanilamide, receiving an average quantity of 32 grammes over an average period of nearly eleven days, combined with large doses of alkalis. Five of them cleared up completely in from two to six days (two having previously resisted mandelic acid therapy) without subsequent relapse. The sixth case relapsed four days after 15 grammes (given in five days). In the seventh case it sulphanilamide was stopped after two doses, owing to severe vomiting, without improvement of the pyelitis.

The eighth case is of considerable interest and merits a detailed description

Mrs K. was admitted to hospital on January 25 1938 with acute pyelitis in the sixth month of pregnancy. At day she was very ill with rigors pain and tenderness in the right loin a temperature of 102 a pulse of 128 and heavy acid pyuria. Films of the urinary deposit showed very numerous pus cells and bacilli while cultures produced a heavy growth of coliform bacilli. On January 28 the temperature rose to 103 and sulphanilamide therapy was instituted. Three grammes daily were given for a period of thirteen days combined with alkalis. Within twenty-four hours all symptoms and signs of the pyelitis had subsided and the temperature came down to subnormal and stayed down. The urine cleared rapidly and became alkaline. On January 31 cultures showed but a moderate growth of coliform bacilli while on February 2 only a very scanty growth was obtained. Chemotherapy was discontinued on February 9 and she remained quite well until February 13 when a sudden relapse occurred. On the 16th she had rigors a temperature of 104 and pyuria with a heavy growth of coliform bacilli on culture. Three grammes of sulphanilamide daily were not given for a period of eleven days. The subsidence of symptoms this time was less dramatic and the temperature did not reach the normal till the fourth day. The urine however became quite clear again and cultures taken on February 25 proved sterile. Once again she remained quite well for one week after the end of the sulphanilamide course and then on March 6 relapsed as suddenly as before with rigors a temperature of 103 and heavy pyuria. Cultures taken on March 7 once more showed a heavy growth of coliform bacilli. A third course of sulphanilamide was now commenced and is still in progress. For the third time the infection has yielded completely to the chemotherapy but the patient is now beginning to reveal toxic effects and is showing signs of secondary anaemia. A blood count on March 10 gave 70 per cent of haemoglobin 3 200 000 red cells and 7 800 leucocytes. A serial temperature chart is appended.



Temperature chart of Mrs K. (pyelitis of pregnancy)  
Sulphanilamide treatment of relapses

#### SUBGROUP II

The three cases of primary cystitis had an acid pyuria. They all presented well marked basal symptoms (trigonitis) and two of them gave a culture of coliform bacilli. They received an average quantity of 22 grammes of sulphanilamide over an average period of approximately ten days. Two were quite clear after two days and did not relapse while under observation. The third was very intolerant to the drug and developed a relapse after clinical cure on a four day course of 3 grammes daily. This cleared up with a second course of 7 grammes in three days.

#### DISCUSSION

There was thus only one complete failure in this group of twelve cases the chemotherapy being abandoned on account of toxic effects. The rapidity with which the others cleared up was most striking but relapse occurred in more than a quarter of them. It may be of interest to observe that the average concentration of detectable sulphanilamide in the urine of these patients (on 2 to 3 grammes daily) was about 1 in 300 (employing the

sodium nitrite beta naphthol colour test against a standard solution of 1 in 5000)

#### (c) "Secondary" Urinary Infections

I now come to a group of fifteen cases of great surgical interest. They are examples of the secondary cystitis which complicates such lesions as senile enlargement of the prostate and stricture of the urethra. It is obvious that a rapid clearing up of urinary infection in such patients would prove of real value in the surgical treatment of the primary lesion and would also benefit cases

which for various reasons are no suitable for radical operation. For the sake of uniformity cases of gonococcal cystitis are not included in this series.

#### SUBGROUP I

This comprises nine cases of senile enlargement of the prostate with urinary infection. In four of them the chemotherapy was given before and after suprapubic prostatectomy in two before or after preliminary cystostomy in the other three no operation was performed. Brief details of the cases follow.

Cases 1-2 and 3.—These had moderate pyuria more than ounces of residual urine. One was a *B. coli* infection

the others had no culture of the urine. One received an average quantity of 10 grammes of sulphanilamide over an average period of five days within which the pyuria cleared up completely. All three had good renal function and in one age suprapubic prostatectomy was done at an average period of seven days after starting the chemotherapy. On minor toxic effects were produced by the drug but in two of the patients there were rather troublesome

After operation all three patients had prostatic glands (100 ccm of 1 per cent) injected twice daily for the first ten days. All the cases healed rapidly without delay of the operative step but it must be stated that the case of long saline irrigation for the first eight to ten days.

Case 4.—Moderate pyuria and renal insufficiency (blood urea of 110 mg). Catheter drainage was established and 2 grammes of sulphanilamide were given daily for three days. After this the urine was quite clear but the drug was discontinued owing to severe intolerance. At the end of one week suprapubic cystostomy was performed and suprapubic drainage established. A few days later the pyuria recurred and a culture of the urine showed coliforms *B. proteus* and streptococci. This again cleared up with 2 grammes of sulphanilamide daily for three days the drug being better tolerated this time. Ten days after the cystostomy the blood urea dropped to 25 mg and prostatectomy was performed. The after treatment and results were the same as in the above three cases.

Case 5.—A man of 69 with rigors pyuria and marked renal insufficiency. Two grammes of sulphanilamide daily for four days were well tolerated and produced an almost complete cure. Suprapubic drainage was established three days later and no further chemotherapy was given. Following the operation progressive renal failure developed and he died eight days afterwards.

Case 6.—A man of 74 with heavy pyuria and residual urine of 10 ounces. Suprapubic drainage (under local anaesthesia) was established at once with small self-clearing catheter after which 2 grammes of sulphanilamide were given daily.

He developed cyanosis and severe prostration after two days and the sulphanilamide was discontinued. By this time the urine was quite clear and remained clear for seven days, at the end of which time the blood urea had dropped from over 100 to 46 mg. The pyuria then recurred and increased, one culture gave coliforms only but a second three days later showed coliforms and *Strep faecalis*. The infection became worse, and the blood urea rose once more to over 100 mg. He was now given 3 grammes of uleron daily for four days, without toxic effects and the urine became clear again, although a growth of coliform bacilli was still obtained on culture. The blood urea dropped once more to 52 mg, and the prostate was successfully enucleated a few days later.

**Case 7**—Good renal function and moderate pyuria, which cleared completely with 9 grammes of sulphanilamide in four days, but the patient refused operation. The urine was still clear two weeks later, but further infection is likely.

**Cases 8 and 9**—These proved complete failures. Both are elderly hospital outpatients, with chronic retention of urine and a thick alkaline pyuria, showing very heavy mixed infection. One completely resisted a two-weeks course of 30 grammes of sulphanilamide which was well tolerated, the other has been on 2 grammes of sulphanilamide daily for six days without improvement.

It will have been noticed that (with one exception) these cases were given very small quantities of sulphanilamide. The drug was on the whole badly tolerated by these elderly patients, and I was afraid of doing additional injury to kidneys already damaged by obstruction. Actually, in no case was there the least evidence of toxic action on the kidneys, and in the one fatal case the renal failure could not in fairness be attributed to the sulphanilamide. Two thirds of the patients were definitely benefited by the chemotherapy, which proved of real service in combating both pre-operative and post-operative urinary sepsis, although it is of interest to note that the incidence of relapse (over 25 per cent) is the same as in the cases of primary urinary infection already submitted. On account of the marked intolerance to sulphanilamide shown by most of these elderly and debilitated patients I intend in future to make further trial of the less toxic uleron in its stead.

#### SUBGROUP II

This consists of four cases of urethral stricture with secondary cystitis, and one case of epididymitis with pyelocystitis.

**Case 1**—This patient was admitted as a case of acute epididymitis and (non-gonococcal) urethritis. After admission he developed symptoms of acute pyelocystitis with marked pyuria, a temperature of 103°, and pain and tenderness over the left kidney. Cultures of the urine showed a heavy *B. coli* infection. He was given 9 grammes of sulphanilamide in three days and responded in a few hours. On the third day he was symptom free with clear urine which on culture showed a very scanty growth of *B. coli*.

**Case 2**—Moderate bulbar stricture, with heavy (mixed) urinary infection. Forty-two grammes of sulphanilamide were given in two weeks. The urine was clear in four days and remained clear. Afterwards the stricture was treated by intermittent dilatation without recurrence of the infection.

**Case 3**—Moderately severe stricture with heavy pyuria. Forty-two grammes of sulphanilamide were given in two weeks. There was partial improvement after one week, but still slight pyuria at the end of the second week.

**Cases 4 and 5**—Severe strictures with severe cystitis and heavy alkaline pyuria and repeated attacks of retention. Three grammes of sulphanilamide were given daily for twelve and fourteen days. Case 5 was also given 4 grammes of uleron daily for four days. Symptoms of cystitis improved but pyuria slightly diminished only during chemotherapy, and relapsed afterwards.

#### DISCUSSION

The four complete failures thus far described in this group of cases of "secondary" urinary infection show a strange similarity. Two are cases of senile prostate and two are severe strictures, but they all had chronic retention of urine and an alkaline cystitis with heavy mixed infection. Whether their non-response to chemotherapy is due to the presence of sulphonamide-resistant organisms in the alkaline urine—for example, staphylococci or *B. proteus*—or to a submucous fibrosis of the chronically inflamed and thickened bladder can only be a matter for speculation. The fifteenth and last case in this group is also a chemotherapy failure, but for a very different reason.

Mrs R., aged 55, was first seen with a short history of intermittent cystitis and heavy pyuria. *B. coli*, *Strep faecalis* and other organisms were isolated from the urine, and she was given 3 grammes of sulphanilamide daily for one week. The urine cleared rapidly, but while still under treatment the pyuria recurred more heavily than before. Further investigation which included cystoscopy and laparotomy, revealed a carcinoma of the pelvic colon, with a very small vesico-colic fistula.

#### Conclusions

It seems both justifiable and opportune, on the basis of the experience reported here (which represents incidentally a small fraction of the total experience), to make a few comments on the mode of action and cause of failure of chemotherapy applied to these and other cases. It is obvious that bacterial sensitivity to these substances is highly selective. Indeed, it appears to vary not only with each group of organisms but also with individual strains of the same organism. No organism is 100 per cent susceptible, and it may be that few are 100 per cent resistant. Other things being equal, the highest incidence of success is likely to be obtained in infections by organisms which are highly susceptible as a group and which have the lowest proportion of resistant strains. A less obvious fact which experience suggests is that the susceptibility of a given strain may vary in the same patient from time to time, a highly susceptible strain becoming resistant after a while, or vice versa. This difference in degree of sensitiveness to sulphonamide compounds on the part of individual bacteria is well shown by the variation in what one might call the "effective" dosage. Thus where Meave Kenny (1937) found 1.5 grammes of sulphanilamide given daily sufficient to overcome coliform infection of the urine, Colebrook and Purdie (1937) have used from four to ten times as much as this for streptococcal infections of the puerperium.

The bacteriostatic action of the various sulphonamide compounds used in practice is also relative. In addition to differences in their general potency against the whole group of susceptible organisms, each may show some variation in its action against individual bacteria and even individual strains. Thus although sulphanilamide seems to inhibit a somewhat larger proportion of gonococcal strains than does uleron, the latter may succeed against an individual strain which has repeatedly proved resistant to the former. Furthermore, a strain of susceptible organisms may become "fast" to one compound and yet capitulate to another.

In my experience the coliform group possesses the lowest proportion of sulphonamide resistant strains and the highest degree of sensitivity to these compounds. This is particularly the case in infections of the urinary and genital tracts, where the growth of coliform bacilli can be rapidly arrested with quite small doses and where there is only a low proportion of failures. Gonococci are less



susceptible is a group requiring fairly intensive and prolonged treatment before they are completely and permanently eradicated, and there is a higher proportion of resistant cases. The high susceptibility of the haemolytic streptococcus (especially the A group) to sulphonamide compounds is well known but I have convincing evidence that certain non haemolytic streptococci—for example *Strep. viridans* and *Strep. faecalis*—can also be partly or completely inhibited by both sulphanilamide and uleron. I have also seen cases of mixed genito urinary infection in which such organisms as *B. proteus*, *B. aerogenes* and diphtheroid bacilli are concerned completely clear up with both those substances. The staphylococcus and the pneumococcus, on the other hand have proved almost entirely resistant in my experience.

It is now generally realized that whatever the exact mode of action of sulphonamide compounds may be they act only as blood borne antisepsics and their direct application to an infected focus is of comparatively little value. Reaching the blood and tissues quickly they are also rapidly excreted and in practice unless they are correctly administered their concentration will soon be found to fall to a subefficient level. An adequate blood supply to a focus of infection is of course an essential condition for success. Avascular foci such as blood clots, cardiac vegetations, necrotic areas and chronic foci embedded in scar tissue or sclerosed bone will resist chemotherapeutic attack no matter how susceptible the enclosed organisms may be.

One cannot help feeling that all these substances exert a purely bacteriostatic action and that they do nothing to stimulate the defence mechanisms of the host. The final result of any infection must largely depend on this defence mechanism and many failures with chemotherapy are probably to be attributed to its faulty operation. Again chemotherapy does not appear to have any action in neutralizing existing toxins or those liberated by the bacteria which these drugs destroy. Above all it in no way protects the patient against relapse or recurrence as is shown by the high relapse rate in the present series and in my other groups of cases. Indeed I have reason to believe that the opposite effect is sometimes produced and that chemotherapy at the very onset of an infection may actually inhibit those anti bacterial processes which confer immunity against recurrence or relapse of an infection. This would explain the fact observed in practice that a higher incidence of ultimate success is obtained when infections are treated some time after rather than at their onset.

Reflection on these and many other problems connected with the great therapeutic possibilities which have been opened by the discovery of sulphonamide compounds shows that a great deal of bacteriological and immunological work will have to be done before the new chemotherapy finds its proper level in the treatment of disease.

#### Summary

1 Clinical experiences are reported with several sulphonamide-containing chemotherapeutic substances (one of which recently introduced under the trade name of uleron is a di sulphonamide).

2 Fifty seven cases with illustrative records of genito urinary infection are reviewed.

3 In a group including four cases of epididymitis and twenty six of urethritis chemotherapeutically treated (in both instances non gonococcal) there were respectively one and three failures.

4 Twelve cases similarly treated and constituting a mixture of acute and subacute pyelitis and cystitis showed one failure and three relapses.

5 Fifteen cases of "secondary" urinary infection nine of them with senile prostatic enlargement four with urethral stricture one with epididymitis and one with vesico colic fistula were treated with these drugs. In the prostatic cases two thirds of the patients were benefited by chemotherapy which proved of value in combating pre-operative and post operative urinary sepsis although the relapse rate was again high. Two prostatic and two stricture cases—all with chronic retention and heavy alkaline mixed infection—completely failed to respond.

6 The selective action of these drugs on various organisms and strains and their mode of action *in vivo* are discussed.

#### REFERENCES

- Cockburn A. J. (1937) *British Medical Journal* 2 935.  
Culbrook L. and Purdy A. W. (1937) *Lancet* 2 1257.  
Kenny, Maule *et al.* (1937) *Ibid.* 2 119.

## A NEW CONTRAST STAIN FOR GONOCOCCI AND MENINGOCOCCI IN SMEARS

BY

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The examination of smears for gonococci particularly from women is facilitated by a method of staining described elsewhere (Sandiford 1937). It consists of Gram's method with Pappenheim's stain in place of a simple red counterstain. The organisms stain as in the usual Gram stain while the polymorph cells show blue violet nuclei and rose violet cytoplasm; the red gonococci standing out much more clearly against the blue violet background of cells than against the red background afforded by the ordinary counterstain. While the method was independently evolved an acknowledgment was given in the paper to Fauth (1918) who it was found had previously described a similar method of staining. Recently I have received reprints of papers by Scudder and Lisa (1931) and Scudder (1931) who apparently unaware of Fauth's paper described such a stain and recommended it for Neisseriae in sections and smears.

The present paper is the outcome of an attempt to devise a method of staining which would not diminish the contrast between cells and Gram positive organisms as does the Gram Pappenheim combination yet which would retain and if possible still further improve the contrast between Gram negative organisms and cells. To this end attention was directed to the staining of the Gram positive organisms and to the staining of the cells.

#### The Gram positive Organisms

**Effect of Acid**—It was found that when as soon as possible happened in dealing with large batches of routine specimens the counterstain was left on rather too long, the Gram positive organisms tended to decolorize. In view of the reported effect of acid vaginal secretion on the Gram staining of organisms (see below) it seemed probable that the 2 per cent carbolie acid which forms the bulk of Pappenheim's stain was responsible for this decolorization. Experiments on stained films with 2 per cent carbolie acid alone showed this supposition to be correct.

**The Violet Stain**—In preparation was edited by the use of crystal violet with ammonium oxalate as the initial stain and acetone as the decolorizer. (I am indebted to Major Beamish, R.A.M.C. for drawing my attention to the method which seems to be the same as that described



by Hucker, 1922) This stain gives a deep purple-black to Gram-positive organisms, and is more "fool-proof" in use than other violet stains Various authors mention the effect of acid vaginal secretion in producing spurious Gram negative results, and recommend the use of either alkaline violet (Burke, 1921) or alkaline iodine (Scudder and Lisa, 1931) Scudder (1931) advocates the use of a buffer with the initial violet stain, and says that the ammonium oxalate mixture acts as a buffered solution Its advantages for vaginal smears seem to be obvious

*The Decolorizer*—Whatever method of Gram is used, acetone is much superior to alcohol for decolorizing films containing pus With acetone, complete decolorization of the cell nuclei may rapidly be obtained and the Gram-positive organisms be left unaffected—a result which is difficult, or impossible of attainment with alcohol unless the smears are very thin and well spread

### The Cells

It seemed that if the violet element could be eliminated from the counterstain and the cells be stained green the contrast between them and both Gram-positive and Gram-negative organisms would be improved According to Lee (1937) this metachromatic effect of methyl green is due to the presence of methyl violet as an impurity With a view to obtaining a pure sample, Messrs Grubler were communicated with, but the one they sent gave no better results than their product which we were using A sample from British Drug Houses gave, just perceptibly, a purer green Scudder (1931) says that an over ethylated methyl green prepared by the National Aniline and Chemical Co was found to be practically free from violet impurity The results she got with it—dark blue-purple nuclei and faint lavender cytoplasm—however, suggest that they were much the same as those given by Grubler's product This is borne out by her statement that Grubler's iodine green produced similar results for I have found it to give the same colour as their methyl green

Various other dyes, as substitutes for methyl green, were tried in admixture with pyronine and other substances but without success Malachite green had seemed a hopeful substitute as both it and methyl green are basic colours This had been discarded however, as the sample we had available—pre-war, made by Lautenschlager—was practically insoluble However in view of our failure to find any other satisfactory substitute, and in view of the fact that according to McIntosh and Fildes (1931) malachite green is highly soluble in alcohol or water a sample was obtained from Messrs Grubler This proved to be freely soluble, and an aqueous mixture of it with pyronine in the proportions given below produced excellent results Used as the counterstain with the Hucker-Gram stain it gives a beautiful contrast between the bluish green cells the purple black Gram-positive organisms and the red gonococci Overstaining with it does not affect the Gram positiveness of organisms

In view of this success with malachite green it was surprising to find in Scudder's paper (1931) that Pappenhaim (1899) was quoted to the effect that one can use methyl green or iodine green but not malachite green in his stain

*Other Uses of the Stain*—I have found it useful also for detection of meningococci in cerebrospinal fluid and Gram negative organisms in centrifuged urine deposits, tissues and sputum It does not seem however, to be applicable to any sort of pus containing any sort of organism I have had the opportunity of trying it on only a few specimens of surgical pus and on only one

containing Gram-negative bacilli, which did not take on the pyronine well This substance is said to have a special affinity for Neisseriae (Scudder, 1931, Walton, 1936) My experience with vaginal smears has been that all Gram-negative organisms stain quite well with it Experiments with the counterstain below and films of *Bact coli* and *Bact typhosum* suggest that their affinity for pyronine is a function of their age In young cultures most of the organisms stain well with it, while in old cultures most of the bacilli take on the malachite green This factor of ageing and degeneration probably affects the affinity of Neisseriae for pyronine, as we have had irregular results with stale specimens of cerebrospinal fluid It should be noted that all the gonorrhoea specimens used in this work have been smears made by the clinician at the time of taking the specimen

The following is, the method of staining, now employed in these laboratories and in the British Military Laboratory in Cairo

### Method of Staining

Any Gram technique to which the worker is partial may be followed up to the end-point of decolorization, but the following is strongly recommended, especially the use of acetone, which is essential in order to obtain complete decolorization of the cell nuclei before counter staining

#### INITIAL STAIN

Crystal violet	1 gramme
Alcohol (98%)	20 c.c.m
Ammonium oxalate (1% aqueous)	30 c.c.m

- (i) Leave this mixture on the heat fixed film for half a minute
- (ii) Flood off with triple strength Lugol's iodine (is used in Jensen's modified Gram stain) and leave on for half a minute
- (iii) Pour off the excess iodine and blot once
- (iv) Decolorize with acetone for three or four seconds
- (v) Wash
- (vi) Put on the counterstain for two minutes
- (vii) Flood off with water—do not wash—and blot

#### CONTRAST COUNTERSTAIN

Malachite green	0.05 gramme
Pyronine	0.15 "
Aq. dest.	ad 100 c.c.m

N.B.—There are two varieties of pyronine B<sup>1</sup> and G<sup>1</sup>, the former being almost insoluble in water Pyronine (Grubler) is apparently pyronine G<sup>1</sup>, as it is freely soluble in water

*Keeping Qualities*—The following statements are based on haphazard observations only, during the use of solutions kept in ordinary bottles at room temperatures under 20° C

Crystal violet stain keeps for about a month, is found to have deteriorated after six weeks Counterstain keeps for at least three weeks, possibly longer 100 c.c.m. in a staining pot may be used for at least 150 small smears

### Summary

A method of contrast staining which greatly facilitates the detection of gonococci and meningococci in smears is described

By this method the cells and nuclei are stained bluish green, Gram-positive organisms purple black, and Neisseriae red

#### REFERENCES

- Burke, V (1921) *J. Amer. med. Ass.* 77 1020  
 Faure G (1918) *Disch. med. Wschr.* 44, 43  
 Hucker G J (1922) *Abst. Bact.* 8 2 (quoted by Scudder 1931)  
 Lee B (1937) *The Microtome and Viable medium* p. 179 London  
 McIntosh J and Fildes, P (1931) *A System of Bacteriology*, 9  
 46 Med. Res. Cncl., London  
 Pappenhaim A (1899) *Virchow's Arch.* 157, 19 (quoted by Scudder 1931)  
 Sandiford B R (1937) *J. Path. Bact.* 45 467  
 Scudder, S A (1931) *Stain Technol.* 6, 99  
 — and Lisa J R (1931) *Ibid.* 6, 51  
 Walton, S T (1936) *J. Bact.* 31 61

# Clinical Memoranda

## Popliteal Embolectomy

Mr J R Blackburn's case of femoral embolectomy reported in the *Journal* of April 2 (p 750) has suggested to me that the following case of popliteal embolectomy may be of interest

### CASE RECORD

A man aged 51 was admitted to Eveham Hospital on January 14 1937 suffering from auricular fibrillation. After digitalis therapy his pulse rate dropped to 75 per minute. In the early morning of January 25 he awoke complaining of severe cramp-like pain in both his legs. After a few minutes the pains died down to be followed by pain in the left leg below the knee. He was seen by me about two hours after the beginning of the pain when his pulse was thready and the rate 120 per minute.

**Examination**—The left leg was pale and cold and was paralysed from the knee down. Pulsation was felt in the left femoral but not in the left popliteal artery. The pulsation in the femoral artery was poor partly owing to his shocked condition and it was less strong than that of its fellow of the opposite limb. There was a localized area over the popliteal artery which was tender on pressure. The embolus had evidently first been held up at the aortic bifurcation and then been swept downwards to the left lower limb. A popliteal embolism was diagnosed and arrangements were made for operation the patient meanwhile being treated for shock.

**Operation**—About six hours after the initial symptoms the left popliteal artery was exposed by a posterior mid line incision under local anaesthesia. This incision was prolonged to expose the whole course of the vessel which in this case ended proximal and not distal to the tendinous arch between the origins of the soleus muscle. The popliteal vein appeared dilated and the circulation in it seemed to be at a standstill. The vein being retracted no pulsation was present in the last one and a half inches of the artery or in its terminal branches but distinct though sluggish pulsation was evident above that level in the artery itself and in the superior and inferior genicular arteries. Two light rubber covered mosquito forceps were applied one to the popliteal artery above and one to the anterior and posterior tibial arteries just below the bifurcation. A longitudinal incision one inch in length was made in the artery just above its terminal bifurcation the embolus delivered itself through the opening and was removed. On relaxing the proximal clamp there was strong and immediate pulsation of bright arterial blood. The proximal clamp was now closed and the distal one relaxed and then removed when some dark blood flowed slowly from the opening in the artery. The vessel was gently milked from below up but no fragments were obtained. The arterial wound was sutured with catgut and a small oozing spot was covered with the muscle graft fixed by a light mattress suture through the adventitia. On removal of the clamps strong pulsation occurred it being particularly noted that pulsation above the level of the embolus in the main and branch arteries was twice its previous volume. By the time the wound was closed the leg was pink and distinctly warmer. The limb was enclosed in cotton wool.

On the third day an ellipse of skin about three inches by two inches over the lateral surface of the lower third of the leg became discoloured but this passed off in three or four days. Otherwise convalescence was uneventful. Tests with a sphygmomanometer and a stethoscope three weeks and nine months after operation showed good circulation in the artery.

### Summary

Two interesting points are noteworthy

1 The point of tenderness which proved to be exactly over the site of the embolus

2 The poor pulsation of the main and branch arteries above the level of blockage and their striking improvement after removal of the embolus

This suggests a spasm proximal to the block which must militate to a large extent against the formation of an efficient collateral circulation

Eveham

G HARVEY DUNCAN, F.R.C.S.E.D.

## An Unusual Case of Miscarriage

The following case of miscarriage seems so unusual as to warrant publication

### CASE RECORD

A Chinese woman aged 36 was admitted to hospital on February 15 1938 with a history of having passed part of a foetus on the previous day. The patient said that she felt both arms part of the trunk and her head were missing but that she had hooked out the head later and had also passed a few small bones mixed with a foul smelling bloody stained discharge. Ten months previously she had had a miscarriage after five months' amenorrhoea and said that she had passed a placenta and an oval white mass about four inches long but she was very uncertain as to its appearance as she had fainted from severe haemorrhage. From her description the haemorrhage was probably treated by packing and injection without exploration of the uterus. After several days the haemorrhage ceased but the abdomen was still larger than normal. She returned to the country and for the next three months had short one-day menstrual periods after which she had almost continuous daily loss of blood stained discharge sometimes foul smelling for the next six months accompanied at times by bearing-down pains. She did not seek treatment as she said her appetite was good and she was able to do her work. It was not until she passed part of a foetus that she took her condition seriously.

After admission to hospital one or two foetal bones were expressed from the uterus on bimanual examination together with a copious pus-like foul discharge tinged with blood. For the first week after admission the patient had a temperature ranging between 101 and 99. The discharge continued with the passage of one or two more portions of the foetus at times. On the ninth day after two days of no menses a few fragments within reach of small ovum forceps were removed and the uterus washed out with glycine without an anaesthetic. There was no rise of temperature following this manipulation and as a slight discharge still persisted during the next five days it was decided to explore the uterus under anaesthesia. On March 1 after a vaginal dilatation of the cervix further small sharp fragments of small bones were removed with ovum forceps. The uterus was then explored again with a sound and a bone was touched at the fundus of the uterus apparently well embedded. This was gradually dislodged by douching with a flushing curette and hooking it with the sound till it was possible to grip it with ovum forceps and remove it though some damage was done to the cervical canal in the process as it lodged transversely across the internal os.

Following the operation there was fresh haemorrhage on the first day probably due to injury caused by the sharp edges of the bone but the temperature remained normal and the case was no further loss. The patient was discharged from hospital on March 7 in very good condition.

Possibly this was a five months' miscarriage of twins one foetus and the whole placenta being passed on the first occasion and the disintegrated remains of the second foetus ten months later or the portions passed on the two occasions may all have been parts of the one foetus.

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## Reviews

### ESSENTIALS OF MIDWIFERY

*A Short Textbook of Midwifery* By G F Gibberd, M B, MS FRCS MCOG (Pp 529 187 figures 15s)  
London J and A Churchill 1938

Two qualities are required of the writer of a "short textbook"—namely, the power of concise exposition and discernment in selecting the essentials of his subject. There are not many short textbooks of obstetrics, and Mr G F Gibberd's recently published work will be likely to receive an immediate welcome for the reason primarily, that he possesses the first named quality to a quite uncommon degree. He possesses also a wide and accurate knowledge of his subject and, in particular, of recent developments in its clinical aspects. He has had the great hospital, of which he is a distinguished alumnus, its particularly well-organized maternity district, and its pathological museum, as his main sources of inquiry and experience, it is also evident that he has drawn freely from his association with Colebrooke and Fry in the research department of Queen Charlotte's Hospital. Starting with these advantages the author could hardly fail to write a useful book, and it may be said without hesitation that the merits of his work are outstanding and should secure for it a notable success.

When space is limited the selection of subjects for the fullest possible exposition must be to some extent a matter of opinion and on the whole the author has shown wisdom in his choice, but there are exceptions. As an instance, we may quote his treatment of ante-natal care, a subject which in the judgment of obstetric teachers generally is of primary importance. Mr Gibberd, however, disposes of it in less than two pages, and he is content to present the 'objects of ante-natal care' in four bald statements which are so obvious in character as to resemble platitudes, and which could have been formulated by any intelligent senior student for himself. The indiscriminate practice of 'routine tests' is discouraged lest they should become an 'automatic ritual,' but the point must not be overlooked that the result of such tests is often the first indication of their being called for. The importance of establishing sympathetic and sustained contact between the patient and her doctor and nurse, particularly in the case of a primigravida, is overlooked, as is also the great assistance which can now be obtained in industrial practice from the public maternity services. Students and junior practitioners are usually in need of both exhortation and guidance in these matters. *En passant* the author surely loses, for the moment, his sense of proportion when he advises expectant mothers to spend ten hours a day in bed.

All authors are, perhaps, prone to discourse freely upon the matters in which they are particularly interested, it is therefore not surprising that the subjects of renal disease in pregnancy and of puerperal infection should receive comprehensive treatment. These sections are written with admirable clarity, the student who masters them will have nothing to fear from examiners, and will in addition be possessed of a store of knowledge which he can put to practical use. On the other hand the hormonal influences which control the reproductive cycle receive but perfunctory treatment, and the reader is given no inkling of the fascinating story of their elucidation—admittedly incomplete, is yet but stimulating to the mind of the thoughtful reader.

There is much in this book to commend and little to decry, if a short textbook of midwifery is needed no better could have been provided. The illustrations, and in particular the skiagrams, are admirable, and have almost all been prepared under the personal supervision of the author.

### PARENTS AND CHILDREN

*The Generations: A Study of the Cycle of Parents and Children* By Dr Emanuel Miller (Pp 276 7s 6d net)  
London Faber and Faber 1938

In this volume, which is an expansion of lectures given at the Institute of Medical Psychology, Dr Miller discusses the relationship of parents and children and seeks to show the causes of the frequent difficulties that arise in families and the way in which they might be avoided. His approach is founded on psycho-analysis, though he does not adhere to the strict Freudian doctrine, and he points out how difficult it is to break the vicious cycle, since many of the faults of parents are inexorably determined by their childish reactions to similar faults in their own parents.

The subject is a wide one. The history of the family in primitive peoples down to modern civilization is briefly reviewed in the first chapter, and an attempt to foresee what may happen to the family under modern social and political developments is made in the last. The intermediate chapters are occupied by a sketch of the problems which face those about to marry, the neurotic reactions to the responsibilities of marriage and parenthood, and the development of the child's character and personality in the family. Although it might be held that the subject matter of this book is not strictly medical, it is a problem of which few medical men can afford to be ignorant, and least of all the general practitioner under whose benevolent eye the family is founded and grows.

Dr Miller's book ought to interest everyone, medical and lay, and his deep erudition and wide range of interest will stimulate the reader to meditate upon a greater variety of questions than might be expected from the modest compass of a volume of little more than 270 pages.

### RENAL PHYSIOLOGY

*The Physiology of the Kidney* By Homer W Smith (Pp 310, 32 figures Frontispiece 15s net) London Humphrey Milford, Oxford University Press 1937

Professor Homer W Smith's book, *The Physiology of the Kidney*, is probably the most important work on this subject since Cushny's *Secretion of Urine*. Like Cushny the author takes us step by step over evidence compiled from the results of hundreds of experiments, summarizing and drawing conclusions as he goes, so that at the end the reader has a fairly clear picture of the present state of knowledge. In this survey the work of the author's own school takes an important place but is not given undue prominence. We see how the very simplicity of the Cushny theory is its greatest pitfall, and how the evidence for excretory activity on the part of the renal tubules, as well as reabsorption from the glomerular filtrate, is now incontrovertible.

The most important steps in this new knowledge have been the direct examination of glomerular filtrate by Richards and his co-workers, and the finding of a substance which is neither excreted nor reabsorbed by the tubules, and can therefore serve as a measure of glomerular filtration. The author shows how the polysaccharide inulin fulfils the necessary criteria for such a

substance. Using the inulin clearance as a standard the simultaneous clearances of other substances can be measured and their mode of excretion studied. The phenol red clearance for example is much greater than that of inulin showing that the former substance must be actively excreted.

In the study of renal physiology difficulties have constantly arisen owing to differences in the mode of excretion of certain substances in various species. Thus the creatinin clearance in the dog is the same as that of inulin but this is not the case in man. Even Cushny's idea of threshold substances is losing its meaning and on this subject the author says: "The problem is undoubtedly a very complex one in our ignorance the term threshold as descriptive of the more or less critical relationships between plasma level and excretion is too convenient to be abandoned. This sentence gives some idea of the critical spirit and at the same time the tolerant attitude in which the book is written. It is not too much to say that it will be read by every serious student of physiology. Apart from the clear exposition of a very difficult subject the reader will learn much about the fallacies which have been found and the pitfalls which await the unwary experimenter and a careful study of this book should avoid many mistaken conclusions in the future."

### PYORRHOEA ALVEOLARIS

*A Textbook of Clinical Periodontia: A Study of the Causes and Pathology of Periodontal Disease and a Consideration of its Treatment.* By Paul R. Stillman D.D.S. and John Oppie McCall D.D.S. Second edition completely revised and reset (Pp. 282, 44 figures, 15s. net.) London and New York: The Macmillan Company, 1937.

In the preface to this the second edition of their book on what is generally termed pyorrhoea the authors emphasize three points: that the dentist should focus his attention on health and the means for attaining it rather than on disease; traumatic occlusion; reattachment of gum to tooth where it has been destroyed by the ravages of pyorrhoea. Health seems to refer mainly to the alveolar structures. If either from overuse or disuse their tone fails the undifferentiated embryonic mesenchyme cells of the pericementum fail in their function of renovation thus showing the importance of normal function. This requires normal occlusion and any deviation from the normal which puts an unwonted strain on a tooth must be followed by disease of its supporting tissue. Such abnormal occlusion is called traumatic occlusion and is held by the authors to be the root cause of pyorrhoea. Fundamentally etiology may be stated as being based upon a disturbance of function: the only function of the teeth is mastication so it follows that overuse (traumatic occlusion) or disuse must be at the base of all dental disease. To the authors of this book malocclusion is the governing factor in the aetiology of pyorrhoea and the great point in treatment is to grind the bite till normal occlusion is attained. In the treatment of pyorrhoea pockets they claim that by presenting a scraped surface of cementum to a gum flap freed of epithelium reattachment of gum to root can be obtained. In Fig. 37—reattachment of gum to root—we note the absence of Sharpey's fibres: the reattachment may be only the cicatricial contraction of the gum on to a sterile root surface. Frankly we are unable to follow the authors' chain of argument—the work could with advantage be compressed to half its size—and we cannot see that they make a strong case for their thesis. The work, however, is worthy of careful study.

### HEALING PROPERTIES OF PLANTS

*Lehrbuch der Biologische Heilmittel.* By Dr. Med. Gerhard Madaus. Vols. I, II, III and index. (Pp. 286+76 plates, 1114 illustrations, RM 92 bound RM 235.) Leipzig: Georg Thieme, 1937.

The textbook of biological remedies by Dr. Gerhard Madaus is a massive encyclopaedia with abundant illustrations. Most of the plants used in medicine in the past or present are described in a series of monographs which occupy the bulk of this work. Each monograph contains an account of the geographical distribution and botanical characters of the plant and a history of its use in medicine. An account is also given of the pharmacological actions and the chemical nature of the active principles. Finally the monographs describe the therapeutic uses of the plants not only in official medicine but also in homoeopathy and in folk medicine. The monographs range from two to thirty pages in length.

The monograph on digitalis is one of the longest (thirty pages) contains a coloured plate and a page on the history of the medicinal use of the plant, five pages on the chemistry of the glucosides, a page of structural formulae and some twenty pages on its pharmacological actions and clinical uses. References are given to some of the most recent work on the latter subjects. The volumes therefore resemble in their general scope the old herbals with the addition of modern chemistry and pharmacology. The author explains in a preface that his general aim has been to collect all the information available about the healing properties of plants. He emphasizes the point that the experience of former generations is of value as well as the scientific knowledge that has been accumulated during the last century. Inspection of the volume shows that its contents have been largely chosen on the basis of folk lore. Adequate descriptions are given of most of the important galenic plants but the majority of plants described are not used in official medicine.

The appearance of this imposing encyclopaedia is perhaps a sign of the increasing interest that is being taken by the German authorities in German folk lore since the new *Weltanschauung* with its emphasis on racial traditions and the importance of subjective emotions in comparison to objective knowledge finds itself more and more in sympathy with the herbal medicine of past ages.

### IMMUNITY REACTIONS OF VIRUSES

*The Immunological Reactions of the Filterable Viruses.* By F. M. Burnet, E. V. Keogh and Dora Lush. (Pp. 368, 27 figures, 17 tables, 10s.) London: H. K. Lewis and Co. Ltd. 1937.

Dr. F. M. Burnet's contributions to the literature of filterable viruses are both numerous and valuable and to these he has now added a monograph on the immunological reactions of viruses. In this last work he has had the collaboration of E. V. Keogh and Dora Lush both of whom have been working with Dr. Burnet at the Walter and Eliza Hall Institute of Medical Research since he returned to Melbourne. While in this country much of Burnet's work was concerned with the bacteriophages and more particularly their neutralization by means of antisera: their antigenic structure and their mode of action with the susceptible bacteria. An earlier chapter in the present monograph deals with this work on the immunological reactions of the bacteriophages and the authors show that despite certain superficial differences due to the small size of these phages there is no real difference between the behaviour of phages and bacteria in these

reactions. It is of interest to note that they are of the opinion that the bacteriophages, like the viruses generally, can most usefully be considered as minute living micro-organisms. The study of the neutralization reactions of the phages has been more readily and accurately studied in the past than similar reactions with the filterable viruses because the methods available for phage titration are relatively accurate and easily carried out. The titration of viruses in the living animal is, at the best, somewhat inexact. As Burnet has shown, however, the chorio-allantoic membrane of the developing egg provides a means of virus titration of much greater accuracy than the animal, and he and his colleagues in Melbourne have made use of this method in the investigation of a number of animal viruses and their antisera.

Having considered the immunological reactions of plant viruses and devoted a chapter to some general considerations concerning animal viruses and their antisera, they describe in successive chapters the neutralization reaction of a number of representative viruses as studied by the egg technique. As in the case of the bacteriophages, differences between the behaviour of viruses and bacteria are noted, though here again they are considered to be only superficial. The lack of firmness of union between virus and antibody, noted by previous workers in this field, is confirmed and the reason for this is discussed. It is shown that the percentage law, discovered by Andrewes and Elford in the case of the bacteriophages, holds also in the case of viruses, the reason for this being the relatively enormous amount of antibody to antigen in the neutralization reaction over a large range of antiserum dilutions.

In the concluding chapters of this valuable monograph the authors take up such questions as the consideration of virus immunity from the biological point of view, the site of formation of virus antibodies, and the production of active immunity against virus infections. Concerning this last problem, the use of living attenuated virus is held to be the method most likely to give success, the employment of killed virus being considered of little use for this purpose. Though in the main such a conclusion will meet with general acceptance, it is perhaps rather sweeping and overlooks the fact that killed vaccines have been shown to be of value in the case of some viruses at any rate.

### Notes on Books

In *Mortality Trends in Minnesota* (Oxford University Press, 16s.) Professor CALVIN F. SCHMID sets out in a convenient form the mortality experience of the State of Minnesota from 1910 to 1935. The population of the State was 2.1 millions in 1910 and 2.6 millions in 1930, in 1910 41 per cent of the population lived in urban sections, in 1930 this proportion had increased to 49 per cent. Trends of mortality from the principal causes are shown and a succinct discussion of possible factors is provided.

For the French series of new treatments Dr F. RATHERY has produced an excellent practical little book on the insulin treatment of diabetes. He stresses the fact that in severe cases (diabetic coma) insulin is the only treatment of any use. He gives clear indications on how to start it and work out the best individual dosage for each patient. The theoretical aspects of insulin resistance and sensitivity are discussed in great detail. The proinsulin compounds should have received more mention. The full title of the book is *La Pratique de la Cure Insulinique et les Diabétiques (en dehors des grandes complications)* and it is published in Paris by J-B Baillière (price 25 fr.).

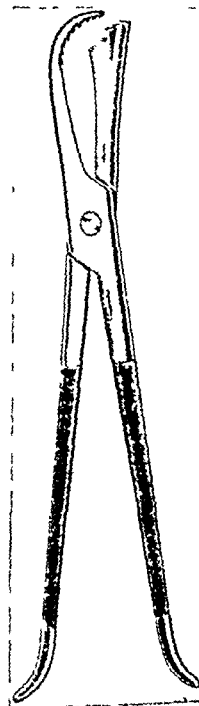
## Preparations and Appliances

### PLASTER FORCEPS

Mr A. ANDERSON BONAR F.R.C.S.  
Ed (Ashington, Northumberland),  
writes

Having watched nurses and others struggling with a thick plaster in an attempt to remove it, I devised a form of forceps, shown in the accompanying illustration. The plaster is split along one side in the usual way with Lorenz's shears. If the plaster is thin removal involves no difficulty. In thick plasters—for example hip spica plasters and in certain walking plasters—it may be a matter of difficulty to remove them without causing extreme discomfort, and even pain, to the patient. The forceps shown here largely overcomes these difficulties. It is simple in design, easy to handle, and the method of application is obvious.

The Medical Supply Association has made this forceps for me, and I have pleasure in acknowledging their help.



### VISIBLE BOOK-KEEPING AND CASE-RECORDING

H. K. Lewis and Co. Ltd. have produced a new loose leaf system for medical book keeping and case recording which seems to reduce the labour involved in both these necessary and complicated tasks to a minimum. This new device is a steel-spined ledger with the usual projecting signals in evidence so that it may be opened at any letter of the alphabet. Once opened the names of twenty-five patients are immediately visible in each section, every name being at the bottom—or on the other side at the top—of overlapping sheets (5 inches by 8 inches) adequate for any ordinary clinical history, and having appropriate spaces for such necessary details as the patient's age, sex, occupation, civil state, and so on. For the recording of clinical histories this method would seem to combine all the advantages of the case book and the card index. The loose leaves for book keeping are similar in size and in overlapping arrangement, but the space allowed for clinical histories on the companion leaves is taken up in the book keeping section by all that is necessary for the recording of visits and consultations. There are ruled columns sufficient for a record of one visit on every day of the year in the case of any one patient. Should the patient survive this a new leaf will have to be inserted for his benefit but if his demands are less exacting the same sheet may last—with the patient—for as long as twelve years. There are also the necessary columns for the total fees payable in each month, the date on which the account was sent, the amount due, and the amount received. The leaves of both varieties are perforated and may be inserted—after a little practice—at the required level on chromium plated rings, all of which open at the turn of a wing nut set in the steel spine.

The complete outfit with 300 sheets costs £2 18s. 6d. or with 500 sheets £3. The binders which seem so solidly constructed as to be almost indestructible, may be bought separately or may the sheets for case notes, book keeping, or both from Messrs H. K. Lewis at 136 Gower Street, London, W.C1. It is perhaps a sign of the times that there is a space for the patient's telephone number beneath the column headed 'Amount Due'.

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## FEVER THERAPY

Pyretotherapy can be active as when a febrile attack is produced by the injection of a foreign substance usually a living organism or a protein or passive when fever is produced by physical means such as short waves or a warm humidified atmosphere. The methods are not identical and it is possible to have shock therapy without fever. The monograph on this subject edited by Dr Walter M. Simpson and Dr William Bierman is a compilation of abstracts and discussions of papers presented at the first International Conference on Fever Therapy in New York in March 1937.<sup>1</sup> Fever is one of the weapons which warm blooded animals, and particularly mammals use to counteract the attacks of parasitic micro-organisms and early experience taught the benefit of very hot baths and other means of external heating. The demonstration of hyperpyrexia produced by physical agents however was not made until 1883. Philipps's original observations were repeated independently by Hill and Flack in 1908; they showed that the temperature of the body could be raised even up to 103° F. by means of hot baths. Dr Clarence E. Neymann has collected and has summarized the available data on artificial fever produced by physical means.<sup>2</sup> His own specialty—psychiatry—has been the means of greatly contributing to knowledge of the subject. As early as 1876 Rozenblum of Odessa purposely inoculated psychotic patients with relapsing fever and published the favourable results he observed after these and other psychotic and demented patients had recovered from relapsing fever, malaria and typhus. Much later infection with malaria relapsing fever the injection of tuberculin, typhoid vaccine, suspensions of sulphur in oil and other organic and inorganic compounds came into vogue and were successfully used in the treatment of general paresis. The common factor in all these remedies is fever.

Many of the sequelae following hyperpyrexia such as nausea, vomiting and prostration are apparently due to disturbance in the patient's fluid

and chloride balance. They can be mitigated by giving large amounts of chloride containing fluid before, during and after the treatment and by increasing the relative humidity and decreasing the dry bulb temperature of the atmosphere to which the patient is exposed. The pathological changes following fever therapy are summarized as engorgement of the blood vessels especially of the capillaries associated with haemorrhage of varying extent and necrosis of the tissues including the muscles, liver, kidneys, lungs, adrenals and brain. Haemorrhages and patchy necrosis in the central nervous system are striking and consistent findings especially where the sedative used was a respiratory depressant. Fever therapy is therefore a dangerous remedy and it should be used only by the expert and for the seriously ill. Its curative action is unexplained though two important factors appear to be weakening of the virulence of infecting organisms and the stimulation of phagocytic cells in the tissues. The greatest triumphs of pyretotherapy have been in the venereal diseases although there are but few conditions in which success has not been claimed for fever therapy. It has been much employed in vascular lesions in acute and chronic rheumatism and chorea and in the various forms of paralysis. The disappearance of tumours after neighbouring infections such as erysipelas or cellulitis is well established and has sometimes been successfully copied by the use of Coley's fluid. Both local and general fever have occasionally been used successfully in malignant disease and it appears that the cumulative effects of fever and x-rays are superior to either alone. There is no proof that a febrile disease can be aborted by an early application of artificial fever but certain chronic diseases both febrile and afebrile can be cured by this means. Penetrating heat appears to be more efficacious than external heat and all other factors being equal electro-pyrexia produced by high frequency electrical currents, damped or undamped is the method of choice. Reliance should be placed only on the rectal temperature; a benzol fused quartz thermometer should be used. In an air-conditioned cabinet in conjunction with electromagnetic induction temperatures of 106°–107° F. or more may be attained.

It is perhaps in dementia paralytica that the results of pyretotherapy are most established. Kraepelin compiled a series of 3,079 cases of paresis treated with malaria. He concluded that 1,319 showed some improvement; this is approximately 43 per cent. About half this number achieved a full remission; 57 per cent did not improve while during and just following the course of treatment with malaria the death rate ranges between 10 and

*Fever Therapy: Abstracts and Discussions of Papers Presented at the First International Conference on Fever Therapy.* New York: Paul B. Hoeber Incorporated Medical Book Department of Harper and Brothers. (5 dollars).  
*Artificial Fever Produced by Physical Means: Its Development and Application.* By Clarence A. Neymann, M.D. London: Baillière Tindall and Cox. (27s.).

30 per cent Since the spontaneous remission rate of dementia paralytica is less than 4 per cent, it is clear that the introduction of malarial therapy was a great step forward, even if the death rate is fairly high A total of 979 cases treated by electropyrexia has been collected by Dr Neymann from published results Of this number 27 per cent are credited with a complete remission, and a further 36 per cent are reported as improved and said to be no longer in need of hospital treatment Thus electropyrexia has increased the total rate of improvement by 20 per cent, while those who have died as a direct result of treatment amount to only 2 per cent In treatment at least eight hours of continuous body temperature above  $103.5^{\circ}\text{F}$  should be employed, and during at least two of these eight hours the temperature should range slightly above  $105.8^{\circ}\text{F}$  Usually the bouts of fever should be given twice a week and the course of treatment continued until a mental recovery results A patient should not be abandoned as hopeless until he has received fifty treatments Tryparsamide and heavy metals should be given with the electropyrexia In syphilis of the nervous system electropyrexia appears to be of some avail—not, of course, in restoring nerve paths and fibres already degenerated In tabes much alleviation of lancinating pains and crises has been obtained Artificial fever alone will not eradicate the syphilitic virus even if body temperatures are maintained that are more than adequate to kill cultures of the *Treponema pallidum* in the test-tube, chemotherapy is needed Electropyrexia has opened a new approach in the treatment of all forms of gonorrhoea Each individual strain of gonococcus appears to have a thermal death time which ranges from five to twenty hours at  $106.7^{\circ}\text{F}$  Usually three-quarters of the number of hours established as the thermal death time *in vitro* is sufficient to eliminate the gonococci from the human system, about 15 per cent of all cases, however are not helped by electropyrexia The location of the gonorrhoeal lesion appears to make no difference Arthritis, ophthalmitis, urethritis, and salpingitis are cured in an identical manner

On the effect of electropyrexia in other diseases little definite has been attained, but Dr Neymann is of opinion that Sydenham's chorea is promptly aborted in the vast majority of cases The method is not contraindicated in rheumatic carditis complicating chorea If anything this condition is ameliorated by bouts of artificial fever Arthritis is another disease in which treatment by electropyrexia has proved a great aid The cases must be selected, as the hypertrophic form does not respond well and the patient may even be harmed by this treatment All the well-known forms of

treatment—rest, elimination of focal infections, physiotherapy of various sorts—must be employed, in chronic refractory atrophic arthritis electropyrexia has a place In the non specific therapy of asthma electropyrexia is useful It has been tried in a host of other chronic diseases, many of which will never yield to pyretotherapy Dr Neymann makes a strong case for its use in specified diseases and has endeavoured to lay down the indications

## THE PLANNING OF MATERNITY HOSPITALS

The annotation under the above heading (April 30, p 955), to which exception has been taken in our correspondence columns, was elicited by a paper read to the Royal Sanitary Institute by Dr Thomas Orr, medical officer of health for the borough of Ealing In this paper the author quoted a recommendation made by the Departmental Committee on Maternal Mortality and Morbidity in 1932 as follows "In the interests of economy as well as to facilitate specialist treatment of non obstetric conditions associated with pregnancy and childbirth, new maternity accommodation should, where practicable, be associated with general hospitals" With this recommendation Dr Orr found it "difficult to agree entirely" and stated "two very strong arguments in favour of an entirely separate institution" The first argument is that the normal maternity patient is not a sick woman and therefore she need not be sent to a general hospital The second is that "there must be separate domiciliary accommodation for the nursing staff attending maternity cases" In illustration of his first point Dr Orr quoted the case of a maternity hospital dealing with over 500 cases a year in which "it was not found necessary, over a period of four years, to call in a medical or surgical consultant on any occasion" With Dr Orr's contentions so far we are entirely in agreement Dr Henry H MacWilliam, in supporting the recommendation of the Departmental Committee in his letter published on May 14, appears to have overlooked certain important considerations (a) that the great bulk of the work of a maternity hospital consists of the care of women who are in good general health, and rated, from the obstetric standpoint, as "normal cases", (b) that the medical and surgical complications of pregnancy and labour are relatively uncommon, and that the principal special maternity hospitals number among the members of their honorary staffs representatives of medicine, surgery, paediatrics, and ophthalmic surgery, (c) that the emergencies which occur in a maternity hospital are



obstetrical not medical or surgical emergencies (d) that the post mortem examinations in a maternity hospital are not really as he supposes carried out by members of the obstetric staff (e) that cases of puerperal sepsis are not offered the best chance of recovery by being admitted to a medical unit.

A further consideration should be borne in mind. The Departmental Committee advised that to provide the optimum of safety a maternity unit should contain fifty to sixty lying-in beds and five to ten ante-natal beds and should deal with 800 to 1,000 cases a year. How many general hospitals in this country can provide a maternity unit of that size? And further is it reasonable to expect that they will be able to do so? An unsatisfactory feature of the present obstetric position is the insignificant size of the maternity units of most of our important general hospitals including the teaching hospitals. We believe that if the first-quoted recommendation of the Departmental Committee were fully carried out the result would be the eventual disappearance of special maternity hospitals. By common consent the present accommodation for maternity cases is inadequate and considerable increases must before long be undertaken. The Committee desired that the additional new accommodation should be provided in connexion with general hospitals *where practicable*. These qualifying words have really no significance for a general hospital is an independent organization which will be its own judge of what is practicable. In consequence the prospect before us would be that the special hospitals would be unable to participate fully either in the coming extension of midwifery accommodation or in the advances and improvements in hospital construction which the future will bring. These hospitals would first suffer in efficiency and finally perish of inanition. We cannot think that our correspondents would wish to see this result brought about.

It is not too much to claim that the special maternity hospitals of this country are in the van of obstetric teaching and practice and certain of them can hold their own even with Professor F. J. Browne's department at University College Hospital or the more recently established unit at the Postgraduate Hospital under Professor James Young. Has the work recently done at Queen Charlotte's Hospital by Drs. Colebrook and Fry and the other members of their research team been overlooked by our correspondents? Thanks to the generosity of British and American donors and thanks also to the courage and enterprise of its board of management Queen Charlotte's Hospital has built up a research organization which is unsurpassed in the obstetric field. Has the maternity unit of any general hospital done better? Why,

then should the special hospitals be shouldered out? It is not questioned that provision for maternity cases is required in many general hospitals to meet local requirements and to complete the equipment of teaching hospitals. Our submission is however that the special maternity hospitals are playing a most important part in obstetric teaching and practice and that it would be a national disservice to weaken their position from ideological considerations.

### THE B.M.A. BUILDING AND THE ROYAL ACADEMY

Not only members of the British Medical Association but also others both medical and lay have learned with interest of the inclusion in the 1938 Royal Academy Exhibition of the architect's plans for the completion of the building scheme adopted some years ago by the Association. These plans prepared for the Council by Mr. Douglas Wood, F.R.I.B.A., are the subject of an article in this week's *Supplement* by the Chairman of the Building Committee, Dr. Henry Robinson, and in the middle of the *Supplement* there is reproduced a drawing by Mr. Wood representing the exterior of the finished building as seen from Tavistock Square. Everyone must judge for himself of the merits of this ambitious plan; to us it seems wholly admirable and it is satisfactory to find what is of course merely a lay view of an artistic matter confirmed by the verdict of Mr. Douglas Wood's colleagues in his own profession and by the Council of the Royal Academy. Mr. Wood and the British Medical Association are alike to be congratulated on a plan which will produce a real addition to the architecture of London.

### A COURSE IN MEDICAL HISTORY

For the first time certainly in the United States of America and possibly in the world a graduate course has been devoted to the history of medicine. That stimulating scholar and philosopher, Henry Ernst Sigerist, Welch Professor of the History of Medicine at the Johns Hopkins University and Director of its Institute, through a carefully planned programme brought together at Baltimore during the week of April 18 to 23 a large and enthusiastic group of men and women from the United States and from Canada among whom were a number of distinguished historians. The President of the University, Dr. Isaiah Bowman, opened the proceedings. The morning sessions were devoted to lectures and discussions and included such topics as principles of primitive medicine, Egyptian medical papyri, the Hippocratic problem, Paracelsus and the development of iatrochemistry, new contributions to the history of the circulation of the blood and the social history of medicine in the nineteenth century. In the informal atmosphere of the afternoons round-table seminars attention was primarily focused on



problems concerning teachers of medical history, such as the various approaches to its study, the interpretation of medical texts, the history of disease, and the choice of a subject for research. The more strenuously educational part of the course was skilfully mollified and at the same time enhanced by exhibits, visits to libraries and learned societies, cocktail parties, and dinners. The vast armamentarium of research and equipment which the Institute commands was made available to those desirous of learning for themselves how medical history may be pursued as an exact scientific study and how it may also be temptingly and successfully introduced into medicine's daily work. Just as in international congresses, one of the more valuable aspects of this graduate week also was the opportunity it afforded of meeting kindred spirits and of discussing individual problems with Dr Sigerist and his staff, who freely gave their undivided attention. The most original item on a crowded programme was a musical evening in the Great Hall of the Welch Medical Library, which houses the Sargent Portrait of the Four Professors. Four string instruments and one soloist performed music which had not been heard for two or three centuries—a frottola on the syphilis of Marchese Francesco Gonzaga of Mantua (1517), dance music played in Southern Italy during the seventeenth century in the treatment of that astonishing disease tarantism, and hymnlike music in praise of St Sebastian, patron saint against the plague (1702). Intended purely as an experiment, this graduate course was by common consent so helpful and so delightful that it will be repeated in future years and should become a recognized feature of medical education in America and possibly also in other countries.

### AN INTERNATIONAL SURVEY OF BLINDNESS

The International Association for the Prevention of Blindness has published a long report dealing with *The Number of the Blind and the Protection of the Eyes in Different Countries*<sup>1</sup>. The International Association was founded at The Hague in 1929. Since then it has carried out useful inquiries on the incidence of various blinding diseases of the eyes and on methods of prevention. The present volume is the result of its most ambitious effort. A questionnaire was issued to all the countries of the world two years ago. Replies were received from thirty-five. The book gives a correlation of these replies. Some countries gave official replies, others answered through individual societies or oculists and further data were supplied by the League of Nations. The report shows how largely the incidence of blindness is a social and economic problem. Prevention of blindness is in the main to be secured by improvements in general hygiene, and that depends upon the social habits of the peoples. In highly industrialized countries there are the added risks of injuries which need to be guarded against. This survey sets out what is being done in the several countries which have furnished information. It is a distinctly instructive record and

since it is issued in an English edition it is available for all those in the worldwide English-speaking countries who take an interest in the matter. It shows what a great need there is for some sort of common agreement in the various countries as to the definition of blindness and the manner of recording statistics, and also for some adjustment of the returns according to the social relief granted to the blind. In some countries no relief is given and the number of blind recorded is small. In other countries, such as Britain, the blind are treated most generously and the number registered is high. The great variation of the incidence of the various forms of blindness is best illustrated by trachoma. This is rare in Western countries and very common and highly damaging to sight in Eastern countries. Myopia as a cause of blindness is much discussed by ophthalmic surgeons and educationists. The variations in the incidence shown in the returns are great. Twenty countries give no figures, though some of these state that they have "sight-saving classes" for children so affected—for example, Portugal, Switzerland, Lithuania, and Japan. Madagascar says definitely there is no high myopia there. Of the countries or cities that give figures the following is the list with the percentages attached: Scotland 17, London 13.93, Australia 13.5, Holland 13.2, France 8, USA 5.3, Tasmania 5.29, Germany 5.13, Rumania 2, Greece 1, Bulgaria 0.81. The differences in Great Britain alone call for some explanation. Those for Scotland are the figures gathered by Smith and Marshall (17 per cent), for London those of Bishop Harman (13.93 per cent), while those from Birmingham collected by Matthew Burn show 4.4 per cent. This report of the International Association will make a strong appeal to ophthalmologists and educationists interested in the care of the blind, and to social workers and members of statutory authorities who are responsible for supervision of the beneficent measures designed for the prevention of blindness and the amelioration of the hard lot of the blind. Its production merits high praise and credit for the staff who have worked so long and diligently to produce it.

### SIGNIFICANCE OF MOLES ON THE FACE

It has recently been suggested by E. Sklarz<sup>1</sup> that many of the small hairy moles and fibromata commonly met with on the face and neck are really rudimentary sensory organs and are analogous to the sensory hairs or whiskers of such mammals as cats, dogs, and rats. The chain of reasoning which led Dr Sklarz to this conclusion is quite interesting. He noticed that in rats which had been epilated by a sublethal dose of thallium the whiskers or sensory hairs persisted. The survival of the hairs is due to the fact that they derive their innervation from the cerebrospinal system, while the ordinary hairs which form the animal's coat are innervated from the sympathetic system. Thallium being a poison primarily affecting the endocrine glands and through them the sympathetic nervous system affects the ordinary hairs, but the sensory hairs escape.

<sup>1</sup> *The Number of the Blind and the Protection of the Eyes in Different Countries*. Paris (6c) 66. Boulevard Saint Michel.

<sup>1</sup> *Derm. Wschr.* 1938, 82, 462.

Thallium of course is not given to human adults so we do not know from direct observation whether the hairs on moles would escape its action. But in severe cases of alopecia areata (a condition in which the sympathetic system is affected) in which all the hair is lost it has been observed that hairs growing from moles remain. This suggests that they are innervated like the sensory hairs of lower mammals from the cerebro-spinal system and hence come into line with sensory organs in general. Now these sensory hairs in the lower animals are characterized by being placed on a special prominence which may be described as a wart or papilla. They are symmetrical and the root of the hair is always in connexion with a dilated blood vessel so that they have been called sinus hairs. There is always pigmentation. Now the moles often found on the face show certain points of resemblance both in situation and in their microscopical structure to the sensory warts or prominences of lower animals. Their commonest situation is on the cheek at a point corresponding roughly with that of the whiskers of cats and dogs and they are often more or less symmetrically placed. Microscopically the human mole like the sensory prominences of the animals is often pigmented. It is true that notwithstanding prolonged search through several hundreds of serial sections Dr Sklarz has not succeeded in discovering any blood sinuses in connexion with the hairs on moles but he has succeeded in finding certain structures in them close to the epidermis which he considers have a resemblance to sensory epithelial organs. They consist of round or oval enclosed bodies sometimes pigmented sometimes not possessing a definite capsule and in general suggesting the structure of an end organ in connexion with a sensory nerve. It would indeed be of great value in the examination of this question to be able to study the innervation of these bodies with the aid of special nerve staining methods. Much light might thereby be thrown on the theory that these encapsulated bodies are rudimentary sense organs. This however Sklarz has been unable to do owing to the difficulty of obtaining enough material. It must be remembered that there are distinct objections to the removal of any considerable sized piece of skin from the face. Nevertheless although much further research is necessary to afford definite proof that moles and fibromata (*Gesichtsnaevi*) are really rudimentary sense organs there is at all events evidence that this interesting and intriguing idea is reasonable.

### THE SUBNORMAL PRISONER

Criminologists are familiar with various grades of mental disorder and mental deficiency in prisoners and are making rapid progress in their appreciation of the psychological factors in crime. There is also however another class of person who seems to be fairly well recognized abroad but not to have attracted much attention here. That is the offender who is neither mentally disordered nor mentally defective nor even appreciably neurotic but merely subnormal. He is below par in every part of his personality—moral, mental and

physical. One might say that he is only partly alive. Many such people seem to drift into petty crime simply from the lack of sufficient nous to keep them out of it. Dr Norwood East, Medical Commissioner of Prisons, makes some interesting remarks on this group in the Commissioners' annual report. He says it includes criminals of inferior intelligence who are not classifiable with the mentally defective and cannot be certified as such. He calls them the constitutional psychic inferiority subgroup and regards them as important in the study of recidivism. Some of them are aggressive criminals and a menace to society but many are no more than a nuisance and in prison are quiet, well behaved, sensible and often rather likeable individuals. Both types present one distinguishing feature: they will soon return to prison after they have been released. An illuminating case who is melancholy, career Dr East summarizes is that of a man of 74 whose previous convictions started early in 1872 and now number about fifty. This is not the total of his offences for some may have escaped detection and others have been taken into account on remission at various times. The family history was uneventful and there was no insanity though a brother had been in prison. At the age of 17 when he was sent off five years penal servitude for pocket picking he had already formed a criminal habit. At a recent interview Dr East found him intelligent, alert and without enmity to society. He has kept in touch with his relations and is welcomed by them on release. He is well preserved physically and mentally and is on the whole an optimist. He gives no trouble when in custody, is satisfied and contented and may, be to a certain extent institutionalized. He is a man whose dispositions and temperament work best in low gear. He has had little ambition and has derived little satisfaction from success and suffered little disappointment from failure. Dr East might agree that his habit of returning to prison at short intervals is perhaps the best adaptation to life of which he is capable that he cannot stand alone and that the nearest substitute for a parent he can find is His Majesty's prison. Dr East finds the aggressive type of recidivist not so common as the passive. He lays stress on the experience that rather of these subnormal types is likely to respond to psychological treatment after they have had a number of convictions and thinks that the detention establishments suggested by the Persistent Offenders Committee may well prove eventually to be a more humane and logical method of dealing with them. Psychotherapy like the steering gear of a ship will only work if there is some propulsive force in operation. The best way of dealing with these people may be to regard them as necessarily permanent inmates of an institution or colony just as many mental defectives are. Incidentally Dr East gives a wide survey of the limitations of psychological treatment. If this method is to be of lasting value the claims made by its exponents must constantly be subjected to the criticism of practical experience. That is far more likely to bring it to general use than any amount of propaganda.

## ROYAL SOCIETY CONVERSAZIONE

The Royal Society conversazione last week again brought together an interesting assemblage of exhibits illustrating advanced work in many fields. Special interest attached to the new methods of sampling industrial dusts, shown by Professor H. V. A. Briscoe of the Royal School of Mines, who has lately received the gold medal of the Institution of Mining and Metallurgy for this work. The latest method which Professor Briscoe has elaborated is called the labyrinth, and consists of an assembly of baffles in a conduit through which the dusty air is drawn. This enables relatively large samples to be collected for chemical analysis, solubility determinations and physiological experiments. The idea has been to establish the causative agent or property responsible for silicosis. Mr. J. E. Barnard showed a simplified method of ultra-violet light microscopy. The greatest obstacle to the wider use of ultra-violet light in microscopy is the need for somewhat elaborate electrical apparatus to produce a high-tension spark of sufficient intensity. This is now in part overcome by using a mercury vapour discharge lamp of special pattern. A large part of the ultra violet energy produced by this lamp is confined to one line of a particular wave-length which is useful in investigations with fresh biological material especially when the presence of a virus is suspected. Some of the historical exhibits were of not less interest than the products of modern laboratories. There was shown for example an original crayon drawing of the physical laboratory of the Academy of Sciences of Paris in the early eighteenth century, the work of Sebastian Leclerc, who was not only an accomplished artist but had applied himself to the study of physics and therefore was able to depict the various scientific instruments, of which more than one hundred were shown, with a fidelity which no one before, or since has achieved. Another exhibit of historical interest which has just come into the possession of the Science Museum was John Hadley's original Gregorian reflecting telescope. Hadley was also famous as the inventor of the reflecting sextant. Another exhibit was obtained from the sale of Isaac Newton manuscripts not long ago in the shape of the earliest trade card of an English optician. It bears the name of John Yarwell and the date 1683 and the back is covered with extracts from the classics in Newton's writing. To turn from these old excursions to very modern instances the Cambridge Psychological Laboratory had an exhibit one part of which was designed to illustrate the factors influencing sensory thresholds. The effect of sensory adaptation was shown on visual acuity, brightness discrimination and loudness discrimination. An apparatus was demonstrated with which the eye can be adapted to any illumination from 0 to 45 000 foot-candles and visual acuity rapidly measured at any illumination over the same range. Another exhibit showed the effect of the rate of application of a stimulus. If the intensity of a stimulus be increased the amount of increase necessary to give rise to a perception of this change is dependent upon the rate at which the change is made. In touch pressure sound, and light—in fact, in all the

cases studied with the exception of that of pain—a decided fall in the threshold is found with increase in the rate of application of the stimulus. Yet another exhibit from the same laboratory showed the effect of knowledge of results on learning and performance. The experiments showed that improvement in performance occurs only when the knowledge of results is afforded. After a fairly high standard of performance—in this case a relatively simple muscular movement—removal of knowledge of results leads to a very pronounced deterioration—which, as with many of these results of psychological experiment, is just what we should expect.

## LISTER MEDAL

The Lister Medal for 1939, which is awarded in recognition of distinguished contributions to surgical science, has been granted to Professor Rene Leriche, professor of clinical surgery in the University of Strasbourg, and he will deliver the Lister Memorial Lecture in 1939 at the Royal College of Surgeons of England. This is the sixth occasion of the award, which is made by a committee representative of the Royal Society, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, the University of Edinburgh, and the University of Glasgow. Previous Lister medallists have been Sir William Watson Cheyne, Professor Anton von Eiselsberg, Professor Harvey Cushing, Sir Charles Ballance, and Sir Robert Muir.

## PAGET MEMORIAL LECTURE

The twelfth Stephen Paget Memorial Lecture, on 'Insulin and Diabetes: The Present Position,' will be delivered by Professor Charles H. Best, M.D., D.Sc., of Toronto University, at the annual general meeting of the Research Defence Society at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C., on Thursday, June 9, at 3 p.m. The chair will be taken by the president of the Society, Lord Lamington, supported by Sir Arthur Stanley, chairman of committee, Sir Edward Mellanby, F.R.S., vice president, and Professor A. V. Hill, F.R.S., vice chairman of committee. Tea and coffee will be served after the meeting, and visitors will be welcomed.

The eighty-ninth annual session of the American Medical Association will be held in San Francisco from June 13 to 17. The scientific sections number fifteen this year.

On May 19 Professor J. J. Abel, director of the laboratory for endocrine research at the Johns Hopkins Medical School, Baltimore, was elected a Foreign Member of the Royal Society.

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## SOME NASAL CONDITIONS

BY

E D D DAVIS, F.R.C.S.

### Nasal Polyp

Nasal polypi are localized areas of oedema of the mucosa of the ethmoid and more commonly the external or meatal surface of the middle turbinal. The polypi arise from the narrow upper part of the nose and as they increase in size they expand to the more spacious and broader part hence becoming pedunculated. Nasal polypi are divided into three main groups according to their aetiology (1) allergic (2) allergic with secondary infection (3) infective or inflammatory.

The allergic group is the commonest and is associated with allergic vasomotor rhinorrhoea of long duration. There is a family history of allergic manifestations such as asthma hay fever and urticaria. The nose shows the characteristic and variable pale moist swelling of the mucosa, and the patient has attacks of nasal obstruction sneezing and rhinorrhoea similar to hay fever. The polypi frequently recur in spite of vigorous treatment. Mucus is retained in the nasal sinuses and a low grade infection is not uncommon.

The infective or inflammatory polypi accompany a chronic rhinitis or sinusitis. X ray photographs should be obtained since they are always useful. There is an uncommon type of single polypus known as the post-nasal or choanal polyp which starts in the middle meatus of the nose and extends backwards into the posterior nares and nasopharynx. It occurs in young subjects and has a long stalk attached to the mucosa of the antrum just within the ostium. This large polypus blocks the posterior nares hence the marked nasal obstruction and if it is completely removed it may not recur for some years.

### DIAGNOSIS

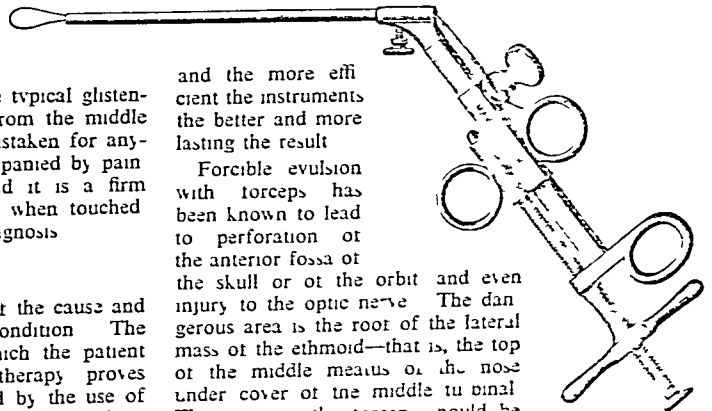
A good view of the nose will show the typical glistening polypi like muscatel grapes arising from the middle turbinal region. Polypi can hardly be mistaken for anything else. A malignant growth is accompanied by pain it occurs in patients of cancer age, and it is a firm vascular red tumour which bleeds freely when touched. Microscopical section will confirm the diagnosis.

### TREATMENT

This must be directed to the removal of the cause and particularly to the underlying allergic condition. The elimination of the exciting causes to which the patient is sensitive with calcium and thyroid therapy proves successful. Little or no relief is obtained by the use of sprays lotions and inhalations. In fact these applications are irritating. Immediate relief can be obtained by removing the polyp with the snare under cocaine anaesthesia. Polypi will recur at varying intervals but the more thorough the removal the less frequent the recurrence and in the case of the single polyp a long interval of freedom is probable. Though removal by snare may be merely palliative it has the advantage of allowing a

clear inspection of the interior of the nose at a later date. On the other hand when the polypi are multiple and inaccessible to the snare and if sinus suppuration is present a more radical operation under general anaesthesia is required. The radical operation consists in removing the polypoid middle turbinal and the parts of the ethmoid from which the polypi grow. It may be necessary to resect the nasal septum in order to obtain a free access to the polyp growing area. An suppurating nasal sinus is drained.

The snare operation is done when the patient is free from a cold or recent infection. He is placed in the sitting position and the best possible illumination is obtained by means of the forehead mirror or head lamp. Strict asepsis and antiseptics must be observed. The nose is anaesthetized by swabbing the mucosa of the affected area with a solution of equal quantities of 20 per cent cocaine and adrephine inhalant (Paine Davis). Adrenaline 1 in 1000 solution may be used instead of adrephine but adrenaline has the disadvantage of producing a reactionary and profuse rhinorrhoea sneezing and occasional bleeding an hour or so after its application. The nose is then gently packed with narrow ribbon gauze soaked in the solution of cocaine and adrephine. If a cocaine spray is used the solution should not be stronger than 4 per cent and the patient is directed to expectorate any of it which trickles into the throat. The snare is threaded with No. 3 snare wire and the orifice of its barrel should have a bridge so that the wire cannot be pulled right through into the barrel cutting off the polyp; it is thus avoided. The polyp is threaded through the snare loop and the barrel is firmly pushed up to their attachment. The polyp should be pulled off rather than cut so as to obtain an underlying flake of the ethmoid bone. The snaring operation should be done with a light hand and the better the technique



and the more efficient the instruments the better and more lasting the result.

Forceful evulsion with forceps has been known to lead to perforation of the anterior fossa of the skull or of the orbit and even injury to the optic nerve. The dangerous area is the roof of the lateral mass of the ethmoid—that is, the top of the middle meatus of the nose under cover of the middle turbinal. The point of the forceps should be used parallel to this area and not directed straight at the roof. Curetting with a sharp ring knife has resulted in severe haemorrhage and osteomyelitis. Rest in bed for a few days is necessary after any nasal operation exposing the ethmoidal infections is thus avoided. The nose should be left alone and at rest. Interference with the natural process of

Some of the polypi

healing, such as the use of sprays and lotions, is undesirable

If haemorrhage is excessive the patient should be kept in the sitting position. Injections of haemostatic serum and calcium may be given. A hypodermic injection of 1/4 grain of morphine for an adult is often more effective than any other remedy. If plugging the nose is really necessary, gauze soaked in the cocaine-adrephine solution mentioned above is gently packed on to the bleeding point. The gauze should be removed at the end of twelve hours. Prolonged packing leads to sepsis, a rise of temperature and tonsillitis are often the first indications of sepsis following a nasal operation. A careful inspection of the nose at the end of a fortnight should be made for polypi which have not been seen at the snaring operation. The treatment of allergic polypi by radium implantation is still on trial.

### Atrophic Rhinitis (Ozaena)

This is a chronic inflammation of the nasal mucosa which results in the loss of the ciliated epithelium and atrophy of the mucosa. The mucus dries, forming large offensive crusts which accelerate the atrophy of the mucosa. There is a loss of the sense of smell, and these patients are susceptible to any catarrhal infection. Patients with atrophic rhinitis are often found to have pulmonary tuberculosis, and a search for the tubercle bacillus should always be made. In severe cases the atrophy and crusting extend to the pharynx and the trachea.

#### DIAGNOSIS

The typical atrophy of the inferior turbinates with the easily recognized and unmistakable offensive odour of the crusts, the broad roomy nose and the long duration of the disease leave no doubt as to the diagnosis. There are a few cases of syphilis, with necrosis and perforation of the middle third of the septum, which may resemble atrophic rhinitis.

#### TREATMENT

The disease starts in childhood, and treatment should be early and continuous to prevent the later atrophic changes. It consists, first, of thorough cleansing of the nose and, secondly, the prevention of crusts. The nose is cleaned by large quantities of alkaline solution, such as equal parts of common salt, sodium bicarbonate, and boric acid one teaspoonful to a pint of warm water. The nose is irrigated with a large nasal irrigator such as Downs's quadruped nasal irrigator. Any adherent crusts should be removed by forceps or by swabbing with hydrogen peroxide. Crust formation is prevented by spraying the nose thoroughly with lipiodol or, if lipiodol is irritating, equal parts of lipiodol and paroline simplex (Burroughs Wellcome and Co). A mixture of potassium iodide 5 grains with aromatic spirit of ammonia 10 minims at intervals is helpful. The latter counteracts the depressing effect of the iodide. The first thorough cleansing should be performed under cocaine anaesthesia by the surgeon and the patient is shown how to use the lotion and spray. The nasal toilet consisting of lotion and spray should be carried out by the patient morning and evening but in the milder cases once daily, at night-time is sufficient. Treatment has to be continued for long periods and so long as there is any crusting or discharge. The general health should receive careful attention and residence at the seaside is beneficial.

### Foreign Bodies in the Nose

Young children push pieces of paper beads fruit-slices etc into the nose and these are found in the

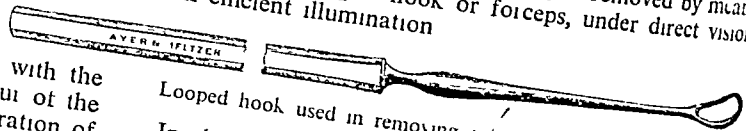
atrium of the middle meatus. It is very easy to lose pieces of gauze or pledgets of cotton-wool in the nose during an operation. Foreign bodies may enter by way of the nasopharynx during swallowing or vomiting, particularly if there is any deficiency or loss of function of the soft palate. If the foreign body is allowed to remain for any length of time it will be covered with calcium deposited from the excessive nasal secretion and so form a rhinolith. A history of the foreign body having been introduced into the nose is not always obtainable, and it is only when ulceration and suppuration occur that attention is directed to that organ.

#### DIAGNOSIS

A blood stained offensive discharge from one nostril in a child points to a foreign body, and a close inspection of the nose after shrinkage of the mucosa with cocaine and adrephine will confirm the diagnosis.

#### TREATMENT

The nose is anaesthetized with cocaine-adrephine solution as used for nasal polypi and the patient is directed to blow the nose vigorously. This may produce the foreign body, but it also has the effect of clearing the nose of secretion. The foreign body is removed by means of a suitable looped hook or forceps, under direct vision with efficient illumination.



Looped hook used in removing a foreign body from the nose.

In difficult, frightened children and when the foreign body is far back in the nose a general anaesthetic is necessary. Syringing to recover the foreign body should never be done, as it may result in the substance being driven into the trachea or into an inaccessible part of the nose. Also, children are frightened by syringing, and infection may be driven to the Eustachian tube and ear.

E Fenz (*Munch med Wsch* March 4, 1938, p 323) describes the results of presacral infiltration with novocain in 143 cases of sciatica. After infiltration 112 were completely relieved, twenty-six were improved, and five showed no improvement. Seventy-six patients could be followed up for periods varying from six months to two years after treatment, forty-nine remained free of pain, sixteen remained improved, and in eleven recurrence had taken place. The technique adopted is described. The patient is fixed in the gynecological position. A thin needle 12 cm long is inserted along the inner side of the sacrum to the first or second sacral orifice, care must be taken not to damage the rectum. About 150 ccm of normal saline with 1/4 per cent novocain is then injected. The operation is painless except for the initial puncture of the skin. A single injection is often successful, but on the average four or five are required. The author has given as many as twenty-four without untoward results. Normal saline alone increased the pain. The addition of novocain is essential for success. The causative factor of sciatica could be determined in only 60 per cent of cases in spite of careful investigation. Of eighty-five cases the aetiological factor was found to be cold in twenty-four, intervertebral diseases in eleven, trauma in seven, diabetes in five, varicose veins in four, a tumour in one, nephrolithiasis in two, prostatitis in one and flat-foot in two cases. In 12 of sciatica although not always to the same degree. Even in diabetic cases the underlying cause was not treated in order to achieve a uniform result.

## PLANNING A HOSPITAL

### SIR HENRY GAUVAIN'S ORATION

In delivering the Annual Oration to the Medical Society of London on May 9 Sir HENRY GAUVAIN, medical superintendent of the Lord Mayor Treloar Cripples Hospital and College at Alton, Hampshire, took as his subject his experiences in connexion with the design of the hospital at Alton, with which task he was entrusted in association with a selected architect.

The patients at Alton said the lecturer were all crippled children, many of them tuberculous, requiring in most cases lengthy treatment and simultaneously needing education. It was early decided that the pavilion system should be adopted and that the ward units should be self-contained and adjacent to each other, with the exception of the isolation and observation blocks. This facilitated the transport of patients and was much safer for rapid evacuation in the unlikely event of fire. In planning an open air hospital one had not only to think of a ward but of the general layout and of the accessories indispensable for the work. At the Treloar Hospital the wards approached very closely to the ideal of the open air ward; they combined permanent structure and successful architectural treatment with maximum convenience and efficiency as well as maximum open air and light. The main hospital consisted of five ward units, each of sixty beds. Experience had shown that with the type of case treated one fully trained sister was able to supervise such a unit with the assistance of probationer nurses. The Board of Education had laid it down that thirty patients might be taught by one teacher and in order to earn most economically the educational grant for a hospital school the ward unit was divided into two similar parts, each half consisting of one large ward of twenty-four beds, one small four-bedded ward and two single-bedded cubicles.

#### Five ward Units at Alton

A tendency was apparent in modern hospitals, both for children and for adults, to abandon the large ward and replace it by numerous small wards or single or double-bedded rooms. In children's hospitals this had the alleged advantage of reducing the spread of infection. After much consideration he decided against this method at Alton, his chief reason being the need for ready and convenient supervision by a responsible person, which was so urgently necessary in the care of crippled children. To adopt the system of separate wards or cubicles would be inadvisable, not only on the ground of capital expense and maintenance, but also on that of staffing, having in view the increasing shortage of nurses.

The five ward units were erected on a great terrace 1,000 feet long and 25 feet wide. The terrace was paved with artificial stones set in a bitumen surround and impregnated with carborundum, which last was introduced to secure a non-slip surface. Green was selected as the colour to be restful to the eyes and avoid glare. In the centre of each ward unit was the sister's office and the patients in each of the large wards were under her immediate eye and she could also see what was going on in the small wards and cubicles. The ward walls to a height of four feet were of terrazzo with all angles rounded, while the centre flooring was teak. Heating was by panels in the terrazzo surround and in addition each ward was provided with an open fireplace, the psychological effect of a fire being very marked, especially on dull and dreary winter days. The whole of the south side of the wards, being open beds, were pushed out with the minimum of labour and it rained or snowed while the children were out, the sliding terrace roof of wired vitreous glass was lowered and instantly afforded the desired protection.

### The Treatment Centre

Sir Henry Gauvain went on to give some account of the design of the observation block and isolation hospital and then described what he called the heart of the institution—namely, the treatment centre. This was placed in a central position in relation to the ward blocks. There was a well-proportioned waiting hall from which direct access was obtained to the various departments—namely, operating theatre, x-ray room, plaster room, massage and exercise room and dispensary. Special attention had been given to the planning of the operating theatre, with all its adjuncts. The walls of the theatre were finished in pale green vitrolite and the floor was of terrazzo tiles polished after laying. The operating theatre and anaesthetic room were ventilated by an air conditioning plant on the roof. Great care had been taken with the electrical arrangements in the theatre area to prevent risk of fire or explosion. All plugs were interlocking and the switches were of the enclosed mercury sparkless pattern. An automatic record of air lighting system had been installed. The sterilizing equipment was of the most modern recessed type.

The patient left the theatre by a separate exit and the operation had been a major one, is transported to the adjoining recovery ward, coming in a room which was so planned that observation was easy. The massage and remedial exercise room, with about paneled walls containing heating panels, had a rubber paving to give good foothold for patients when taking walking and other exercises. The department opened on to a lawn where remedial exercises might be undertaken in the open air under favourable weather conditions. A bathing pool for remedial exercises was adjacent. It was a custom in shape thus permitting attendants to deal with patients without themselves getting into the water. The plaster room, specially designed for its work, had a buff tiled floor, tiled dado and painted plaster above. It was fitted with all necessary sinks and appliances, including allows for plaster spinal jackets and casts, special stands for hip and knee plasters and so forth. The dental room had a rubber floor and vitrolite wall linings. The x-ray room, studio, dark room and fireproof film store were in a suite entered from the waiting hall. This department was entirely shock proof and all wires within reach of the patient had been eliminated. A special type of radiographic table had been installed, fitted with two entirely shock proof tube holders.

#### The Light Department

There remained the light department, which purposefully he had not erected near the treatment centre. A number of the patients having light treatment were amputees and anyhow he felt that the treatment centre would be overcrowded by the constant stream of patients, some fifty or more a day, receiving light and allied treatments. Owing to the tall levels, one half of the hospital was two-storied; accordingly he had made the central portion of the lower floor into a covered winter playground, provided with radium heat and ultra-violet light, but quite open on its southern aspect. Behind this was the extensive light department, with sister's office and examination room.

I hope I have not wearied you, said Sir Henry Gauvain in conclusion, with this description of the hospital of my dreams, now completed and functioning satisfactorily for our needs. Doubtless in many ways it could be improved upon, but I am truly able to say I am content. If I may express a final thought on the most urgent need of modern hospitals, it is the lack of properly designed and protected balconies for accommodation. Realizing to appreciate that need one should be a patient as well as a doctor. The advantage of getting into the open air away from the sounds, sight and smells of the sick room must be experienced to be understood and in my opinion this is a factor insufficiently recognized in practice.

## Reports of Societies

### ANTERIOR HYPOPHYSIS IN DIABETES MELLITUS

At a meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on May 10, Dr F. G. YOUNG gave details of some experimental work on the relationship of the anterior hypophysis to diabetes mellitus.

Dr Young said he thought his audience would agree that the theories as to the cause of diabetes were less complete and satisfactory to day than they were seven or eight years ago. There then seemed to be no serious doubt that the cause in the majority of cases of diabetes mellitus was a deficient secretion of the islets of Langerhans. There was some indication that the pituitary gland might sometimes be involved in the aetiology of diabetes, but it was generally agreed that the posterior rather than the anterior lobe of the gland was to be considered as responsible. Houssay's researches had undoubtedly provided the main stimulus for the vast amount of research which had taken place on the subject during the last few years. Houssay and a number of other investigators had almost simultaneously observed that the daily administration to intact normal animals of extracts of the anterior pituitary lobe might result in the appearance of symptoms of diabetes which, however, disappeared within a few days of the cessation of daily injections. This and other work suggested that hyperfunction of the anterior pituitary lobe as well as hypofunction of the pancreatic islets might be a cause of the symptoms of diabetes mellitus. In regard to the words "diabetes" and "diabetogenic," Dr Young explained that he meant by the former a condition in which hyperglycaemia, glycosuria, ketonuria, polydipsia, and polyuria were exhibited and the agent which provoked their appearance he described as "diabetogenic." The use of the term "diabetes mellitus" he restricted to diabetes in human beings. The majority of the investigations of which he gave details were concerned with the artificial production of diabetes in animals, and in this connexion Dr Young said that there was no proof that the results of the researches would throw light directly on the aetiology of human diabetes mellitus, though it seemed probable that they might ultimately do so.

#### Diabetogenic Extract of the Anterior Pituitary

He had found that dogs were by far the most satisfactory animals for demonstration of the diabetogenic activity of anterior pituitary extracts in intact animals. Cats and rabbits exhibited less striking and consistent results while rats and mice were comparatively insensitive. Extracts with diabetogenic activity were only slowly effective and it was only after two or three daily injections that hyperglycaemia and glycosuria appeared. If a dog was given a daily intraperitoneal injection of a suitable amount of a crude saline extract of fresh anterior pituitary gland there was usually no obvious result until the third or fourth day when hyperglycaemia was exhibited, the volume of urine increased and sugar and ketone appeared in the urine. If the daily administration of the same amount of extract was continued for seven to ten days the glycosuria and ketonuria—rarely the polyuria—subsided and finally disappeared. If the amount of extract injected daily was then suitably increased hyperglycaemia, glycosuria and ketonuria reappeared, only to disappear again with continued daily administration of the diabetogenic extract. The discovery of this phenomenon suggested that if the amount of extract

injected was increased suitably at intervals of three days the animal should remain constantly diabetic. This proved to be so. An important question then arose. If the amount of extract injected daily were increased to a very high level would the dog become completely resistant to the diabetogenic action of the extract? Or would the animal lose its power of becoming resistant? The latter proved to be the answer. All except one of the animals investigated had been found to be incapable of resisting the diabetogenic action of a daily dose of crude extract equivalent to 25 grammes of fresh tissue. Moreover, in these animals when the daily injections ceased the diabetic condition continued and had apparently become permanent. Thus treatment with the anterior pituitary extract appeared to provide a means of producing a permanently diabetic condition without recourse to surgical interference with the pancreas. To date, of six dogs treated with suitably large doses of extract only one had failed to become permanently diabetic. The remaining five had shown no sign of recovery from the diabetic condition, but their behaviour had differed in a number of respects from that of depancreatized dogs.

In explaining the differences between the behaviour of the permanently diabetic dogs and the depancreatized dogs, Dr Young said the diabetic condition of the former was due to a deficiency of insulin, but the islets could still secrete an amount of insulin which, if suitably administered to a completely depancreatized dog, would be sufficient to maintain life. In the depancreatized dog the diabetic condition was due to a deficiency of insulin which would lead to fatal inanition owing to the absence of pancreatic enzymes. The subnormal digestive powers of the depancreatized dog would not permit of the ingestion of sufficient non-carbohydrate food to cover the urinary loss of carbohydrates, but the diabetic dogs on which the experiments had been carried out were able to obtain sufficient calories by the ingestion of large amounts of non-carbohydrate food.

#### The Glycotropic Factor

In an attempt to purify the pituitary substance responsible for the effects obtained by Cope and Marks, Dr Young found that the active principle was present in preparations of the so-called lactogenic hormone—prolactin—though later investigations showed that the active substance was not identical with prolactin nor with the gonadotropic or thyrotropic hormones. There followed details of the investigations carried out with preparations of the glycotropic factor which were rich in prolactin but almost free from the thyrotropic and gonadotropic hormones. It was found that if two suitable injections of glycotropic-factor were given, one sixteen hours after the other, to a fasting intact rabbit, the hypoglycaemic action of 2 units of crystalline insulin, administered intravenously five hours after the first pituitary injection, was entirely abolished. Similar but less striking results could be demonstrated when the glycotropic factor was administered to hypophysectomized rabbits. The hyperglycaemic response to subcutaneously or intravenously administered adrenaline might be greatly increased under these conditions. All the responses could be demonstrated in rabbits in which the blood sugar level had not been significantly affected by the anterior pituitary injections alone. As a result of the findings of Dr Wesslow and Griffiths (*Lancet* 1936, 1, 991) it seemed possible that the plasma of a particular type of diabetic patient might contain an abnormal amount of glycotropic factor, which suggested that in some instances at least clinical diabetes might be of pituitary origin. If in some cases human diabetes was associated with excessive production of the pituitary glycotropic substance, the results of the administration to such cases of an antiserum to the glycotropic factor would be of interest. By the prolonged daily



administration to monkeys and rabbits of preparations of prolactin rich in glycotropic substance but containing no detectable thyrotropic or gonadotropic hormones it was possible to produce an antiserum highly active in neutralizing the action of prolactin in the pigeon crop gland but this serum exhibited no consistent antiglycotropic activity. The experiments did not prove that the glycotropic substance was incapable of evoking an antiserum and further investigation of the point seemed desirable, it only because such an antiserum might have some clinical value as well as physiological interest.

There was as yet no evidence that islet tissue to med under the influence of anterior pituitary extracts was capable of secreting insulin. It however one response of the dog's pancreas to diabetogenic extracts was a relatively slow functional proliferation of the islet tissue then the ability of a dog to become resistant to the diabetogenic action of a small daily dose of extract would be explained. It was clear that should it prove possible to prepare a pancreatotropic substance free from other undesirable anterior pituitary factors the investigation of the clinical uses of such a preparation might yield results of great interest.

#### Pancreatic and Pituitary Factors

Further investigations were necessary before any definite conclusion could be drawn concerning the identity of what might be called the diabetogenic complex of the anterior pituitary gland. Dr Young added that it was possible that in the normal animal the finely adjusted balance maintained between sugar production in the liver and sugar utilization in the extrahepatic tissues was controlled by the balanced antagonistic actions of insulin and the anterior lobe diabetogenic factor both acting peripherally on the muscles as well as on the central production of sugar in the liver. The case of the heart-beat might be analogous. The heart had the intrinsic property of beating rhythmically although the actual rate and type of beat were adjusted by the mutually antagonistic action of the sympathetic and parasympathetic nerve supplies. Similarly inherent processes of manufacture of sugar in the liver and utilization in the peripheral tissues probably existed these processes being intrinsic properties of the relevant tissues. The precise mutual adjustment of the rates of these two processes might be mediated by the endocrine system the antagonistic actions of insulin and the pituitary factors playing an important part in this adjustment. If that were so then freedom from diabetes was the result of a precise regulation of the relative effectiveness of the pancreatic and pituitary factors. If for any reason the regulation was faulty so that pituitary effects predominated then diabetes might result.

Whether the permanently diabetic condition resulting in dogs from anterior lobe treatment was a secondary phenomenon arising from islet lesions produced by the temporary diabetes or whether it was of primary significance and induced by a mechanism independent of that causing the temporary phase of the diabetic condition could not be decided at present. The first possibility was perhaps the more probable and it was correct then it might be found clinically that a short period of diabetes mellitus due to overaction of the pituitary gland might persist after the action of the hypophysis had returned to its normal level the persistence being due to pancreatic islet lesions.

It was clear that knowledge of the part played by the hypophysis in the aetiology of diabetes was still very elementary. The large number of published papers on the subject often mutually contradictory could be a source of embarrassment rather than an aid to future development. Perhaps few would disagree with the statement of Claude Bernard. It is that of which we are aware which is a great hindrance to our learning that which is yet unknown to us.

#### PSYCHOLOGICAL FACTORS IN ORGANIC DISEASE

At a meeting of the Medical Society of Indianapolis Psychology on May 12 with Dr H. C. SQUIRES in the chair a paper was read by Dr A. T. MACBETH WILSON on psychological factors in organic disease.

Drawing attention to the importance of nomenclature Dr Wilson defined organic disease not as a type but as a secondary stage of disease—a stage in which acute or chronic functional disturbances by either their severity or their chronicity had produced anatomical changes. Psychological factors were changes in the life of individuals related to their disease which were most easily described in the language of psychology. The bodily changes of emotion provided the link between psychological and physiological phenomena. Physiological disturbances of psychological origin might go on to organic disease which could in its turn produce further psychological and hence further bodily disturbance. The resulting clinical picture was apt to be complicated and was perhaps most easily understood by the use of a number of basic concepts.

#### Biological Tension

The first of these was what Dr Bacon had called the dispositions of organisms driven to satisfy certain needs. The second was the idea of traces—the fact that the mode in which the drives of the individual were satisfied was affected by experience and that some traces of a past event could influence current behaviour. The process by which the interaction of dispositions and traces produced a continuous satisfaction of needs despite changes in the environment was usually known as adaptation. Whenever adaptation became difficult it came into existence a state of biological tension which produced both psychological and physiological disturbances and the behaviour of the individual took on a character known as emotional which was most likely to mean more primitive. It apparently occurred as inevitably in the body as it did for example in the social behaviour of an individual who must necessarily make a certain journey and would if it was imperative successively use a car, a bicycle, walking and crawling.

It was sometimes a little difficult to understand the results of biological tension. To a large extent—a both clinical and experimental work seemed to indicate—physiological disturbances seemed to depend on the individual rather than on the specific nature of the physical or emotional stress which produced it. Similarly the degree or intensity of such physiological disturbances varied from one individual to another. Those who suffered from chronic tension were more likely to suffer stress to suffer disturbances when were more severe.

#### Body Speech

A concept of great value was that of the language of the body—the expression of emotion by alteration of physiological function. This concept was particularly important where adaptation had failed usually as a result of the situation known to psychologists as conflict. In this situation some drive of the individual became conflicted with self interests or self respect was banished from conscious expression and inhibited from being seen by body functions as were controlled by the central and the cerebral cortex. Such drives often continued to seek what satisfaction or expression was possible in spite of disturbances of those visceral functions which were controlled in this way. The situation might also be described as one of unrecognized biological tension. An important concept of which there was ample experimental and clinical corroboration. Asked about the relation of an individual might make to contradictory replies—such



in words and one in the language of the body. The second might be the correct reply, as in some instances of blushing.

What might be described as the idiom of body speech varied from one individual to another. The importance of understanding the idiom lay in the light it might throw on the origin of conflict—that is, of the need to speak in two languages. Although not of immediate therapeutic interest this was important in the prevention of disease, since to translate the patient's body speech into words, to interpret his physiological symptom was often of little value and might do harm. The aim of treatment in such circumstances was to lead patients to make their own interpretations.

### Gastric and Cardiac Manifestations

Previously reported investigations on peptic ulcer had shown that 84 per cent of 205 patients had passed through some disturbing event in their lives just before their symptoms began. In fifty-two cases of recurrent ulcer, in which there existed radiographic evidence of the return of a previously healed ulcer, forty-two of the patients had suffered gross disturbances in their lives before the recurrence, although they had not necessarily noticed the obvious connexion in time between external and internal events. To be in a position to convince first oneself and then the patient of this connexion removed much of the mystery from peptic ulcer and made treatment and prevention of recurrences more easy. Prevention of ulcer, a disease which caused 4,600 deaths in 1936, might be partly accomplished by adequate explanation and treatment of the dyspepsia, which so often existed for years before an ulcer appeared.

Work on cardiac pain by Bourne, Scott, and Wittkower had shown that there were two available theories of recurrent attacks of pain related to ischaemic disease of the heart—some change in the local conditions, or a visomotor change the result of a biological tension which might be as unrecognized in recurrent as it was obvious in single attacks. The psychological investigation of patients lent much weight to the second theory which had the additional advantage of explaining the differences in what was called sensitivity to pain. These cases of ischaemic disease of the heart showed clearly that psychological disturbances might arise from organic disease and produce secondary physiological disturbances affecting the symptomatology of the condition. That patients should express as they often did a feeling of relief after a severe haematemesis seemed to be a related phenomenon—a psychological effect of severe physiological disturbance strongly resembling the behaviour of the soldier with a blighty.

### CUTANEOUS AND CONJUNCTIVAL DIPHtheria

A meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland was held on April 22, with the president Dr E. T. FREEMAN in the chair.

Dr H. R. ROGERS described eleven cases of cutaneous and conjunctival diphtheria seen in the Cork Street Hospital during the last four months of 1937. Seven of the eleven cases also had non-diphtheritic conditions: two had concurrent scarlet fever, three erysipelas and two measles. In two cases only was the cutaneous or conjunctival diphtheritic lesion the sole infection present. Two of the patients died and in each case the cause of death was an associated streptococcal condition. In the five cases of cutaneous diphtheria the association of impetigo of the face or limbs with a diphtheritic or erysipelous condition led to the swabbing of the skin lesions. The conjunctival diphtheria was bilateral in five of the six cases of this condition and six of the seven cases showing cutaneous lesions had diphtheria of the throat or nose. These rare forms of diphtheria were not

associated with much toxæmia, and cardiovascular changes of diphtheritic origin were not observed. All the cases occurred in children. The diphtheria bacilli isolated were either of the gravis or intermediate type.

In the discussion which followed the president of the Academy, Dr A. R. PARSONS, Dr T. A. BOUCHIER HAYES, Dr L. B. SOMERVILLE, Dr C. MURPHY, Dr J. C. FLOOD and Dr ALAN THOMPSON took part. Dr R. A. Q. O'MEARA then read a paper on the use and abuse of sulphanilamide and related substances. A long and interesting debate followed, those taking part including Dr G. C. DOCKRAY, Dr C. J. McSWEENEY, and Dr V. M. SYNGE.

## Local News

### SCOTLAND

#### Finance of Scottish Universities

The Committee of Inquiry appointed by the Secretary of State for Scotland in April, 1937, has recommended the payment of grants out of the Education (Scotland) Fund to the four Scottish universities as follows: Glasgow £21,000, Edinburgh £13,000, St Andrews £5,000, and Aberdeen £4,000. These sums have been chiefly determined by the amounts necessary to enable the universities to balance their budgets for the present year. In the case of Glasgow this amounted to £12,000, and of Edinburgh to £4,000. Before the committee was set up it was pointed out by the Scottish universities that the number of students resorting to them was notably higher in proportion to the population than was the case in England and Wales. Indeed the Scottish universities made provision for over 20 per cent of the total number of students in Great Britain. Edinburgh and Glasgow had been able to preserve their solvency only by encroaching upon capital or by borrowing. Edinburgh had just managed to make ends meet in 1936-7, but a deficit of £4,000 was expected on the present year, while Glasgow had been under-financed for several years. The total Treasury grant annually distributed to the universities of Great Britain amounts to £2,025,600 and on the standard formula of receiving 11/80ths of what accrues to England and Wales the Scottish universities would be entitled to about £220,000, while in point of fact the Scottish universities are getting £346,750. In England contributions amounting to 8.7 per cent of the income of the universities are payable by local authorities direct to the universities in their areas, but in Scotland the income derived from local sources amounts to only 4.2 per cent of their income. The Scottish universities, it is pointed out by the committee, are well off in the matter of bursary and scholarship endowments administered by the universities, which have a revenue of nearly £70,000 a year, in addition to trust funds controlled by non-university bodies. The committee's report is published by H. M. Stationery Office, 120, George Street, Edinburgh, price 6d.

#### A Nutrition Inquiry

The inquiry into the connexion between economic and social factors and physical welfare conducted under the direction of Sir John Orr of the Rowett Research Institute, Aberdeen, to which reference was made in these columns on March 12 (p. 586) is further described in the annual report of the Carnegie United Kingdom Trust. The work which is proceeding includes an economic and dietary survey of 1,000 representative working class families, with a clinical examination of the children of the families surveyed, also a demonstration of the effect on health and physique produced by bringing the diet

of some 200 families to a higher level. The staff consists of a dietary survey team of nine trained women, a clinical team of two qualified medical practitioners with two assistants and four recorders of statistics. The report also gives details of the survey of Scottish village life completed during the early part of last year which was carried out by questionnaires addressed to the head teachers of rural schools in some 2000 Scottish villages. It was found that approximately half the villages in Scotland did not possess adequate hill accommodation which is considered to be essential to social organization and the Trust will assist some fifty villages to erect halls.

## ENGLAND AND WALES

### National Fitness Council Medical Committee

The National Fitness Council for England and Wales has set up a Medical Committee with the following terms of reference. To take such action as may be found desirable in order to enlist the co-operation of the medical profession in promoting the policy of the Council and to consider and report on the medical aspect of the Council's work. The membership of the committee as at present constituted is as follows: Chairman Lord Dawson of Penn M.D. Vice Chairman Sir Kave Le Fleming M.D. Dr Adolphe Abrahams Dr Anna B. Broman Dr George Chesney Dr G. E. Friend Major A. H. A. Gurn Dr J. Alison Glover Dr L. Haden Guss MP Dr L. P. Lockhart Captain J. G. Paterson Dr J. R. Rees and Miss P. Spafford. The first meeting of the committee will be held on June 2. The address of the National Fitness Council for England and Wales is 1 Queen Anne's Gate Buildings Dartmouth Street, SW1 (Telephone: Whitchall 9060).

### National College of Physical Training

The Board of Education and the National Fitness Council after considering a large number of possible sites have chosen one at Merstham in Surrey for the National College of Physical Training which is to be erected under the Physical Training and Recreation Act for the purpose of training teachers and leaders. It consists of 220 acres on the Merstham Manor Estate in a very attractive part of the North Downs. Part of the site forms an almost level plateau nearly 600 feet above sea level, and has very good views of the surrounding country. There are several areas of woodland and groups of trees and Alderstead Heath a public open space is adjacent. The land is protected on all sides not only by natural features but also by town planning schemes while close by are areas acquired in connection with the Green Belt. The site comprises three portions: the main portion of 130 acres including the plateau will probably be used for the college buildings and training grounds, a detached portion of nearly forty acres is admirably suited for playing fields being level and well screened by belts of trees while adjoining fields of about fifty acres are available to meet future needs. The soil is very suitable for grass and there should be little difficulty in providing lawns and playing fields on any part of the site. The college when built will be a national centre for the study and practice of physical training in all its aspects and will supply teachers of physical training for elementary and secondary schools together with organizers and leaders for the new fitness movement.

### The Cancer Campaign in Yorkshire

The Earl of Harewood presiding at the annual meeting of the Yorkshire Council of the British Empire Cancer Campaign at the Leeds Medical School announced that income now very nearly met expenditure. Professor R. D. Passy, head of the cancer research laboratory in the Algernon Firth Pathological Institute of Leeds

University presented a report with comments on the cancer situation in Yorkshire under his direction. He spoke in particular of the influence of prolonged inter-uterine infection on the development of cancer of the cervix and of the bladder and human cancer. He said that Walter H. Norris and his wife in Holland had lately examined the family histories of patients suffering from cancer and claimed to have shown that in both countries the incidence of cancer in certain sites in the body though not in all sites was higher in some families than in the population at large. To ascertain if the same was true in this country Dr Joyce Rhodes had begun an investigation of similar lines employing material obtained from the General Infirmary at Leeds and the Bradford Cancer Committee. The annual report of the work of the Yorkshire Council was presented by Sir Harold Macintosh. He said that it was the need for the campaign was great when the inaugural meeting was held in 1925 it was more so to-day. The work of the Propaganda Committee had done much in recent years to create a more rational and sensible attitude of mind towards cancer. Sir Edward Mellanby also addressed the meeting.

### Health Congress at Blackpool

The annual congress arranged by the Royal Institute of Public Health and Hygiene will be held next week at Blackpool from Tuesday May 31 to Saturday June 4. At the inaugural meeting the mayor will offer an official welcome to delegates and Lord Cozens Hard will give his presidential address followed by a civic reception and dance. The work of the congress is divided into five sections—(1) State medicine and industrial hygiene, (2) women and children and the public health, (3) tuberculosis and physical training—all of them meeting in the Technical College, Palatine Road. The local hospital, a crèche, welfare centre and other social services will be open for inspection by members bearing the congress badge and visits have been arranged to Preston Lytham St. Anne's Royal School and the Fylde Water Board's new reservoir. There will also be an exhibition of a film on physical fitness as promoted in Lancashire schools and a demonstration of physical exercises by members of the Lancashire Keep Fit movement. For further particulars can be had from the Secretary Royal Institute of Public Health and Hygiene 28 Portland Place London W.1.

## IRELAND

### Radiologists Meet in Belfast

The four biennial annual meeting of the British Association of Radiologists was held in Belfast on May 13 and 14. The scientific sessions taking place at the Whitla Medical Institute by permission of the Ulster Medical Society. At the opening session on Friday morning Dr R. Maitland Beath who was inducted as president by his predecessor in office Professor J. Woodcock Morrison gave an address on the history, activities and aims of the Association. This was followed later in the morning by an address from the guest of honour Dr P. Fiernberg Moller of Copenhagen on chronic fluorine poisoning as seen from a radiological standpoint. The afternoon was devoted to three papers on radiodiagnosis. A Paper on Radiography of the Fourth Ventricle by Dr T. G. Hart Hardman Dublin. Brocas Abscess and its Differential Diagnosis by Dr J. F. Brailston Birmingham and Syphilitic Aortitis and Aneurysm of the Aorta by Dr. Peter Kerley London. On the same day a visit was paid to the Royal Victoria Hospital and members were given an opportunity of inspecting the General Hospital, the Royal Maternity Hospital and the new open Magdalen Clinic. The annual dinner was held in the evening at Thompson's

Restaurant, the guests including Sir Robert Johnstone (President of the B M A), Dr Moller, the Vice-Chancellor of the University Mr C G Lowry (Professor of Gynaecology Queen's University), Mr Henry Hanna (Chairman of Medical Staff Royal Victoria Hospital), Mr Howard Stevenson (Senior Surgeon, Royal Victoria Hospital), and Dr J C Rankin (Physician in charge of Electrical Department Royal Victoria Hospital). The subject at the Saturday morning session was radiotherapy, two papers being presented by Dr S Cochrane Shanks, London, on "Four Area Methods of X-Ray Treatment of Tinea Tonsurans," and Drs J Ralston Paterson and Margaret Tod, Manchester on "The Radium Treatment of Angiomata in Children."

## Correspondence

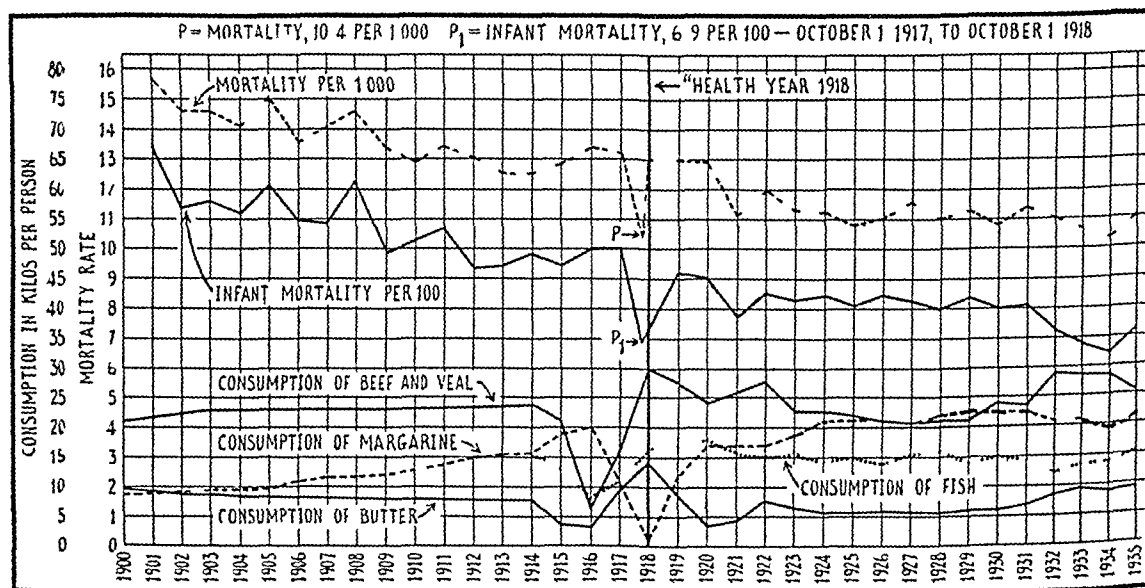
### Nutrition in Denmark During the War

SIR—May I correct any misunderstandings which may have arisen from Dr Alfred C Jordan's reference to the rationing of foodstuffs in Denmark in 1918 (*Journal* April 30, p 973). Rationing became necessary in this year

but his "dictatorial powers" were simply part of a myth which ought to be exploded. The rationing was forced on us by the circumstances then existing, and the director responsible for it was Professor H Mollgaard, who was supported by Dr Hindhede and several other people.

The directors of this scheme were surprised to find that the results of this rationing showed the importance of animal nutrition, thus supporting the modern views of McCollum, Mellanby, and Orr. The supposed "Spartan diet" of 1918 has for too long been quoted in support of the vegetarian faddism of Hindhede. It is an established fact that the Danish people never lived better than in 1918, when they had genuine home-made—mostly animal—food without any imported substitute foodstuffs. It was especially the poor people who benefited because of the equal distribution of butter and milk (instead of margarine and skim milk). It is especially dangerous for the nutrition of poor people if this great and important experiment with the dietary of three million people is misquoted and wrongly explained, as it has been for twenty years.

For full comprehension of the accompanying chart, which has never before appeared in an English journal, it is necessary to remember that the decreased mortality is counted from October 1, 1937, to October 1, 1938, the



Nutrition and Mortality in Denmark, 1901 to 1935

because margarine—which provides too great a proportion (15 to 20 per cent) of the calories in the Danish dietary—could not be imported, consequently the consumption of this substitute foodstuff was reduced almost to zero in the autumn of 1917. It became necessary to restrict the export of butter and a weekly ration of 250 grammes was allowed for each person. All small children were allowed 1 litre of whole milk (against Dr Hindhede's views) and the consumption of meat and fish increased considerably (this also was against Dr Hindhede's views). Free trade was possible in meat and fish, but potatoes were scarce, bread restricted and the imports of fruit diminished. To make up the loss of calories previously provided by margarine it was necessary to eat more milk and meat. The only part of the usual conception of this rationing which is true is that the bread was whole rye and whole-wheat because the import of foreign meal was stopped. Dr Hindhede certainly gave advice regarding the bread,

full mortality of the whole year 1918 rising to 13 per thousand because of the influenza epidemic which began in Denmark in October, 1918—I am, etc.,

Copenhagen

JOHANNES CHRISTIANSEN

### Problems of Thyrotoxicosis

SIR—The figures given in Mr Peter McEwan's most interesting paper (*Journal* May 14, p 1037) prompt the suggestion that the variations in the incidence of thyrotoxicosis throughout England and Wales have to a large extent a racial basis.

Mr McEwan's map on page 1039 bears an almost startling resemblance to those ethnographical maps that show stature, the amount of brunetness or the like. Wales shows a much higher death rate from thyrotoxicosis in 1936 than England, and Cornwall is fourth amongst the English counties. Much more striking evidence, however,

is provided by an area to the north of London Ripley (*The Races of Europe* 1899) states on pages 22-3

One detail of our map confirms us in this opinion that a primitive dark population in these islands now mainly of Celtic speech has been overlaid by a lighter one. Notice the strongly marked island of brunettes just north of London. Two counties Hertfordshire and Buckinghamshire are a dark as Wales and others north of them are nearly as unique. An investigation goes to show that this brunette outcrop is a reality. It is entirely severed from the main centre of dark eyes and hair in the west by an intermediate zone as light as Sussex Essex or Hampshire. Our stature map on page 227 makes the people in this vicinity very much taller than those about. This betokens a British lineage. In a later chapter considering purely social phenomena we shall show that peculiarities in suicide land tenure habits of the people and other details of the counties are likewise the concomitants of this same racial isolation. The fact is all the more striking because the district lies so close to the largest city of Europe. Again on page 221. Most remarkable of all is the little area just north of London comprising the counties of Hertfordshire Bedford and Huntingdon. This district we were at great pains to emphasize in our chapter upon the British Isles as a region where the physical characteristics of the pre-Teutonic invaders of the island were still represented in comparative purity.

This racial island may be taken to lie within the counties of Hertford Buckingham Bedford Northampton Huntingdon, and Cambridge. Of these six counties no fewer than three appear amongst the six English counties with the highest death rate from thyrotoxicosis—the other three all show incidences above the average. If it is a coincidence it is a most remarkable one that Mr McEwan's map should so faithfully reproduce the most curious feature in the ethnographical maps of this country.

I have made one further comparison. Beddoe (*The Races of Britain* 1887) gives a map showing an index of nigrescence which was the measure he adopted for assessing the brunetness of the population. Not all the counties are shown separately but adding together Mr McEwan's figures where necessary 33 comparisons can be made. The correlation coefficient between the index of nigrescence in 1885 and the death rate from thyrotoxicosis in 1936 is without weighting no less than 0.42 a value that is amply significant with 33 pairs of observations.

It would be interesting to see whether further observations covering other periods and other areas—for example France—confirmed the hypothesis that thyrotoxicosis exhibits a racial incidence. It is difficult to think of any other hypothesis that would account for the geographical variations that have been so clearly displayed by Mr McEwan—I am etc.

J. A. FRASER ROBERTS

Burden Mental Research Trust  
Stoke Park Colony, Bristol  
May 19

SIR—Mr Peter McEwan in his illuminating article on thyrotoxicosis in the *Journal* of May 14 points out that deaths from this disorder are highest in the counties of Merioneth, Cardigan Westmorland Huntingdon and Caernarvon. There are features in Merioneth and Caernarvon which bear on this problem—namely the migration of the young and strong and the low standard of living—both consequent on the depression in the slate industry.

The slate industry is the most important single industry in the two counties but unemployment among the workers in the Caernarvon area during the past eight years has averaged more than 31 per cent. Further the average wage of those in employment is far lower than that of workers in any other extractive industry—namely 45s 1d

per week. The next lowest industry is stone quarrying 31s 3d while the average for 230 industries in Great Britain for the same period was 64s 6d. This accounts for the steady migration of the young and strong which is shown in the census returns. Here we find that if the proportion of persons between 20 and 24 years of age in Great Britain is taken as 100—the proportion in the Gwynedd (a quarrying and agricultural district) is only 77 whereas the proportion of workers in the 65-69 age-quinquennium is 130 compared with 100 for the whole of Britain. Further in the pre-war years the average wage in the slate industry (and with it the standard of living) was appallingly low—24s 11d per week compared with a bricklayer's 40s 7d.

We therefore have a population chronically undernourished from which the young and strong elements are continually being removed and this seems to me to be the cause of the high incidence of thyrotoxicosis—autumn states deficient vitamin and relatively low resistance to infection remain. It must be realized that these facts apply only to the quarrying industry, the standard of health in the immediately neighbouring agricultural and seaside districts is high.

I am indebted for the foregoing figures to Mr Dylan Pritchard M.A. F.S.S. whose report was prepared for the recent inquiry into the incidence of tuberculosis in Wales—I am etc.

GRIFFITH EVANS  
D.M. FRCS.

Caernarvon May 20

SIR—I should like to thank Mr Cecil A. Joll for his kind reference to my article on this subject (*Journal* May 21 p. 1125) and for emphasizing his views as to the danger of iodine medication in thyrotoxicosis. Mr Joll also refers in connexion with one of the cases I quoted to that most controversial problem—thyrotoxicosis in the absence of an enlarged thyroid gland. He delicately points out that the photographs prove nothing as regards the size of the gland but I had meant those to illustrate the point not to prove it. I considered that the clinical facts established the diagnosis in this case. The report of the microscopic section however was oedema and some areas of fibrosis and degeneration. Colloid storage was diminished and some of the vessels contained finely granular material. Epithelial hyperplasia was not present. My intention was to direct attention to this group of difficult cases in which hyperthyroid symptoms are present but in which it is difficult to differentiate the gland from the normal and I am glad to have elicited Mr Joll's method of dealing with this very real difficulty—I am etc.

Bradford May 23

PETER MCEWAN

### Diethyl Ether Anaesthesia

SIR—The letters in the *Journal* on this subject from Dr E. B. Grogono (May 14 p. 1068) and Dr John Elam (May 21 p. 1127) should prove valuable in bringing this serviceable anaesthetic into more general use. Dr Elam's letter ends with the hope that some of our expert anaesthetists will carry out further work on this valuable agent. This excellent proposal further suggests that Dr Elam and possibly many others are unaware of the history of the drug and of the manner in which it was introduced into this country.

It had long been known that diethyl ether possessed anaesthetic properties but difficulties in manufacture and stabilization prevented its general use. Messrs. Mure and Co. of Rahway, New Jersey, after prolonged research were able to overcome these difficulties and produce an

efficient and relatively stable form of divinyl ether which they introduced under the name of vinethene, later changed to vinesthene. Numerous clinical trials were made for them in America, and the exact action of the drug was exhaustively experimentally examined by Dr Hans Mollitor, their distinguished pharmacologist. Before, however, allowing any of the preparation to be sold in England, Messrs Merck asked the Anaesthetics Committee of the Medical Research Council and the Royal Society of Medicine to conduct a clinical investigation of its properties. Dr Mollitor and Dr Randolph Major (their research chemist) attended a meeting of the committee in London and placed all their information at our disposal. They also arranged to have forwarded to us adequate supplies of the product.

Sir Francis Shipway, Dr Langton Hewer, and myself all made careful notes of its action in large numbers of cases and some four or five other anaesthetists also gave their assistance with more limited numbers. The results of all these observations were then pooled and a paper on vinethene was published, on behalf of the Committee, by Sir Francis Shipway in both the *British Medical Journal* (p. 70) and the *Lancet* (p. 82) on January 12, 1935. It will be remembered that a similar procedure was employed in the case of both avertin and evipan. Since that time Messrs Merck have appointed Messrs May & Baker as their agents in this country and the latter firm now import vinesthene, and I understand partly manufacture it at Dagenham, and are the sole agents for marketing it here.

The merits of vinesthene have been so well described in the letters mentioned above that I need add nothing. However, while on the subject I would like to mention one or two points that might lead to disappointment if not realized beforehand. Dr Grogono refers to the price (about 3s per ounce), which makes administration by open methods rather costly. This is unfortunate, as I have found it far the best method of administration for children for whom it is a particularly suitable agent owing to the small amount of mucous secretion. Although much more potent than ether it is also far more volatile, and so considerable quantities have to be used on an open mask. This great volatility causes another trouble. Although the bottles in which Messrs May & Baker pack vinesthene are most elaborately stoppered and sealed I have sometimes found one nearly or quite empty after being stored in a cool cellar for some little time. Again though relatively stable while in the sealed bottles (it is packed in an atmosphere of nitrogen), it quickly depreciates when once opened and should not be used after the lapse of a few hours.

Vinesthene has a rather unpleasant odour, suggestive of garlic but this odour is extraordinarily evanescent. It disappears from the air of the operating theatre and from the patient's *breath* in a remarkably short time. A ward sister to some of whose patients I was accustomed to give vinesthene on the mornings preceding visiting afternoons was loud in its praises. She told me that her ward was free from the smell of anaesthetics when her visitors arrived which was far from being the case when ordinary ether was used.

Vinesthene should not be given when there is any suspicion of defective liver function. Further even than this Dr Mollitor does not recommend its use, as the major agent in prolonged operations. As an adjuvant this warning would hardly apply. As to potency, it must be remembered that vinesthene lies somewhere between ether and chloroform and probably rather nearer the latter. So the possibility of overdose must not be overlooked.

In my view the best method of administration is with a gas-and-oxygen apparatus, such as a Boyle's, when it will be found that passing the gases over the surface of the vinesthene will usually give adequate relaxation without bubbling them through the liquid.

It is most distasteful to me to criticize any opinion of such an authority as Dr Elam, but I feel compelled to warn strongly anyone less experienced than he is against using vinesthene in a Clover's inhaler. We all know that the surest way of killing a patient with an anaesthetic is inadvertently to place chloroform instead of ether into a Clover. Vinesthene is nearly as potent as chloroform. *Verb sap.* The only other instance in which I have heard of vinesthene being used in a Clover's inhaler happened by inadvertence while we had the substance under test. It proved rapidly fatal—I am, etc.,

C. F. HADFIELD, D.A.

Hon. Sec. Anaesthetics Committee,  
M.R.C. and R.S.M.

London, W.1, May 23

### Perforation in Typhoid Fever

SIR,—In Sir William Willcox's account of certain cases in the Croydon typhoid epidemic published in the *Journal* of May 21 there occurs one paragraph upon which I am surprised that he did not make some comment—namely, the paragraph about perforation on page 1086. "*Perforation of the ileum* occurred in one case. This was recognized early, and all liquids by mouth were withheld for three days, recovery followed without operation." As there was only one case of perforation this paragraph presumably refers to Case 1 recorded on page 1090 where it is stated that the patient died twenty-five days after perforation, apparently from the effects of toxæmia due to the *B. typhosus* and not to any sequel of the perforation. In this account the fact of perforation is referred to as briefly as if it were a triviality instead of the most dreaded and deadly of the complications of typhoid.

Many years ago in a discussion on perforation in typhoid at one of the medical societies of London I was somewhat sharply taken to task by the late Sir John Bland-Sutton for venturing to suggest that a patient might recover from perforation without operation, because, he said, you cannot be certain that perforation has occurred unless you have the evidence of either a necropsy or an exploratory laparotomy. Sir John was, I now think, right, for, though I have seen two cases in which I believed perforation with recovery had taken place without operation, I am convinced that I should have had great difficulty in proving in a court of law that my diagnosis had been absolutely correct. It is quite certain that symptoms justifying operative intervention may occur and yet an exploratory laparotomy will show that perforation has not taken place, there may, indeed, be no macroscopical morbid condition whatsoever.

Further, the paragraph I have quoted above would I think, lead any practitioner who has had no, or little, experience of enteric fever to conclude that the best way to treat perforation is to withhold all liquids by the mouth and trust to nature. Sir William does not deal with perforation in his paragraphs on treatment. One asks why, if perforation was diagnosed early in this case, recourse was not had to operation. The only contra-indication to operation is a moribund state of the patient and if this patient was the one referred to in Case 1 possibly that was the reason. Perforation of an abdominal viscus in typhoid if not operated upon is almost invariably fatal—I am, etc.,

Hemlingford Abbots, Hunts, May 22 E. W. GOODALL

## The New Divorce Law

SIR—This law enacted to relieve the hardship and cruelty unintentionally inflicted upon an innocent family must be in the public interest and in view of the statement made by Mr Justice Humphreys as President of the Medico Legal Society on April 28 (and reported in the *Journal* of May 7) I hope I may approach you further. The occasion was of a very full and instructive paper read by Mr William Latcy dealing with the question of incurability of insanity as a ground for divorce under Sec. 2 (d). The judge stated that this question will not be left to the medical witness to decide but that the judge himself would as in every other case come to his conclusion of fact upon the evidence. A remark was recently made to me by a High Court Judge that he himself was much perturbed as to the meaning of incurability. How could I be satisfied that a case was incurable? The paper referred to helped to clear the issue and it is hoped will soon be published.

As a consequence of the Act the hardship and pitiless neglect inflicted upon a family of young children dependent on a parent suffering from incurable insanity will be mitigated in spite of some moral prejudices presented and it may be helpful to state that there are many safeguards against the improper detention of a patient certified to be insane which imply that any patient detained for over five years is probably incurably insane.

The Act states that a petition for divorce may be presented to the High Court by the husband or wife on the ground that the respondent is incurably of unsound mind and has been continuously under care and treatment for a period of at least five years previously and preceding the presentation of the petition.

It would appear to be impossible to detain a recovered case after the period fixed by the Act—namely five years—and only those who were deemed incurable would remain and for the following reasons: (1) It is required by law for the protection of the patient that within one day of the reception of a patient under care a copy of all the admission papers (certificates orders etc.) must be forwarded to the Board of Control (Lunacy Commissioners). (2) The patient must be examined fully both physically and mentally by the doctor within seven days of admission and the result as a statement to this effect must by law be sent to the Board of Control who may make further inquiries and demand a further report if they think fit. (3) Before one month has expired after admission another medical statement justifying detention must be made and sent to the Board of Control. (4) Before the expiration of a year if the patient is still detained another medical statement must be made and sent to the Board of Control and (5) yet others at the expiration of the second fourth and seventh years and after that (6) a further report must be made every five years. These reports are to the effect that the patient is still of unsound mind and a proper person to be kept under care and treatment. As additional safeguards one or two members of the Board of Control visit all public mental hospitals once every calendar year and a private interview is granted to any patient desiring one when any complaint regarding detention or treatment can be made. The private licensed houses in the London area are visited officially six times a year and two visits are made by them to private asylums outside this area as well as four visits by local Justices of the Peace. In addition a patient it well enough may be granted leave of absence for a period of forty eight hours. All voluntary patients may leave at any time on giving three days notice. Further all letters written by patients to the petitioner the Board of Control and to others (specified) must be forwarded unopened. It thus appears there is a great unlikelihood of any sane patient being detained improperly and I quote these facts as a reassurance to show

that no certified person—unless demented and incurable—is likely to be detained in an asylum.

Recovery after five years is not impossible though unlikely and improbable. In 1000 cases I have known improvement sufficiently definite for the patient to be discharged in only four cases after twenty years detention but there is always the possibility of a relapse. My personal experience is that less than 5 per cent of all cases of insanity recovered after they had been detained over five years. The late Sir George Savage a leading authority on mental diseases supported me and held that even after an acute and short attack of insanity although recovery had taken place a permanent scar was left on the brain. There has been much uncertainty on the part of medical officers in charge of insane patients (1) whether they should be compelled to give the information about incurability of a husband or wife. A medical officer has no desire to obstruct the Act and render the law of the land ineffective and inoperative. If he refuses the information does he stultify the law and render himself liable to punishment? Also can the Court demand the information? The number of cases where a petition being sought for is likely to be a serious one is already into four figures but I have been informed there is much hesitation and demur. (2) Is the doctor giving the information protected if he describes a patient as incurable and this patient should subsequently be cured? (3) If the doctor in charge declines to give the information and an outside specialist is brought in will the local authority detract the expenses in the case of a 'stale' patient? (4) Will the local authority in the case of patients from a public institution detract the costs of an action at law arising out of the proceedings? (5) Is it a betrayal of professional secrecy to certify incurability? Several of these points have been considered by the British Medical Association and also by a committee of the Royal Medico-Psychological Association but other points must necessarily arise and it will be a satisfaction if help can be given to those desirous of doing their duty under the new Divorce Act to individual patients and to their friends and to the State. Already complaints are being made and requests urged for an amendment in Parliament to omit this clause in the Act as to incurability—I am etc.

London W 8 May 21

ROBERT ARYSTRO G-JO ES

## Pneumonia, Subphrenic Abscess, Duodenal Fistula

SIR—In the most interesting case described by Sir Arthur Hall Mr Graham S Simpson and Dr J L A Grout in the *Journal* of May 14 (p. 1043) it is difficult to imagine the pus from an empyema going through the diaphragm to form a subphrenic abscess and then this abscess bursting into the duodenum. Is not the reverse direction more likely? I have seen cases in which the duodenum has been perforated without vomiting or previous symptoms of duodenal ulcer causing rupture. Friction between the liver and the diaphragm which is mistaken for pleurisy. Following this a subdiaphragmatic abscess develops which gives rise to dullness at the right base due to collapse of the lung by pressure and this is thought to be pneumonia by the medical attendant. But on percussion in front of the chest instead of dullness there is a tympanic area over which a dullness can be obtained with coins owing to the abscess containing gas. Such an abscess if allowed to persist does often perforate the diaphragm and cause empyema.

and may also cut into the lung so that sputum may be coughed up. Most of the cases of subdiaphragmatic abscess that I have seen have been referred to me because of pneumonia—I am, etc.

Hove, May 18. WALTER BROADBENT, M.D., F.R.C.P.

### Psoriasis

SIR—I have read with interest the paper on psoriasis by Dr J. T. Ingram in the *Journal* of April 23 (p. 881). Dr Ingram gives the impression that a hot sunny climate is an infallible treatment for psoriasis. He states that if the patient can be transferred to a hot and sunny climate the psoriasis spontaneously disappears. Again, that it is well known that in a cold, stormy and sunny climate the psoriasis will disappear and will not reappear so long as the patient remains in that climate. It is obviously fatuous, therefore, to suggest that treatment is useless. Finally, he says that ultra-violet light therapy is undoubtedly the next best thing to being able to live in those climates where psoriasis does not exist.

The Northern Sudan fulfils all requirements as to a very warm and sunny climate. During my service therein my work has brought me very little into contact with psoriatic patients, and I can form no impression as to the prevalence of psoriasis among the white population. I have, however, in the last six years in the Sudan met with two white subjects of psoriasis.

A man who has been over ten years in the Sudan. To my knowledge he has rarely been free from typical psoriatic patches for the last six years. Before coming to live in the Sudan the only manifestation of the state which he had noticed was an affection of the nails which now show characteristic pitting. A diagnosis of psoriasis had not been made.

A man whom I was asked to see in consultation. He was suffering from what at first sight appeared to be a generalized seborrhoeic dermatitis. The presence of characteristic demarcated lesions in the scalp and over the knees and interolateral aspect of one leg made a diagnosis of psoriasis clear. He had been resident in the Sudan for at least nine months.

About nine years ago in England I came across a case of longstanding psoriasis in a middle-aged woman who had lived for many years in Cape Town. The disease had first appeared there. Her condition failed to improve with ultra-violet light treatment.

Psoriasis is certainly not non-existent among natives of warm and sunny climates. In 1931 I saw Dr P. H. Manson-Bahr demonstrate a case in a Lascr sutor. It is my impression that psoriasis is not uncommon in natives of the Sudan. During some three years in which I was seeing out patients at the Khartoum Civil Hospital I was able to show a number of typical cases to students of the Kitchener School of Medicine. Some of these cases, submitted to biopsy, presented a consistent histological picture. During the current year I have seen two cases of the condition in the White Nile Province. Both cases had been diagnosed by a Sudanese medical officer of the Sudan Medical Service. It is my experience that graduates of the Kitchener School of Medicine are familiar with, and have little difficulty in recognizing, psoriasis—I am, etc.,

El Dugim, Sudan, May 13

HENRY RICHARDS

SIR—In the article on "Some Problems in Psoriasis" by Dr John T. Ingram in the *Journal* of April 23 two rather dogmatic assertions seem to me, as a general practitioner who has been troubled with this scourge since puberty, to require a little modification. The first is 'We all know that if the patient can be transferred to a hot and sunny climate the psoriasis spontaneously dis-

appear.' This may be true in the majority of cases but in many cases the psoriasis has been in India and Mesopotamia for many years and would very probably persist if the complaint were not once and for all at the end of this period and in a hot climate in the state. I am sure that even if the patient of a worthy person could afford to take such a holiday he would be far from cured and psoriasis in a climate would be decidedly cured.

Another point which vexes me is the detail which we are given in the article of the complaint and its treatment afforded by the patient. Pregnancy and not a course of treatment of several weeks of active breaks of psoriasis. This may be a bit hardly helpful to a doctor and the following case I saw was under my care. A woman who had been affected with the scourge from the age of puberty up to her marriage about ten years later found of a sudden that of conceiving and becoming a mother the psoriasis mysteriously disappeared without a further effort to labour or even to consider treatment and the cure was completely clear. When we first discuss a problem that the shock can either cure or combine it appears then it would seem that our knowledge of it is very meagre and the cure is a fact of God.

I read the article not in an cynical spirit for I enjoyed and was helped by it considerably. The two points I have raised may call for an explanation but a satisfactory one I am at a loss to give—I am, etc.

Worcester, May 17

J. G. BENNETT

### Sterilization of Syringes

SIR—In the *Journal* of May 13 (p. 1070) Dr J. Sandison Crabbe describes the method of sterilizing hypodermic syringes with olive oil heated till a crumb of bread in it turns brown and mentions that he has used it for over thirty years. It may be of interest to note that this method was in use at the Pasteur Institute in Paris as long as 1890. In the early spring of that year I attended Dr Roux's course of practical bacteriology and saw this method used for sterilizing the syringes which were employed in the treatment introduced by Pasteur, of those who had been bitten by animals suffering from rabies—I am, etc.,

Manchester, May 21

GEORGE R. MURRAY

SIR—May I suggest that pure carbolic acid may be very usefully employed in quickly and satisfactorily sterilizing hypodermic syringes. The needle is immersed in the carbolic and the fluid is drawn up into the barrel, thereby sterilizing the interior of the syringe as well. After about a minute's immersion the carbolic is removed by boiled sterile water and the syringe is ready for use. The carbolic acid can be easily carried in the practitioner's bag if stored in a well-stoppered bottle enclosed in a wooden case. In addition a small measuring glass, into which the antiseptic is poured for the purpose of the immersion, may be added to the equipment. The same method can be applied to the sterilization of forceps, scissors, etc., in the treatment of minor injuries which come to the surgery. One or two fairly wide-mouthed glass jars are kept ready filled with liquid carbolic acid, into which the essential parts of the instruments (those which touch the wound) may be immersed. They are quickly sterilized, and are then removed into the antiseptic lotion which is used for washing and cleansing the wound. A couple of sugar-tong forceps act admirably as fingers for handling the cotton wool and dressings,



and the wound need not be touched by the surgeon's hands. I have found that this procedure yields good results—I am, etc.,

Rhyl May 16

J JONES

SIR—I have followed with interest the many methods of sterilizing hypodermic syringes described in the *Journal* in the past few weeks. May I mention another method that does not appear to be generally known?

I carry in my bag a two ounce bottle of chloroform. Having assembled my Record syringe I dip the needle into the bottle and suck some chloroform into the syringe. The syringe is then held point upwards and shaken to make sure that the whole of the inner surface has been wetted and the chloroform is then squirted back into the bottle. By moving the plunger in and out a few times all chloroform is expelled and the syringe is dry and for all practical purposes sterile. I have used this simple method for some thirty years and have never had cause to regret it. As the whole procedure takes about a minute the time saved is considerable.

The chloroform bottle will be found useful in a variety of other ways—for rapidly sterilizing the clinical thermometer, the business end of an abscess incise dissecting forceps, probe etc. and for removing the remains of rubber adhesive plaster from the skin and grease stains from one's clothes. I may add that a few drops of chloroform judiciously applied to one's outer garments will cut short the activities of a flea that has reached one's skin—I am, etc.,

J SMALLEY

Torcross Devon May 16

Major IMS (ret.)

\* In our correspondence columns five months ago (January 8 p 92) Dr Charles Corfield said he thought that chloroform should be a good solution to keep both syringes and needles in, in the belief that chloroform is lethal to all forms of micro organisms and to spores. Professor L P Garrod who has made a special study of the action of antiseptics wrote in the *Journal* of February 12 (p 358) that the statement that chloroform will kill spores requires emphatic contradiction. He quoted the observation made by Koch in 1881 that chloroform would not kill anthrax spores in 100 days and his own observation that it kills the spores neither of *B. subtilis* nor of *C. tetani*. In the annotation which gave rise to the recent correspondence on the sterilization of syringes we drew attention (*Journal* April 30 p 955) to a case in which the patient died from gas gangrene after an injection into the thigh of luminal *C. welchii* were found in the 70 per cent alcohol in which the syringe was kept. It was pointed out that spores have been found in material which had been immersed in spirit for twenty years. It seems therefore that although many practitioners have used alcohol for sterilization of syringes without any accidents and although some evidently have had the same experience with chloroform it is quite clear that neither of these agents has a destructive effect upon spores and that anyone using them should bear this in mind—Ed. B.M.J.

### Penetrative Power of Infra red Rays

SIR—Advertisements of the Heala ray apparatus claim that it produces infra red rays of wave lengths between 600 000 and 1 000 000 Å and that these rays penetrate the tissues deeply. Now a number of scientific papers have been published which show that the shortest infra red rays (about 10 000 Å) and the red rays are the ones which penetrate the skin most deeply but only about

10 per cent of these penetrate through the cheek which is about 5 mm thick. In the case of a white man a faint red glow may be seen in a mirror in a dark room coming through the cheek when a glow lamp is put inside the mouth. Dr H J Taylor working in the laboratory of the St John Clinic found that the whole skin of a rat 0.41 mm thick absorption was complete for rays below 70 000 Å. The human body itself is an emitter giving out infra red rays of about 93 000 Å. An average length of 600 000 to 1 000 000 Å would then be felt as cold. The Heala ray apparatus is an emitter of dark heat and scientific evidence shows that heat when passed from a dark electric heater through a piece of flesh slowly conducted through from the surface. The rays do not penetrate it—I am, etc.,

St John Clinic, Ranelagh Road,  
SW 1 May 23

LEONARD HILL

### Pathogenesis of Bronchiectasis

SIR—I was interested to read the paper by D S F P Lee Lander and Maurice Davidson in the *Journal* of May 14 (p 10-7). When I was working in the chest service of the Barnes Hospital St Louis I was able to make similar observations and noted that not only do the ectatic bronchi constrict during expiration but also that they dilate considerably when amyl nitrite is inhaled. Professor Ewart A Graham suggested that amyl nitrite might be given to patients who were having bronchograms made for the diagnosis of bronchial neoplasms and we observed that in some of these cases considerable dilatation occurred at the tumour site after the inhalation of the nitrite suggesting that there was bronchial spasm. When these observations were extended to cases of bronchiectasis it was found that in some cases dilatation occurred in the ectatic bronchi after inhalation of amyl nitrite. As the authors of the recent article point out this does not well agree with the textbook theory of the pathogenesis of bronchiectasis—I am, etc.

Exeter May 16

W F NICHOLSON

### Excision of the Patella

SIR—In the *Journal* of February 19 (p 297) there is a reference to an operation performed by Lister only years ago—Lister put his faith in the value of the antiseptic method to a supreme test. To Lister it was no less than he had opened joints before the first knee joint being a suppurating one. There the annotation leaves Lister and warns 'any and every one who calls himself a surgeon that they may come to grief over any operation involving opening of the knee joint. The dangers returned to are intra articular haemorrhage and infection. This is very sound advice to the surgeon of to day who operates full of hope but not certainty. Why was Lister's antiseptic method with drainage which had survived a 'supra test' not recommended? We have only to turn back to the second volume of the *British Medical Journal* of 1889 (p 355) to read of a number of cases of successful repair of the fractured patella reported by Lister. Incidentally only under very exceptional circumstances would Lister have excised the bone however severely damaged. He was decidedly averse to sacrificing tissues that could be saved. Damaged tissue that is excised is dead and cannot be saved by the antiseptic method and the patella is an important protector of the knee joint. It is not too much suggested that 'this cherished bone the patella is superfluous'. All second bones are precious and a knee joint without one is left vulnerable to the simplest





adjuvant treatment in cases of gonorrhoea provided it is given in appropriate doses.

2 More research is needed in standardizing the proper doses necessary for treatment in the different stages of gonorrhoea.

3 Local treatment in all stages of gonorrhoea is very essential.

4 The cases which best respond to the antitoxin are those with metastatic localizations.

5 The fact that there are cases which respond very quickly to the antitoxin and others which do not points to the need for further investigation to settle the contradictory views held by different workers. Owing to the well known fact that there are different species of gonococci which even of old differed in their response to treatment we believe that there may exist a species specificity to the antitoxin—a hypothesis which points to the line of investigation that could possibly be followed to settle this problem.

We intend in the near future to publish details of our work which we hope will further tend to prove the points stated above.—We are, etc.,

H EZZAT  
Director Venereal Section  
A F RAGAB  
Tutor Venereal Section

Kasr el Aini Hospital Faculty  
of Medicine Cairo May 11

### Treatment of Placenta Praevia

SIR—I feel impelled to reply to the letter of Dr H Gordon Oliver (*Journal* May 14 p 1071) because I disagree entirely with his method of treating placenta praevia which is none other than the dangerous and one had hoped obsolete method of *accouchement force*. The first principle in the treatment of placenta praevia is that the case should be transferred to a hospital or well equipped nursing home whether the case requires Caesarean section or not. I am sure Dr Oliver agrees with this and my criticism only concerns his treatment of a case when it was not possible to send to hospital. Under these conditions the usual procedure is version and pulling down a leg, the delivery then being left to nature. If possible an external version is preferable but otherwise a bipolar version will be necessary. Under domiciliary conditions this treatment by early version and slow delivery gives good results although the use of Willett's scalp forceps provides an even better method. The technique of their use is easier than that of version while the results are as good for the mother and a little better for the child. I see no reason why the use of Willett's forceps should not be within the repertoire of the practising obstetrician who may have to deal with placenta praevia in isolated surroundings.

For lateral placenta praevia rupture of the membranes may be all that is required but the application of Willett's forceps in addition can do no harm and is a safeguard where the simpler measure fails to stop the bleeding. The risk to the child is a secondary consideration in such a serious maternal complication. Many of these children die owing to the original separation of the placenta and many of them are premature. Even with Caesarean section there will be a foetal mortality of about 25 per cent although isolated series with lower rates have been reported. Version gives a 60 to 70 per cent foetal mortality and Willett's forceps 10 to 15 per cent less than this. As regards the treatment actually adopted in Dr Oliver's case—namely manual dilatation and forceps delivery—the risks of severe laceration of the lower segment are extreme partly from manual dilatation and partly from the application of forceps when the cervix was sufficiently dilated to allow it. Such practice leads

to fatal post partum haemorrhage. It is in fact *accouchement force* and although it may give a slightly lower foetal mortality than version it will also result in a serious increase in the maternal death rate. The method is an old one dating back to before the time of Pare. It is rediscovered from time to time but has been proved to be not dangerous and should have no place in modern obstetrics. At the present time cases of this type or placenta praevia when removal to hospital is out of the question are best treated by version followed by natural delivery or if the instrument is available by the use of Willett's forceps—I am, etc.

Souths May 22

TREVOR BARNETT  
M.D. FRCS. M.M.S.A.

### Origin of Cancer

SIR—I am much obliged to Dr W. L. English (May 14 p 1070) for drawing my attention to some points mentioned in the *Journal* of May 7 (p 1024) which apparently require amplification. In the case of the clock weight although the gravitational pull on the weight is almost the same all the way down the capacity for doing work is potential is greatest when the weight is at the top. I am however alive to the fact that the analogy between the clock and the tumour is not as good as it might be. In regard to the suggestion that the developmental energy I mentioned is of the same ilk as vital to cells *force hypermechanique* I can assure Dr English that far from being a vitalist I have been all my life a confirmed rationalist. In this connexion I suggest that he carefully peruse a discourse delivered by Professor H. Mark at the Royal Institution and published in *Nature* of July 3 last on the synthesis of large molecules. Professor Mark explains how for the building up of a highly complex organic molecule from a simple one a certain definite amount of activation energy is necessary. I am now suggesting that possibly the activation energy which Mark says is necessary for polymerization is of the same class as the growth energy or *Baumum* of Cope and other thinkers. Cope in his *Primordial Forces of Organic Evolution* (p 481) states: "The duration of life or of the functioning organic machine has a definite limit in time. All this means that a certain limited quantity of energy is at the disposal of each individual organism"—I am, etc.

11, of Man May 17

E. G. FLETCHER

### The Services

#### DEATHS IN THE SERVICES

Surgeon Captain Sir ARTHUR STANLEY NANCE, K.B.E., C.B., R.N. (ret.) died at Donemark, Bantry, Co. Cork, on May 11 aged 77. He was born on May 27 1860. The son of Mr James Nance, F.R.C.S., of Ecclehall, Salterford, was educated at Trent College and St. Bartholomew's Hospital and took the M.R.C.S. in 1882 and the L.S.A. in 1885. After holding the post of House Surgeon at the Metropolitan Free Hospital he entered the Navy and became Fleet Surgeon of August 1900 and Surgeon Captain on June 22 1917. During the war of 1914-18 he was principal medical officer at the Admiralty and received the C.B. and K.B.E. in 1919 also the United States Navy Cross. He was a Justice of the Peace for Co. Cork. In 1896 he married Janet Beatrice daughter of Mr W. S. Tidball, B.A.

Colonel GEORGE JENOME KELLIE, B.A., M.D., Surgeon (ret.) died at Guildford on May 10 aged 70. He was born at Karachi on March 15 1867. The son of Mr James Kellie of the 9th Foot (Royal Irish Rifles) and was educated at King's College, London. He took the L.R.C.P. and the M.R.C.S. Eng. in 1890 and the D.P.H. of the Inst.

Lieutenant Colonel John Joseph OBE FRCGS (ret) died at Fairfield, Warrington, North Merseyside, on April 24, aged 67. He was born on March 7, 1891, at Lymm, educated at Gillingham, where he graduated M.B., B.S., with high commendation, and winning the Bursary Entrance Scholarship. Subsequently he studied at St. Bartholomew's Hospital, London, took the M.R.C.S., F.R.C.P. in 1918, and the F.F.C.S. in 1908. After filling the posts of house surgeon at Gillingham Hospital, Wakefield, and the Eye and Ear Infirmary at Liverpool, Stanley Hospital at Liverpool, he entered the Indian Medical Service as lieutenant on July 27, 1919. He became a major, lieutenant colonel on January 28, 1919, and retired on July 10, 1929. He served in the war of 1914-18, and was mentioned in dispatches in the *London Gazette* of December 25, 1917, and June 8, 1919, and received the OBE on June 9, 1919. Most of his service was passed in civil employ in Bengal and Bihar. He had been a member of the British Medical Association since 1901.

## A SUICIDE'S INSURANCE POLICY

### *Judgments in Final Appeal*

<sup>1</sup> Beresford v Royal Insurance Co Ltd *Times* May 10, 1937,  
53 *Times Law Reports* 583

To the Honorable Secretary of the Department of the Interior  
 Washington, D. C.  
 Sir: I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the application of the National Park Service for the purchase of the land known as the "Horse and Rider" land, situated in the State of California, and to inform you that the same has been referred to the proper authorities for their consideration. I am, Sir, very respectfully,  
 Yours very truly,  
 J. M. Smith, Secretary

To Mr. Justice Macmillan, it was clear that it was not the duty or intention of the company in making its policy, to effect an assignment to itself. It was directly contrary to it, merely that the policy would do it, should and being its own, should permit of two operations. It did not cease to pay a consideration of his contract, should but in consideration of that it paid the premium, imposing a time limit of a year, it provided some sales and against his terms, out of policy, the policy to provide. Moreover, the insured could not be said to be cut by his crime. The intent of the provision was a transfer not a guarantee against the desire to benefit relative or creditors was a motive for it. If the plea of public policy was stated in this case the remarkable result would be that the company who had provided the insured with the inducement to commit a crime, would be the only persons to benefit by it. Two principles of public policy were in conflict, for it was undeniably public policy that persons should fulfil the contracts into which they entered, and in particular it was important that life insurance policies, which were most useful instruments of credit, should not be subject to any contingent invalidity. However having pointed out these considerations, it was the judgment in which the other learned lords had concurred. Lord Macmillan did not find that they were sufficiently convincing to deter him from agreeing with that judgment also.

The Irwell Valley Water Board were ordered by the Manchester Assize Court 1st December' to pay damages to a married couple who rented a public house supplied with water by the Board and had suffered from lead poisoning. The water was pure up to the stop cock of the premises, but on the premises themselves there was twenty four feet of old piping which was apt to contaminate water which stood in it. The water had a plumbo solubency of twenty eight parts in a million and Mr Commissioner Henn Collins, K.C. (now Mr Justice Henn Collins) found that although they had satisfied their statutory duty of supplying pure and wholesome water, they had failed in their common law duty of warning the consumers to take precautions against lead poisoning. The Board appealed but the Court of Appeal dismissed their case on May 5. Lord Justice Greer said that the Board had been warned over and over again that the water passing through the old pipe was liable to be contaminated, and they therefore had a duty to supply the water to the tenant in such a condition that after going through the pipes, it would be reasonably fit for domestic use. They might quite easily have protected the consumers either by making the water more alkaline and so reducing its plumbo solubency, or by

<sup>1</sup> *British Medical Journal*, 1938, 1, 100

sending out a circular to the users warning them to run off a certain quantity before they used it. The Board had delayed in unreasonably long time in installing apparatus which would have made the water harmless and had not sent out warning notices. They could not excuse themselves by saying that the local authority had advised them that it might be dangerous to frighten people by sending out these notices. Between 1929 and 1935 they had received a series of complaints of lead poisoning from various occupiers of premises. The Commissioner's decision was correct. It would be lamentable if the law did not protect consumers of water against this danger. The other learned judges agreed and Lord Justice MacKinnon pointed out that in 1902 the Local Government Board held a lengthy inquiry into the plumbic solvency of moorland water and that as a result various local Acts obliged water authorities to counteract this danger—for example the Acts governing the water supply of Mallock, Chertfield, Wakefield, Plymouth, Windermere, and Stockport. The court gave the Board leave to appeal to the House of Lords.

### A MOCK TRIAL "FEATHER v. WATSON"

The Court of King's College met on May 4 to try the important and interesting action of Feather v. Watson. It was convened by the Listerian Society of King's College Hospital and Judge Earengay presided, assisted by Dr Charles Newman the Vice-Chancellor. Counsel in the case were Mr. Max Muller and Mr. David Karmel.

Mrs. Feather was a disgruntled ex-patient bringing an action against her general practitioner, Dr. Watson, for negligence. Her case was that she consulted him on January 15, 1937, complaining of tiredness, nervousness, and palpitation. She was living apart from her husband. He diagnosed nervous depression and advised her to go for a cruise. This she did and on January 30 sailed in the *Empress of Abyssinia*, but she had a miserable time and returned in an even worse state of health. The sea had been very rough, she had been sea-sick, she had been frightened of Spanish warships in the Mediterranean, and on the voyage home had fallen down when the ship was rolling and hurt her head. Dr. Watson then told her to stay in bed, but as soon as she was well enough to get up she went to a specialist, Dr. T. S. F. West, whose name had been given her by the ship's surgeon, Dr. Maitair MacLagan. The consultant said she was really suffering from Graves's disease and called in a surgeon who performed a subtotal thyroidectomy on February 22. She made a good recovery, and on April 1 was reconciled with her husband. She sued the doctor for negligence in not diagnosing thyrotoxicosis and for prescribing a wholly wrong treatment. She claimed the cost of her voyage, her operation, and her specialist's fees, and also damages for physical and mental suffering.

The plaintiff explained giving evidence on her own behalf that she had always been highly strung. Since separating from her husband in 1935 she had become more nervous and had lost weight. Her eyes were not prominent before 1937. She told Dr. Watson she was tired, run down, nervous, and had palpitations. On her return she was in bed for a fortnight under his care, but he seemed very casual. Dr. MacLagan, who examined her on February 1, said he had noticed a very rapid pulse and slight exophthalmos and had taken her for a known case of exophthalmic goitre sent for a voyage before operation. He was surprised that Dr. Watson had not written to him. He did his best to keep her in bed, but she got up and did more than he would have advised. She was very sea-sick, ate nothing, and lost weight. He told her she was suffering from thyrotoxicosis. He mentioned the name of Dr. West when she asked him for a recommendation, but did not mean to go behind the defendant's back. Cross-examined, he said that no Spanish warship ever came in sight.

Dr. West said that Mrs. Feather on February 24 had obvious severe hyperthyroidism, slight exophthalmos, wasting

tremor, some enlargement of the thyroid, a pulse rate of 110 and a blood pressure of 145/75 mm. Hg. She needed an operation at once and must have had Graves's disease in January. He would have expected Dr. Watson at least to take the blood pressure and to see whether the rapid pulse was transient or permanent. Mr. M. C. Gunter, the surgeon, said that the patient had obvious signs of exophthalmic goitre, though the eye symptoms were not severe. He had the basal metabolic rate estimated and found it was -55 per cent.

### THE DEFENCE

Dr. Watson, giving evidence in his own defence, said that when he first saw the plaintiff she was nervous with very brisk reflexes, very volatile, and had no exophthalmos, but a little tachycardia. There was no obvious thyroid enlargement, and he did not think she had Graves's disease then. Her neurotic temperament and matrimonial troubles were quite sufficient to account for her symptom. He thought of Graves's disease as a possibility, but did not regard it as sufficiently probable to justify him in putting her to the expense of investigation. He admitted that he did not take her blood pressure, but said that it would not have told him anything. In his opinion her anxiety about the Spanish warship had brought on the Graves's disease. She had mild symptoms when he returned. He thought she should have rest in bed before the vessel reached.

Sir Thomas Standstill, an expert on thyroid disease, said that a mild degree of thyrotoxicosis such as in the present case was very difficult to diagnose. The symptoms of simple neurosis and mild hyperthyroidism were practically the same: nervousness, loss of weight, tremor, palpitations, and rapid pulse. A sea voyage was admirable treatment for a mild case of Graves's disease.

Judge Earengay, in summing up, pointed out that to the jury to return a verdict of negligence the matter must be all new. The doctor had done less than was reasonable, one might say, a prudent man in his position. They must not expect him to use the same skill and care as a specialist. The must judge him by the standard of a general practitioner and take all the circumstances into account.

The jury returned a verdict for the plaintiff with damages thirty guineas, the price of the cruise. The audience was asked to return a verdict by a show of hands and found an overwhelming majority in favour of the doctor. Judge Earengay said that the trial had been conducted very much as it would have been in court, and that those who had taken part in it and seen it might perhaps have been helped to understand the way in which such actions were tried. Doctor Watson was apt when they first came into court as witnesses to be pulling about, they received in cross-examination, but soon got used to it. As parties to an action they were told in being much more anxious for no one could tell how a jury would do. Every doctor should be afraid of the law, belonging to a deterrence society.

### A DOCTOR VINDICATED

After hearing evidence in the case of Perry v. Perry and Ciapparra, a special jury found that Dr. S. G. P. Ciapparra, the respondent, was not guilty of adultery. The petitioners' husband alleged adultery on three occasions at the doctors' surgery in Princess Road, Holland Park, and claimed damages. Both sides called private detectives, and the petitioner relied also on the evidence of his wife who wanted to adduce. The President (Sir Boyd Merriman), agreeing with the verdict, pointed out that they had found not merely that adultery was not proved, but also that it had never taken place. He said that there were at least four reasons which seemed to him absolutely conclusive against accepting the allegations. He dismissed the petition and awarded costs to Dr. Ciapparra. In exempting the jury from service for five years, he thanked them warmly and said that the services of a jury had been exceptionally valuable in that case.

## Obituary

### SIR THOMAS FLITCROFT

This well-known and popular Lancashire doctor died on May 14 at the age of 77, in Bolton, the place of his birth, to which he had given a long life of devoted service.

Thomas Evans Flitcroft received his medical education at Glasgow and at the University of Manchester. He held the offices of surgeon to the Bolton Infirmary and to the Edgeworth Homes. While he built up a large practice he was making for himself a reputation in municipal and national politics. A strong Liberal of the old school, who took his politics seriously, he was for long president of the Bolton Liberal Association. He entered the Town Council in 1892 and sat on it for twenty-six years during which time he filled many important positions there, being Mayor from 1926 to 1928. He served for several years on the Asylums Board for Lancashire, and was a Justice of the Peace for Bolton from 1899 to the time of his death. He took a keen interest in the Red Cross movement, and was for long assistant county director for the society. In Masonry he was a prominent local figure, and there were in fact few local public movements in which Flitcroft could not be found playing an active part.

Sir Thomas was at one time president of the Certifying Factory Surgeons Association. He was at different periods president of the Bolton and District Medico-Ethical Society, president and treasurer of the Bolton Medical Society, and chairman of the Panel Committee. During the war he was chairman of the Recruiting Committee and of the local Medical War Committee. He joined the British Medical Association in 1884, and during his long membership served as chairman of the Bolton Division from 1910 to 1920, representative in the A.R.M. from 1910 to 1919, president of the Lancashire and Cheshire Branch, 1912-13. Centrally, he was a member of the Parliamentary Elections Committee from 1919 to 1933, and served also on the Finance Committee, 1919-20.

Flitcroft was essentially a Lancashire man in general and a Bolton man in particular, and became a popular figure in his beloved county. During the struggle over the national health insurance scheme he became known to a much wider circle. Always an active politician (he unsuccessfully contested the Farnworth Division in 1918), he had a personal acquaintance with Mr. Lloyd George, who consulted him on the medical aspects of his scheme. This position of influence was not without its dangers at a time when medical and political feeling ran high. Flitcroft never concealed the fact that he was a strong believer in the scheme, though he did not fail to point out to Mr. Lloyd George that many modifications would be needed before it could be acceptable to the profession. However, though Lancashire was on the whole hostile to the scheme, Flitcroft never lost the confidence of his constituents as was proved by his return as the Bolton representative all during the fight and as long after as he cared to hold the office.

He was knighted in 1913 and thoroughly enjoyed the distinction and the pleasure it gave to his friends. This was shared by his wife, as popular a personality as he was himself, and a great helpmeet to her husband. It is pleasant to recall that before her death they celebrated their golden wedding. For the past few years his health had been failing and he took little part in affairs. His

funeral was very largely attended by representatives of every section of the Bolton public, including representatives of the B.M.A. and the other local medical bodies.

Dr. Alfred Cox writes

Flitcroft was a man of a very friendly disposition and exceedingly pleasant to meet at any time. With all his geniality he could be depended on for sound common sense, together with an understanding of the difficulties of other people. He was one of those successful and prosperous men who are not spoiled by prosperity—rather improved. He was a public spirited man, full of loyalty to the Bolton people who had made him, and of desire to do what he could to serve them. This applies also to his work for his profession and the B.M.A. I saw much of him from 1913 onwards until I left my post, and he could always be relied on for any service the Association asked of him. For B.M.A. purposes Flitcroft was for a long time synonymous with Bolton. Along with my contemporaries and his Bolton colleagues I remember him with kindly and affectionate feelings, mingled with deep respect for the moral courage which he displayed during the Insurance struggle, when a more popularity hunter would certainly have taken a different line.

### PROFESSOR I. BOAS

Professor I. Boas, the distinguished gastro-enterologist, died a fortnight ago in Vienna at the age of eighty. His scientific career began when he became assistant to Professor Ewald at the Augusta Hospital in Berlin in 1885. Working in co-operation with Ewald he devised the test breakfast which laid the foundation for all later investigations on the chemical functions of the stomach. Though in recent years it has been to a great extent replaced by the fractional test-meal, the Boas Ewald test breakfast is still used in many Continental and American clinics. Boas was a brilliant clinician and soon gained the reputation of being the foremost gastro-enterologist in Europe. Students from all parts of the world attended his lectures and demonstrations, and his textbook on *Diseases of the Stomach and Intestines* was for many years the most popular work on the subject, passing through nine editions and being translated into many different languages. Boas was a tireless worker and wrote numerous valuable papers describing the results of his investigations. Perhaps his most important practical contribution to medicine was his discovery of the presence of occult blood in the stools in organic diseases of the stomach and colon. He continued to investigate the changes undergone by blood pigments in the alimentary tract until a few weeks before his death.

In 1898 Boas founded the *Archiv für Verdauungs-krankheiten* which came to be known as *Boas's Archiv* and was the first journal of gastro-enterology published in any country. In 1920 he founded the German Gastro-Enterological Society, which meets alternate years in Berlin and Vienna.

The advent of National Socialism made it impossible for Boas to continue his scientific career in Berlin. He was fortunate to receive an invitation to work in one of the hospitals of Vienna, where he continued to investigate problems connected with the porphyrins and published a number of important papers on the subject. He believed that he had devised a spectroscopic method by which it would be possible to distinguish the pigment derived from carcinoma from that derived from ulcer, but he died before he had time to describe the test. When finally political upheaval reached Vienna he recognized that the

end of his working life had come. Still full of energy and mentally alert as ever in spite of his eighty years he found peace with an overdose of vitamin D. In the death of Boas the profession loses a pioneer of gastro-enterology, a man beloved by his many pupils throughout the world.

A F H

### THE LATE MR FURNIVALL

Major W Guyon Richards IMS (ret) writes: I have read your notice of Percy Furnivall with warm appreciation. I first met Furnivall when dressing for Mr Morant Baker at Birt's; he was doing his second term of dressing. He not only created a number of records for penny tarthing, cycling, but was a first class boxer; he reached the final of the amateur heavyweight championship. Whenever I came home from India a visit to Furnivall's was an exciting joy to look forward to. He married Sir Henry Butlin's daughter Olive. Of all the men I have met no one made a greater impression on me than Furnivall, in spite of being sometimes extremely tired after a busy day there was always an immense joy in life and a great interest in every subject one could bring up. His language was free and vigorous and one enjoyed being cursed by Percy. He once said that when you could call a pal any name you fancied and he enjoyed it you were really firm friends. I count Furnivall's friendship as one of the great things in my life.

Supplementing the obituary notice of Dr EVAN WILLIAMS RICHARDS (May 14 p 1078) we have received the following tribute from Dr W H Lewis, chairman of the Public Health and Housing Committee of the Montgomeryshire County Council. During the years that Dr Richards was medical officer of health and school medical officer for Montgomeryshire it was my privilege to be in close association with him and he inspired in me an affection and regard which will be with me always. His fine character and attractive personality were outstanding and made a responsive appeal to all who came in contact with him; notably his colleagues in the profession and all associated with him in his work. In truth it may be said that all men spoke well of him. The schoolmasters and the children looked forward to his visits in pleasant anticipation. The interest he had in his work and his full and precise knowledge of the details concerned with health matters and his administration were impressive—the retentive memory he possessed was extraordinary—a very special gift. During his last illness the total termination of which he foresaw, his bearing bore out all that his good life had fore-shadowed. His burial service at his beloved Tregaron, the place of his birth, was attended by many of his friends in the profession and it seemed as if the whole town was there to pay the last tribute. I am one of the many who mourn with his widow and children the loss of a great friend.

The following further particulars have reached us of the career of Dr MICHAEL GRABHAM who died at Quinto do Val, Madeira, on April 30. He was educated at the University College School, London, at St John's College, Cambridge, where he was an exhibitioner and took first class honours in the Natural Sciences Tripos and at St Thomas's Hospital. He entered the Government Medical Service, Jamaica, in 1891 and for thirty-eight years was in charge of the Victoria Jubilee Hospital, Kingston. During this time more than 400 maternity nurses were trained there for the colony. He was secretary of the Jamaica Medical Council in 1894, on the Board of Governors of the Jamaica Institute in 1902, president of the Jamaica Branch of the British Medical Association in 1927, served on the Cattle Diseases Commission in 1897 and the Malaria Commission in 1908, and received the thanks of the Jamaica Government for valuable services rendered at the earthquake in 1907. He was Masefield medallist in 1918, and retired in 1929. Dr Grabham

published many papers on obstetrical subjects in Government reports also on malaria and hookworm disease. He contributed many notes on the mosquitoes of Jamaica and much material for study to the Carnegie Institution in Washington, D.C., which has been incorporated in *The Mosquitoes of North and Central America and the West Indies*, published by that Institution in 1915. (After the great earthquake he received a cable inquiring for the area, not of himself, but of his collection of mosquitoes, suggesting that it was too valuable to be kept in an earthquake zone, but should be placed in safe custody in the museum.) A genus of more than forty species of mosquitoes bears his name. In 1934 he published *Plants Seen in Madeira* and another botanical work on the Madeira flora is now in the press.

Dr CYRIL JAMES GOZNEY EXLEY, who died at Bardney, Lincoln, aged 47, was born at Leeds and practised there after qualifying L.M.S.S.A. (Lond.) in 1915 until he moved to Bardney. He was trained at University College, London, and at the Leeds Medical School, and joined the Leeds Division of the British Medical Association in 1917. A colleague writes: Cyril Exley was a people's doctor in the best sense of that term. To rich and poor alike he brought the same genial presence, the same fund of humour and a vivid kindness and understanding of heart which made everyone feel eternally in his debt. He did his bit in the war and after coming to Bardney appeared to have before him long years of service. Unfortunately about three years ago his health broke down and two subsequent operations set a limit to his to-morrow powers. For this period of time he has borne about with him not one but several thorns in the flesh, which might well have broken the spirit of many a stronger man. Perhaps the impression of him which will linger longest in the memories of his friends will be his amazing fight he put up to carry on his practice. No more gallant effort to retain his usefulness could be imagined on the part of any man. Worn out by pain and general illness he tried to see his patients up to the last until suddenly he was compelled to quit the arena. Amidst grievous difficulties and disabilities he bore aloft unsullied the banner of the great traditions of medicine.

The Stratford Division of the British Medical Association has lost a tried and trusted member in the death of Dr R. BOYD ROBSON, which occurred on May 3 at the age of 63 years. He graduated M.B. Ch.B. at Aberdeen University in 1902 and was subsequently in practice at Ilford for thirty years, where he too, an active part in local affairs. He was a member of the staff of the Ilford Emergency Hospital (later to become the King George Hospital, Ilford) and honorary anaesthetist to the latter hospital. Dr Robson was also a member of the Executive Panel Committee and lecturer to the St John Ambulance Brigade. He was on active service during all four years of the great war, being in the campaigns in Gallipoli, Italy, and France.

Dr FRANCIS FERGUSON KERR, formerly of Manchester, died at the age of 77 in a London nursing home on May 10. He was born at New Bandon, New Brunswick, where his father, James Kerr, was the local magistrate and was educated at Ottawa Collegiate School. He followed his brothers into Western Canada, and was being opened up and eventually settled down in Winnipeg, then a small town, as a schoolmaster. When the Manitoba Medical School was started by local doctors he became one of the first batch of medical students and then went on to pursue his studies at Edinburgh University, where he graduated M.B. Ch.B. in 1898 and M.D. in 1903. He was a demonstrator of anatomy under Sir William Turner and after an assistantship in Haddington went into general practice in Horwich, Lancashire. After a few years he moved into Manchester, where he had a large general practice extending from Higher Broughton to Prestwich. He was a keen member of the British Medical

Association and took a leading part in the formulation of the well-known 'Salford scheme' when the Insurance Act was instituted. He was a prominent figure in Manchester medical circles, and many young doctors there owe much to his encouragement and advice. When the war was over many years of strenuous work had begun to tell on his health and he retired to San Remo, where he practised for a short time, but for some years past he had lived in retirement in a villa near St Raphael. He is survived by his widow, three daughters, and a son, his son a daughter, and two sons-in-law are all members of the medical profession, and two of his grandchildren are medical students.

We regret to announce the death on May 7 of Dr EDWARD SYMES PRIOR of Hampstead Way, Golders Green, N.W. He was a student at the Middlesex Hospital, and took the M.R.C.S. and L.R.C.P. diplomas in 1906, after which he served as house-surgeon to the "Dreadnought" Seamen's Hospital at Greenwich, house physician to the Brompton Chest Hospital, and resident medical officer at the Bolingbroke Hospital. During the war Dr Prior left his practice at Golders Green and went to Egypt to join the Egyptian Expeditionary Force, holding the rank of temporary captain R.A.M.C. On returning to civil life he was for some years a medical referee to the Ministry of Pensions. He had joined the British Medical Association in 1909, and was chairman of the Hendon Division in 1933-4.

## Medical Notes in Parliament

The House of Lords this week considered the Coal Bill. The House of Commons discussed air defence and the Board of Trade Vote and began consideration of the Finance Bill. Progress was made with other measures.

Dr Haden Guest has been appointed a member of a committee which is to examine the possibility of evacuating the population from areas of especial danger during air raids.

### Progress of Bills

In the House of Lords on May 23 the Children and Young Persons Bill and the Leasehold Property Repairs Bill, which had passed the House of Commons, were read a first time. The Workmen's Compensation (Amendment) Bill passed through Committee.

On the same day in the House of Commons the Housing (Rural Workers) Amendment Bill passed through the report stage. The motion for the third reading of the Bill was supported by Sir Francis Fremantle and was agreed to after a motion for its rejection had been negatived. The Bill was read a first time in the House of Lords on May 24.

Dr Elliot introduced the Mental Deficiency Bill in the House of Commons on May 24. The object of the measure is to extend by one month the time within which the Board of Control are required by Section XI of the Mental Deficiency Act 1913 to determine whether orders made under the Act are to be continued and to validate orders purporting to have been continued under that section. The Bill was read a first time without debate. The second reading will be taken on May 30.

A Select Committee of the House of Lords on May 24 rejected a Bill promoted by the governors of St Bartholomew's Hospital to enable them to use the general funds of the hospital for providing a paving patients' department.

### Insanity and Divorce in Scotland

The House of Commons Standing Committee on Scottish Bills began on May 17 to examine the Divorce and Nullity of Marriage (Scotland) Bill which had already passed the House of Lords.

On Clause 1 ("Additional Grounds for Divorce") Mr HORSBURGH moved to leave out the provision enabling the court to grant divorce on the ground that the defender was incurably insane. She said that if this ground were allowed divorce would be decided not on facts substantiated in court but on the opinion of experts. It could not be said with certainty that those who had been in an institution for five years would not recover. The Board of Control for Scotland in this year's report referred to a type of nervous illness regarded until recent years as incurable and fatal. For this a cure had been found. In the English law the petitioner had to prove that the person in an institution was suffering from incurable insanity. In the Scottish Bill incurable insanity was presumed after five years unless evidence could be brought to rebut that assumption. Great difficulties had been experienced in England. She had been in touch with the British Medical Association and she believed that in England the law would be a dead letter for the reason that it was almost impossible to get medical experts to declare that the illness of a person was incurable.

Major NEVEN SPENCE said he was utterly opposed to divorce for grounds of insanity. He had asked many alienists if they could draw up a list of incurable forms of mental illness. One and all declined to do so. Involutional mental illnesses affecting women at the menopause and rather later might go on for long over five years and be completely cured. Recovery from dementia praecox was not unknown. To-day thousands of general paralytics were going about doing their ordinary work. Sufferers from senile dementia recovered to an extraordinary extent under hospital treatment. All toxic confusional insanities were at least theoretically curable. The outlook for the puerperal cases, toxic delirium, and cases due to lead or alcoholic poisoning, was good but the illness might be prolonged beyond the five year period. As a physician wild horses would not drag from him a certificate of incurable insanity in any circumstances. He believed that to be the feeling of the medical profession as a whole. Mr ERSKINE HILL said the assumption in law would make the Scottish Bill more workable. Cures took place, for the most part in the first three years.

The LORD ADVOCATE Mr T. M. Cooper, said the chances of recovery for a married lunatic who had been at least five years in an asylum seemed to be in the ratio of 24 to 50. The medical expert was not necessarily the best authority on questions of this kind. Members should discard the suggestions of the medical experts and consider the question from the standpoint of the man in the street.

By 24 votes to 9 the Committee approved the retention in the Bill of the words 'is incurably insane.'

Consideration of the Bill was continued on May 19.

The Bill passed through Standing Committee and was reported to the House on May 24.

### Milk Tests in Scotland

Replying to Mr Tom Johnston on May 17, Colonel COLVILLE said that in the city of Aberdeen during 1937 354 test samples of milk, which were not formal samples taken for the purposes of the Food and Drugs Act, included 208 taken from a single herd at its owner's request, eighty seven out of the total of ninety five samples found to be under standard were from this herd. In the county of Aberdeen test samples were taken with the object of securing improvement in the quality of the milk from byres where formal samples already taken for the purposes of the Acts had been found to be under standard. In neither case, therefore, could a valid comparison with other areas be made.

Mr JOHNSTON asked if the Minister did not think that there was something seriously wrong when, in a county area, 56 per cent of the samples of milk taken were found to be adulterated. Colonel COLVILLE said that his answer indicated that there were special circumstances in this case.

Mr HENDERSON STEWART asked if the Minister had any reason to expect that adulteration of milk to an extent such as this was prevalent throughout Scotland. Colonel COLVILLE

replied that there was no information to support that general statement.

On May 17 Mr. JOHNSON asked the Secretary of State for Scotland why during 1937 no test samples of milk were taken for analysis in the counties of Buteshire, Orkney, Renfrew, Ross and Cromarty, and Zetland or in the parishes of Ar. Coubridge and Dumfries.

Colonel COLVILLE replied that although no test samples were taken in the areas referred to formal sampling under the Food and Drugs Acts was carried out. The Food and Drugs Acts did not impose on local authorities any duty to take test samples, although most local authorities took such samples as a means of obtaining a certain amount of information. He was called for or of assisting producers to detect the reasons why their milk was not up to the standard. An examination of the sampling reports for 1937 was being made by the Department of Health with a view to asking local authorities to increase their sampling activities where this appeared necessary.

Sir EDMUND FINLAY asked whether all local authorities could not be required to test milk. Colonel COLVILLE said that when the examination to which he had referred was finished they would see whether further steps were desirable in that direction.

### Nutrition for Expectant Mothers: Results of Scheme

In response to a request by Mr. Ward, Dr. Ellot circulated on May 19 this table showing particulars of the results of the Joint Council of Midwifery Nutrition Scheme for Expectant Mothers from July 1 to December 31, 1937.

Patients Receiving Special Foods					
Total number of mothers receiving food	Puerperal death rate from causes	Puerperal death rate from causes	Total puerperal death rate	Maternal death rate from causes	Infant death rate (still born and neonatal)
44-6	Nil	0.45	0.45	0.67	5
Patients Not Receiving Special Foods					
90-0	1.77	1.77	1.77	1.35	53

All rates in the tables are calculated per 1,000 of births.

### The Case of Bernard O'Sullivan

On May 23 Sir JOHN MELLOR asked the Home Secretary if his attention had been drawn to the evidence given at the trial of Bernard Anthony O'Sullivan who pleaded guilty to a charge of attempting to murder a boy aged 9, whether he had investigated the allegation of the medical officer of Brixton Prison that while at Broadmoor O'Sullivan had declared that he thought it right to murder young children, whether he was satisfied that O'Sullivan's record and condition justified his release in 1935, and whether he would take more effective steps to prevent the release of dangerous criminals and lunatics.

Mr. SORESENSEN asked a question on the same subject.

Mr. LLOYD replied that in March 1923 O'Sullivan was convicted of wounding with intent to murder and was sentenced to ten years penal servitude. While serving this sentence he showed no signs of mental abnormality and having earned by good conduct and industry full remission marks he was released in the ordinary course on licence on October 1930. In April 1932 he pleaded guilty at Manchester Assizes to a charge of larceny and was sentenced to three months imprisonment with the result that he became liable to serve in addition the remainder of his penal servitude sentence. At this time he was found to be insane and was transferred from prison first to Rainhill Mental Hospital and subsequently to Broadmoor where he remained until January 15, 1935 when his sentence expired. On the expiration of his sentence the powers and responsibilities of the Home Secretary with respect to his custody came to an end but as he was still insane he became liable to detention under the ordinary provisions of the Lunacy Law. Accordingly he was removed to the Broadmoor Mental Hospital as a rate-aided patient. The question whether and if so when the patient

should be discharged thereupon became one for the visiting committee of the hospital. Persons like O'Sullivan who are sentenced to one specified term of imprisonment or penal servitude were in a different position from persons who when charged with a criminal offence were found insane by the court and ordered to be detained during His Majesty's pleasure. When a person was ordered to be detained during His Majesty's pleasure the responsibility of deciding whether such a patient had sufficiently recovered to be released without undue delay rested on the Home Secretary. The decision in such a case was often a matter of great difficulty and great care was taken to make all necessary inquiries and to weigh the various considerations which arose. O'Sullivan was at present under careful observation in prison and it was a result of that observation he was certified to be insane immediately steps would be taken for his removal to Broadmoor.

### Bacteriological Standards for Graded Milk

Mr. LIDDALL on May 19 asked whether the Minister of Health was aware of the dissatisfaction felt by public health medical officers at the inadequate bacteriological standards for graded milks and of their anxiety over the absence of any compulsory bacteriological standard for ungraded milk which was consumed by the vast majority of inhabitants of the country, and what steps he was taking to remedy it. Dr. ELLIOT replied that bacteriological tests prescribed for graded milks were adequate as a standard of cleanliness. A similar standard for all other milk was not practicable at the present time.

### Annual Expenditure on Patent Medicines

On May 23 Mr. DAVID ADAMS reminded the Minister of Health that in 1937 a Select Committee of the House estimated that the amount spent each year in the United Kingdom on patent medicines was between £20,000,000 and £28,000,000 against an annual expenditure on drugs under the national health insurance scheme of only £2,000,000. He asked whether in view of this persistence of unskilled and often dangerous self-treatment the Minister would consider changes in the law whereby drugs sold under a proprietary name should at least be regulated as stringently as were ordinary foods and drugs under the Food and Drugs Act 1875. Mr. BERNAYS said he was not sure what change in the law Mr. Adams had in mind. Clause 6 of the Food and Drugs Bill now before Parliament not only strengthened the present law regarding labels issued with drugs, but also applied to advertisements containing false descriptions of drugs or misleading statements as to their nature, substance or quality.

### Experiments of the Hannah Institute

On May 23 Mr. MACQUISTEN asked the Minister of Agriculture whether his attention had been drawn to certain experiments made by a body called the Hannah Institute, assisted by contributions from the co-operative societies and a large milk combine by which the institute were alleged to have satisfied their elves that over 60 per cent of calves fed on fresh milk soon contracted bovine tuberculosis and what steps he proposed to take in view of those experiments.

Mr. MORRISON said he could not be expected to be responsible for the experiments of a scientific body. This was only one experiment and many others were being carried out. It would not be safe to go by that experiment within a narrow range. The Government was trying to review the whole subject in the light of other experiments as well as this one.

**Houghall Isolation Hospital.**—Mr. MESSER asked on May 19 if the Minister of Health had completed his inquiry into the administration of the Houghall Isolation Hospital. Dr. ELLIOT said he had received through the usual channels a report on the administration of this hospital. He had no authority to determine the points at issue between the Council and the former matron as to the conditions of re-employment. He was satisfied that the premises were excellent, quite unsuitable and he hoped shortly to receive a proposal to approve formally proposals already before him for its replacement by a new hospital.



## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended May 14, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for (a) The 126 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	29	4 3	8 —	3	1	30	2 3	10 —		—		
Diphtheria Deaths	998 32	144 8	213 6	61 1	30 —	781 19	96 3	147 4	33 3	28 2	933	157
Dysentery Deaths	49	10	117	—	—	16	2	4	—	—		
Encephalitis lethargica, acute Deaths	7	1 2	2	1	—	5	1 —	1		—		
Enteric (typhoid and paratyphoid) fever Deaths	14 1	1 —	50 —	1 —	1 —	24 3	3 —	4 —	1 —	3 —	27	—
Erysipelas Deaths		2	67	7	5		—	59	9	7		
Infective enteritis or diarrhoea under 2 years Deaths	47	16	17	5	2	57	13	6	4	2		
Measles Deaths	28	11	426 21	5	8* 2	13	—	152 —	2	—		
Ophthalmia neonatorum Deaths	95	7	41		1	76	9	29		1		
Pneumonia, influenzal† Deaths (from Influenza)	1,188 54	76 11	11 3	6 —	12 —	798 36	64 5	6 2	7 3	3 1	945	88
Pneumonia, primary Deaths		18	266	18 13	17		11	192	15 15	5		
Polio encephalitis, acute Deaths	—	—				2	—					
Polio myelitis, acute Deaths	5	—	1		—	5	1 —	—		—		
Puerperal fever Deaths	2†	2 —	25	2	1	26	4 —	10	1	2		
Puerperal pyrexia Deaths	177	18	20		—	108	10	13		3		
Relapsing fever Deaths	—	—	—	—	—	—	—	—		—		
Scarlet fever Deaths	2,154 3	181 1	450 —	99 1	84 —	1,440 3	139 —	348 —	87 1	25 —	1,911	273
Small-pox Deaths	1 —	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping cough Deaths	20	6	97 2	2	25 1	20	6	199 14	2	4 —		
Deaths (0-1 year) Infant mortality rate (per 1,000 live births)	385 64	72 59	82	18	17	365 61	58 48	74	29	16		
Deaths (excluding stillbirths) Annual death rate (per 1,000 persons living)	5,119 12.6	1,005 12.8	631 12.9	191 12.9	164 14.5	4,537 11.3	884 11.0	571 11.7	169 11.5	129 12.3		
Live births Annual rate per 1,000 persons living	7,129 17.5	1,379 17.6	1,003 20.5	349 23.6	284 25.2	6,133 15.2	1,188 14.8	1,011 20.7	392 26.7	236 22.6		
Stillbirths Rate per 1,000 total births (including stillborn)	309 42	39 28				277 43	51 41					

\* 5 cases in Belfast alone

† After October 1 1937 puerperal fever was made notifiable only in the Administrative County of London

‡ Includes primary form in figures for England and Wales, London (Administrative County) and Northern Ireland

## EPIDEMIOLOGICAL NOTES\*

## Smallpox

During the week under review a case of smallpox was notified at Gravesend and admitted to the Isolation Hospital. The patient referred to last week has since died.

## Enteric Fever

Notifications of enteric fever in England and Wales were 14 compared with 8 in the previous week with 1 death—the same as last week. One case was notified in London itself in the borough of Kensington. In Scotland 30 cases of enteric fever were notified compared with 41 in the previous week, of which 3 were cases of paratyphoid (Glasgow). Forty-four cases of typhoid fever were notified in Hawick and one each in Ayr County, Falkirk and Paisley. Of the 97 cases to date in the Hawick outbreak 2 patients have died. Following a suspected case of typhoid in one of the passengers of the Orient liner *Orema* which docked at Tilbury on May 19, 4 members of the crew have been sent for observation to the Port of London Sanitary Hospital at Denton near Gravesend.

## Diphtheria and Scarlet Fever

While the incidence of diphtheria in England and Wales is practically the same as last week more cases were notified in London—144 compared with 103—and there were 8 deaths compared with 3 in the previous week. The numbers for England and Wales remain above the median value for the last nine years and those for London remain below it. Scotland, Eire and Northern Ireland also report some increase in the incidence of diphtheria. There was a rise in the notifications of scarlet fever in England and Wales for the week—2154 compared with 2078—and in London the figure was 181, compared with 174 for the previous week. For England and Wales the notifications are above the median value for the last nine years, for London they are considerably below it. There was a slight rise in the figures for Scotland and Eire and a slight fall in those for Northern Ireland.

## Primary and Influenzal Pneumonia

Notifications of primary and influenzal pneumonia in England and Wales continue to decline, 1188 being recorded compared with 1222 in the previous week, for London the figures were 76 and 85 respectively. There were 34 (34) deaths from influenza in England and Wales and 11 (8) in London. Local rises in the notifications of pneumonia were as follows: Warwick 116 (111) of which 72 (75) were in Birmingham and 13 (15) in Coventry, while smaller numbers were reported widely scattered throughout the county. West Riding (Yorks) 133 (125) of which 65 (17) were in Sheffield and 19 (17) in Leeds and smaller numbers were reported from a large number of urban districts. During the week the deaths from influenza were: Birmingham 4 (4) Bradford 3 (0) Sheffield 2 (3) Coventry 1 (3). In Scotland notifications of primary pneumonia were 266 compared with 273 in the previous week. There were 11 cases of influenzal pneumonia, 2 more than last week and 3 deaths the same as last week.

## Measles

In the 126 Great Towns there were 28 deaths from measles compared with 32 in the previous week, of these 11 (13) occurred in London and 2 (0) in Gateshead and in no other area did more than one death occur during the week. During the week 343 cases were reported from the LCC elementary schools compared with 712 in the previous week. The average daily

admissions to the LCC fever hospitals were 49 an increase of 6 on the previous week while the number of cases of measles under treatment in these hospitals on Friday May 13 was 1630 compared with 1718 on May 6. On the same day there were under treatment in the LCC fever hospitals 1047 (10.6) cases of diphtheria, 77 (808) cases of scarlet fever, 285 (295) cases of whooping cough. Notifications for the week ended May 14 in the eleven metropolitan boroughs in which measles is notifiable were: 461 (406) distributed as follows: Battersea 16 (76) Bermondsey 18 (38) Finsbury 19 (23) Fulham 42 (57) Greenwich 126 (11) Hampstead 20 (17) Lambeth 36 (31) St. Pancras 37 (34) Shoreditch 39 (28) Southwark 21 (28) Stepney 27 (31). In Scotland 426 cases of measles were recorded compared with 461 in the previous week, the figures for Glasgow were 164 (186) Dundee 77 (96) Aberdeen 60 (71) Falkirk 37 (27) Edinburgh 36 (76). During the week there were 2 deaths from measles in the 16 principal towns of Scotland compared with 17 in the previous week, of these 9 occurred in Glasgow, 7 in Dundee and 1 each in Edinburgh, Clydebank, Coatbridge, Kilmarnock, Hamilton. In Northern Ireland there were 8 cases of measles, 5 of which were in Belfast alone, with 2 deaths, both in Lurgan. During the week there were 5 deaths from measles in Eire (all in Dublin).

## Typhus

During the week ended May 7 there were reported in Morocco 169 cases of typhus with 10 deaths compared with 168 cases in the previous week. The 169 cases were mainly distributed as follows: Chaouia 42 (48) Marrakech 26 (40) Rabat 22 (24) Casablanca 10 (1). Europe: Poland during the week ended April 30 there were 14 cases of typhus with 8 deaths compared with 103 cases and 8 deaths in the previous week, the departments with more than ten cases were: Lwow 25, Wilno 17, Polesia 16, Stanislawow 14, Nowogrodek 11, Wolhynia 11. In Rumania during the week ended March 23, 128 cases of typhus were reported compared with 160 in the previous week, occurring mainly in: Orhei 31, Lapusna 21, Covurlui 15, Balti 12. In Yugoslavia during the week ended April 24 there were 23 cases of typhus (35 in the previous week) distributed as follows: Drina 12, Litoral 9, Zeta 2.

## Universities and Colleges

## UNIVERSITY OF OXFORD

The following notice was published in the *Oxford University Gazette* of May 18:

## FIRST EXAMINATION FOR THE DEGREE OF B.M.

The Board of the Faculty of Medicine gives notice that the following regulations for human anatomy will be substituted on January 1, 1939 for those now in force (*Examination Statutes* 1937 p. 314):

## II Human Anatomy

The examination will include (a) a written paper and (b) a practical and viva voce examination. The written paper will be assigned to each part in the written examination and will be expected to show their acquaintance with the structure of the human body, including general topography, the skeleton, the main anatomy of organs and tissues, with special reference to processes of growth and development, and the structure of human embryos, and the external and internal anatomy of the human body. The viva voce part of the examination will be expected to show their knowledge of human anatomy, and to test their ability to recognize and describe the normal and abnormal anatomy of the human body, and to give evidence of their knowledge of the anatomy of the living body.

Dr R. H. S. Thompson has been elected to a Research Medical Fellowship and Practitioner in Medical Science at University College.

\* Except where otherwise mentioned figures in parentheses refer to those for the week preceding the one under review.

## UNIVERSITY OF CAMBRIDGE

At a congregation held on May 13 the following medical degrees were conferred

MD—T O Garland G H Jennings, W F Nicholson  
MB BChir—J H Waid

*Assistants in Medical Research*

The Appointments Committee of the Faculty of Medicine will shortly proceed to appoint three assistants in research to the Regius Professor of Physic to hold office for three years from October 1, 1938. (1) Assistant in research in radiology. This is primarily a research appointment but will include part-time duties as assistant in the x-ray department at Addenbrookes Hospital with opportunities for x-ray investigations in the Department of Anatomy. Salary £600 a year. (2) Assistant in research in psychiatry. This is primarily a research appointment but will include part-time duties as assistant in the psychiatric department of Addenbrookes Hospital with opportunities for work in the Department of Experimental Psychology. Salary £500 a year. (3) Assistant in research in pathology (morbid anatomy and histology). This is primarily a research appointment but will include part-time duties as assistant in the pathology department of Addenbrookes Hospital, with opportunities for work in the Department of Pathology of the University. Salary £500 a year. Applicants for these posts should hold the medical degrees of a university within the British Empire and should produce evidence of special training after qualification in radiology or psychiatry or pathology as the case may be. Further information may be had from the Secretary of the Appointments Committee of the Faculty Mr R Williamson Department of Pathology Tennis Court Road Cambridge to whom applications together with three testimonials a statement of previous appointments, and copies of published papers should be sent by July 1.

*The Oral Examination in Pharmacology*

Under the old regulations elementary pharmacology in the Second MB Examination Part III consisted of a practical and an oral examination. Under the regulations of October 1 1934 which came into force in March 1936 a longer oral examination was substituted, because a practical examination on the new course was not feasible. This examination has now been held four times, but has been unsatisfactory because in the case of some candidates it is difficult to assess their knowledge in an examination which is wholly oral. More over a wholly oral examination is not in accord with Regulation 17. The Faculty Board therefore proposes that a two hours paper in pharmacology be added.

## UNIVERSITY OF LONDON

At a meeting of the Senate held on May 18 the Dunn Exhibitions in Anatomy and Physiology for 1938 were awarded to S D V Weller of University College and J W L Doust of King's College respectively. The degree of DSc in Biochemistry was conferred on W T J Morgan.

## ST GEORGE'S HOSPITAL MEDICAL SCHOOL

Sir Frederick Hobday, Emeritus Professor Royal Veterinary College and honorary lecturer in comparative medicine to St George's Hospital Medical School will give a course of six lectures entitled 'A Comparison of Diseases in Animals and Man' in the Medical School on Mondays at 5 p.m., beginning on May 30. The lectures will be illustrated by epidiascope and cinematograph and are open, without fee to all medical and veterinary practitioners and students.

## LONDON HOSPITAL MEDICAL COLLEGE

Two open scholarships each of the value of £100 have been awarded to H G Danziger of Trinity College Cambridge and F E T Scott of Clare College, Cambridge for the academic year 1938-9.

A course of two lectures on 'The Physiology of the Digestive Glands' will be given at University College Gower Street WC by Dr B P Babkin, Research Professor of Physiology in McGill University Montreal on June 7 and 9 at 7 p.m. At the first lecture the chair will be taken by Professor C Lovatt Evans FRS. The lectures which will be illustrated with lantern slides are addressed to students of the University and to others interested in the subject. Admission is free, without ticket.

## UNIVERSITY OF DURHAM

At a meeting of the Council of King's College Newcastle on May 16 Angus E W McLachlan MB ChB, PhD Ed was appointed lecturer in venereal diseases in succession to Dr Sidney Thompson who has resigned.

## UNIVERSITY OF WALES

## WELSH NATIONAL SCHOOL OF MEDICINE

The Council of the School at its meeting on May 19 appointed Dr W H Tytler to the David Davies Chair of Tuberculosis to fill the vacancy caused by the retirement of Professor S Lyle Cummins on September 30 1938. Dr Tytler who graduated in medicine at the University of Toronto at present holds the post of Research Bacteriologist to the Welsh National Memorial Association.

## UNIVERSITY OF BIRMINGHAM

*Honorary Degrees*

At the annual degree ceremony on July 2 to mark the occasion of the opening of the Hospitals Centre and the new Medical School on July 14 by the King and Queen the honorary degree of LL.D will be conferred on the following members of the medical profession: Dr Robert Hutchison President of the Royal College of Physicians of London Sir Cuthbert Wallace Bt, President of the Royal College of Surgeons of England and Sir Edward Mellanby, FRS, Secretary to the Medical Research Council.

## UNIVERSITY OF LIVERPOOL

The Council at its meeting on May 17, appointed Thomas Benjamin Davis MD professor of pathology in the University of Bristol to the George Holt Chair of Pathology in succession to Professor J H Dible.

The title of Professor of Tropical Diseases of Africa was conferred on Dr Thomas Herbert Davis while holding the directorship of the Sir Alfred Lewis Jones Research Laboratory Sierra Leone, where he has served for nine years.

## UNIVERSITY OF MANCHESTER

Presiding at a meeting of the Court of Governors on May 17 the Vice Chancellor, Professor J S B Stopford, gave a survey of recent and forthcoming events. He hoped that it would very soon be possible to start work on the clearing of the site of the new dental hospital and that building would immediately follow. Work was proceeding apace with plans for alterations to the Burlington Street Drill Hall which was being made into a centre for physical recreation. In the new gymnasium rooms were being provided which could be used for carrying out tests of physical fitness and other forms of medical examination. He was hopeful that with the co-operation of the Medical School it would be possible not only to provide medical supervision and promote the physical welfare of students, but also to find out a good deal about health and the factors influencing health, that would be of preventive medicine. The Vice Chancellor mentioned among other developments in the University the proposed creation of a degree of Doctor of Dental Surgery, to encourage research and advance scientific study, and so help to lift dental surgery to its rightful place.

Dr E N Rowlands has been appointed assistant director of the Department of Clinical Investigations and Research and Dr Benjamin Portnoy chief medical assistant in the Department. Mr H T Simmons has been appointed lecturer in applied anatomy.

On May 18, at the Founder's Day commemoration the honorary degree of Doctor of Science was conferred on Sir Henry Dale, MD FRS, Director of the National Institute for Medical Research. In accepting the honour paid to him as a recognition of medical science, Sir Henry Dale said: 'Your University is rightly proud of its fine department for the basic sciences of medicine with the distinguished investigators who lead it. Only recently you took one of them from his teaching and researches and gave him the highest administrative responsibility as your Vice Chancellor. You have here a great hospital devoted to the medical care of the dense population which the industry has created around you. Here if anywhere are the conditions for the growth of a great centre of medical research in the fullest sense.'

## UNIVERSITY OF SHEFFIELD

At its meeting on May 13 the University Council received with regret the resignation by Dr W Skyrme Rees of the post of demonstrator in anatomy. The Council thanked Dr Rees for his services to the University.

## UNIVERSITY OF EDINBURGH

The honorary degree of LL.D will be conferred on Dr W N Robertson CMG CBE FRACS, Hon FACS Vice-Chancellor of Queensland University on July 20 on the occasion of the installation of Lord Tweedsmuir as Chancellor of the University.

## ROYAL COLLEGE OF SURGEONS OF EDINBURGH

At a meeting of the Royal College of Surgeons of Edinburgh held on May 14 with Mr W J Stuart President in the chair the following having passed the requisite examination were admitted Fellows

H R Arthur F G Bidder A L W Bell A Currie J D Davies V Drach N Dutt T E Elliot D Evans B S Gribble J R Gibbs G D Harris A R Hill S W Lissett E Lifford A Lvall J S MacViney P L O'Neill E Parry J C Patterson R B Peckham J P Philp F B Pierce J A Ross A G Rutledge S C Saptarshi T M Scott I D Sutherland R Thorny L E Vine J A Wain R A L Wenger H C Wyckoff

The Henry Arthur Dalziel Burns Bursary was after a competitive examination in organic chemistry in its application to medicine awarded to M Metz

The Baillie Memorial Prize was after a competitive examination in materia medica and therapeutics awarded to E Blumenkranz.

## SOCIETY OF APOTHECARIES OF LONDON

The following candidates have been approved at the examination indicated

MASTER OF MIDWIFERY—Herbert Reginald England M B B Ch Robert Stevenson Cromie M D Louis Alice Matheson M B Ch B DPH Sumitranbai Shinkhande M B BS DCOG

## Medical News

The King has appointed Dr Edmund Claud Malden to be Surgeon Apothecary to His Majesty's Household at Windor Castle in the room of Sir Henry L Martyn KCVO who has resigned

Sir William Bragg O M President of the Royal Society will open the Meyerstein Institute of Radiotherapy at the Middlesex Hospital on Thursday June 9 at 3 p.m.

The House of the British Medical Association including the Library will be closed for the Whitsun Holiday from 5 p.m. on Friday, June 3 to 9 a.m. on Tuesday June 7 (Library 10 a.m.)

The House and Library of the Royal Society of Medicine will be closed for the Whitsun holiday from Saturday June 4 to Monday June 6 both days inclusive

The Buckton Browne annual banquet of the Harveian Society of London will be held at Merchant Taylors Hall Threadneedle Street EC on Tuesday June 14 at 7.30 for 8 p.m.

The Chairman and Directors of Boots Pure Drug Company Limited are celebrating the jubilee of the firm by a luncheon party at the Savoy Hotel London on Thursday June 2 Lord Trent Chairman and Managing Director will preside and the principal guest will be the Minister of Health

In our advertisement columns this week the Senate of the University of London invites applications for the Chair of Radiology tenable at the Royal Cancer Hospital at a salary of £1,500 per annum

A meeting of the Kensington Division of the British Medical Association will be held in the Great Hall of B.M.A. House Tavistock Square WC on Friday June 24 at 8.45 p.m. when a symposium on Co-operation within the Profession will be opened by Sir William Wilcock Viscount Dawson of Penn Dr W A Daley (Principal Medical Officer LCC) Dr James Fenton (President Society of Medical Officers of Health) Dr G C Anderson (Secretary British Medical Association) Dr E A Gregg (Chairman London Panel Committee and Insurance Acts Committee) and Dr Alfred Cox (Secretary London Public Medical Service) will take part in the subsequent debate

The National Institute of Industrial Psychology's vacation course in psychological methods of vocational guidance will be held at the London School of Economics from August 3 to 13. During the same period and at the same place a vacation course in the administration of Binet Simon tests of

intelligence will also be held. The fee for the former course is five guineas and for the latter three guineas. Applications should be sent as soon as possible to the Secretary of the N.I.P. Aldwych House WC2

The German Tuberculosis Congress will be held at Zoppot on June 10 and 11 in connexion with the meeting of the medical officers of the German Public Health Service. Further information can be obtained from Reichstuberkulose Ausschuss Einemstrasse 11 Berlin W 62

The third Congress of the Italian Radio Neuro Chirurgical Society will be held at Pisa from June 4 to 6. Further information can be obtained from the president, Professor Avila Clinica delle Malattie del Sistema Nervoso Pisa

The thirteenth Congress of the International Association for the Protection of Childhood will be held at Frankfurt am Main from June 12 to 18. Further information can be obtained from the Secretariat Saalbau Jungnolstrasse Frankfurt am Main

The first Pan American Congress of Endocrinology which is also the first congress of endocrinology to be held in any part of the world will take place at Rio de Janeiro from July 17 to 23 under the presidency of Professor Aloysio de Castro. It will consist of four sections dealing respectively with the experimental clinical surgical and medico-social aspects of endocrinology. Further information can be obtained from the Academia Nacional de Medicina Avenida Augustus Severo 4 Rio de Janeiro Brazil

The twenty-ninth Congress of the German Röntgen Society will be held in Munich from July 4 to 7. Further information can be obtained from the president Dr G A Weltz, Ludwigstrasse 4 München 22

There has been set up in the Kaiserin Friedrich Haus Robert Koch Platz 7 Berlin NW 7 an information bureau which will be able to give doctors every kind of information. The office is semi-official and gives advice impartially and free of charge. It would be to the advantage of every visiting doctor to get into touch before or after his arrival in Berlin with the Kaiserin Friedrich Haus so as to save time and make the most of his stay

King Edward's Hospital Fund for London has just issued the May edition of the outpatient time table to all doctors in the London area. The object of the time table is to prevent as far as possible patients attending outpatient departments on the wrong day or at the wrong time. Further copies are obtainable free from the publishers Messrs George Barber and Son Ltd 25 Fumival Street EC 4

The April issue of the *Chinese Medical Journal* is devoted to the history of Chinese medicine

The issue of *Paris Medical* for May 7 which is devoted to diseases of the heart and vessels contains an appreciation by Dr H Grenet of the international congress on rheumatism recently held at Oxford Bath and London. The issue for May 14 contains the list of the consulting and resident staff of the Paris hospitals

To celebrate the fiftieth birthday of the American Association of Anatomists a portrait medal has been struck in memory of its first president Joseph Leidy (1825-91). This was designed by Robert Tait McKenzie Canadian physician and sculptor (now living in Philadelphia) of the work The Sprinter at Cambridge The Athlete at Oxford and the Scottish American War Memorial at Edinburgh are familiar examples on this side of the Atlantic

Mr Harry Oakes has made a gift of £60,000 to St George's Hospital and on May 19 was elected a vice president. A short time ago he gave £20,000 to the hospital

Dr J A Struthers (Inner Temple) was elected to the Bar on May 11

Dr Mohammed Mahtouz Bey principal medical officer ophthalmic section Government Hospital Alexandria has been elected President of the Ophthalmological Society of Egypt

## Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL BMA HOUSE TAVISTOCK SQUARE WC1

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

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### QUERIES AND ANSWERS

#### Mosquito Bites

'BS' writes: In the course of my holiday this summer I shall be visiting places where mosquitos may be expected. Is there any preparation one can apply to the exposed skin which will repel these insects? In the event of a bite what is the best immediate local treatment?

\*\* Some years ago the Medical Officer of Health for Belfast advised oil of lavender on the hair or clothes as a preventive of mosquito bites. "As the mosquito frequently bites about the ankles two pairs of thin socks or stockings are better than one thick pair." To protect the face use a 50 per cent alcoholic solution of thymol, or oil of cloves in lanoline. If bitten dab on at once a weak solution of ammonia or of washing soda or common soap and vinegar, or apply a cut onion to the sore. If the irritation is severe apply iodine in glycerin.

#### Menostaxis

Dr ALISTAIR FRENCH (Greenford) writes: I suggest that 'A H I' (*Journal* May 21, p 1142) should try a course of antuitrin S for his patient who would appear to have an endocrine imbalance. I c.m. subcutaneously twice a week for six to ten weeks should re-establish a more normal rhythm. This was successful in a recent very similar case of mine and I should be interested to hear the result from 'A H I' if he tries this treatment.

#### Income Tax

##### Temporary Residence in the United Kingdom

'A D' is a British subject and was resident in the United Kingdom until 1928. Since then he has resided and worked abroad (but was on leave in this country between June 15 and December 13 1933) up to May 7, 1937. He was in the United Kingdom from that date to January 15, 1938, and during that period terminated his appointment abroad. On the last mentioned date he sailed to take up another appointment and has been abroad since. On leave he received on departure a lump sum representing two months pay for each year's service. He holds shares in British companies and income tax is deducted from these on payment. He makes certain allowances to relatives.

\*\* 'A D' is apparently not liable to income tax in respect of his foreign earnings—it is assumed that the appointments abroad were not held from companies registered in the United Kingdom. As regards the dividends,

he is entitled to relief from the income tax—not to the allowances which would be made if he were resident in this country but to the proportion of such allowances in the ratio of his total income to his United Kingdom income (An application for the appropriate form of claim should be made to the Chief Inspector of Taxes, Waterloo House London SE1). A further allowance may be due on any income which arises abroad but is paid to him under deduction of tax because it is paid through an office in England. The allowances in question would include anything in respect of the payments made to relatives, provided that the relative concerned is 'incapacitated by reason of old age or infirmity'.

#### Allowance for Wear and Tear

'J C' inquires whether there is a statutory right to the additional 10 per cent.

\*\* Yes. Rule 6 of Cases I and II, Schedule D provides for such deduction as the Commissioners may consider just and reasonable. Section 18 of the Finance Act provides that the Commissioners shall allow an additional deduction equal to one tenth of the deduction attained under the said Rule 6. The present Budget proposes to increase the one tenth to one fifth and assuming it becomes law for 1938-9 where 20 per cent is considered just and reasonable the actual deduction due will be 20 per cent plus one fifth of 20 per cent—that is 24 per cent.

### LETTERS, NOTES, ETC

#### Elementary Ambulance Instruction

"FIRST AID" writes: There must be many practitioners like myself who having given lectures or conducted examinations in first aid, pray that it may never be their lot to be treated by their classes. I am sure that for the elementary first aid courses too much is taught in lectures and in the manuals. Too much stress is laid and time spent on the treatment of fractures. Surely it is unnecessary to know the Latin names for the bones. I have known pupils from elementary classes asked in their first examination what Potts and Colles' fractures were. While wise lecturers may tell them that the less they do to a fracture the better, they are expected in their examination to know how to apply splints and bandages. They cannot realize what damage and shock they may produce by inexperienced handling. I am told that the home nursing lectures are hardly practical and simple enough for beginners, and for those who will only have to nurse in cottages and small houses. I should be glad to know if others agree with me. The majority of those people to whom I lecture are easily confused, and the simpler we can make the subject the better.

#### Rate of Growth of Nail

Dr L W HEFFERMAN (Swansea) writes: On December 26 1937, an injury produced a small subungual hematoma of my right middle finger. The discoloration was just visible at the edge of the cuticle. I have seen it emerge into the open, and now, five months later (May 22, 1938) like the setting sun it is disappearing over the distal margin of the nail. The distance traversed has been 1.4 cm, this is the length of the nail from the cuticle to the cut edge. The nail has therefore grown 1.4 cm in five months.

#### Medical Pictures

A correspondent writes: The eleventh annual exhibition of the New York Physicians Art Club, which opened at the New York Academy of Medicine on May 7, is essentially conservative and conventional, the majority of the 170 paintings being the tangible result of a summer vacation's leisure and as such of no medical interest. Among the notable exceptions however are several abstractions which are certainly original. Dr M M Melicow's oil abstraction 'Exploratory Operation' depicts two surgeons stooping over a large recumbent question mark. In Dr F M Margaretten's painting 'Caesarean Section' famous figures in its history watch from the gallery a modern operation being performed. Among the photographs exhibited those by Gregory Zilboorg and by Max Thorek are particularly effective.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 433 Misconceptions of Hilar Tuberculosis

F HAMBURGER (*Disch Tuberc bl* March 1938 p 55) deplors the mischievous myths which have grown up around the conception of tuberculosis of the bronchial glands. Strictly speaking it is a condition to be found in nearly all persons infected with tubercle bacilli by inhalation. In other words almost everyone who is tuberculin positive may be said to be the subject of bronchial gland tuberculosis. Yet this nearly always innocent condition has been exalted to the position of a real danger signal and radiological hilar shadows have been allowed to darken the lives of countless children who would have been both happier and healthier had they never been branded with this term. According to Professor Hamburger, the radiological demonstration of bronchial gland tuberculosis should be ignored unless tuberculin skin tests are positive the sedimentation rate is abnormally high percussion and auscultation sound a note of warning and the radiological examination itself shows something more definite than a hilar shadow. To condemn a child to months and even years of a valetudinarian life on the strength of only a hilar shadow and without other confirmatory evidence is not in the best interests of either the child or its parents. It often happens that a child is subfebrile suffers from a chronic cough and looks poorly but is definitely non-tuberculous as shown by the negative findings of a tuberculin test. A hilar shadow in such cases may be due to a non-tuberculous pneumonia which may clear up in two or three weeks. Were the clinical and radiological picture really due to tuberculosis a year or two would be needed for recovery.

### 434 Hemeralopia and Gastric Ulcer

T GANTZEL (*Hospitalsudende* January 18 1938 p 85) states that in 1931 the dietetic treatment of gastric ulcer at his hospital was changed from a restricted to a fairly liberal regime which began with milk and gruel and was extended in three or four days (after melaena pain tenderness and vomiting had ceased) to egg porridge toast and mashed potatoes. In order to ascertain the influence of this diet on the store of vitamin A in the body hemeralopia tests were carried out on admission and again after the completion of treatment some three weeks or more later. Of the forty four patients thus tested as many as thirty seven suffered from hemeralopia of various degrees on admission. On the completion of treatment nineteen showed a diminution of their hemeralopia twenty-one showed no change and four a higher degree of hemeralopia than before. Considering the comparatively high proportion of cases in which improvement was noted in the hemeralopia it would seem justifiable to conclude that the dietary was not faulty with regard to its vitamin A content. As other Danish observations have shown that the mortality from gastric ulcer is only about 1 per cent on this fairly generous diet the author concludes that its substitution is justifiable.

### 435 Primary Liver Carcinoma in Liver Fluke Disease

W A S WALSH E S GAULT and L MORRISON (*Amer J Digest Dis Nutrit* February 1938 p 789) report a rare case of primary carcinoma of the liver associated with *Clonorchis sinensis*. The liver fluke which is very common in the United States usually enters the human body as a result of eating fresh-water carp in a raw condition. In light infestations the symptoms may include dyspepsia epigastric and upper abdominal distress and

night blindness. When the disease becomes more advanced the liver descends below the right costal margin to a varying degree and recurring attacks of jaundice take place with chronic diarrhoea and vomiting. Anasarca finally appears and a severe cachexia sets in as a terminal stage of the disease. There is often a leucocytosis of over 20 000 white cells per cmm and an eosinophilia of over 40 per cent. If the intestation is severe small areas of liver necrosis 2 or 3 cm in diameter may be seen with marked cirrhosis—interlobular and around the ducts—causing obstruction of the portal circulation. Enlargement of the spleen chronic congestion of the gastro-intestinal tract and chronic gastro-enteritis may follow. In a few cases a primary carcinoma of the liver has been seen in association with the intestation. In one case reported a male Chinese aged 47 had suffered from vomiting pain in the upper right quadrant of the abdomen loss of weight and exhaustion for six weeks. The liver was enlarged and the abdomen distended. Biliary drainage revealed a marked duodenitis and catarrhal cholecystodochitis. Viable eggs of the *Clonorchis sinensis* were found in the bile. The patient test hospital but returned two months later and died within six days of an associated bronchopneumonia. Complete necropsy was refused but a stab biopsy of the liver showed marked interlobular cirrhosis areas of liver necrosis and a primary liver cell carcinoma.

## Surgery

### 436 Subtotal Gastrectomy for Duodenal Ulcer

H ANNES DIAS (*Arch Med Appar Dig* January 1938 p 31) after an extensive review of the literature comes to certain conclusions. Duodenal ulcer is cured spontaneously in 40 to 50 per cent of cases. It must not be considered as a local lesion but as an evidence of the mal function of organs other than the stomach and duodenum. Gastrectomy deals only with the local lesion and of the pathogenic factors corrects only the hyperchlorhydria and the gastritis. Cases of jejunal ulcer following gastrectomy are being reported in increasing numbers. The operation is a serious one with a high mortality except in the hands of highly specialized operators. It is a result in the disease agastria and may cause anaemia and disturbance of the intestinal functions and of the equilibrium with changes in the intestinal flora. It is a mutilating and a physiological operation indicated only very exceptional. The problem of duodenal ulcer has not been solved by this operation as certain authors have claimed.

### 437 Saphenous Vein Ligation

P J SARMA (*Surg Clin N Amer* February 1938 p 129) gives the end results of ambulatory ligation of the saphenous vein for the treatment of varicose veins in 1 000 cases. The number of ambulatory ligations of the saphenous vein undertaken has increased rapidly every year since 1927. There were many recurrences following obliterative treatment and the majority of these were seen in those cases in which there was insufficiency of the saphenous valves. The thrombus produced by the obliterating solution could not be removed and the pressure of the column of blood canalization of the thrombus resulted and in a short time the varicosity reappeared. The Trendelenburg test was carried out in order that the cases might be classified. A positive test signifies incompetence of the saphenous valve and the regurgitation of blood into the saphenous vein from the femoral. Ligation treatment followed by chemical obliteration is indicated in the

cases. Ligation is contraindicated by any systemic or degenerative disease. If an acute local or general infection is present ligation should be postponed until the patient is free from such conditions. Careful examination should be made to rule out any possibility of severe cardiac disease, arterial disease of the lower extremity, or thrombo-angitis obliterans, before treatment is undertaken. Ligation of the saphenous vein at the sapheno-femoral junction is the operation of choice. When the superficial circumflex iliac and superficial epigastriac veins or the external pudendal veins empty into the upper end of the saphenous instead of the femoral vein, they are also ligated. The technique of the operation is fully described. A 5 per cent solution of sodium morrhuate and a 5 per cent solution of mono-ethanolamine oleate have proved the most satisfactory obliterating solutions. Good results were seen in 958 of the 1,000 patients treated.

438

## Rubber Grafts

D FIESCHI (*Rev Chir* Paris, January, 1938, p 1) describes the results which have followed the use of rubber grafts in different types of operation. It was found that rubber sponge was well tolerated by the tissues, and that after a few days connective tissue invaded the holes of the rubber and incorporated it into the tissues. The various cases in which this method of treatment has been tried successfully include one of inguinal hernia with a large orifice and a tendency to recurrence, a large ventral hernia, and a femoral hernia. It has also been used for fixation of a mobile kidney, the formation of artificial breasts in comminuted fractures, and as a substitute for a testis which had been removed. In the case of herniae it has been possible for the patient to return to work without risk of recurrence, and illustrations are given showing the graft in position after as long as twenty-eight years. The procedure is as follows. The patient is placed in the Trendelenburg position, and after laparotomy the sac is exposed and opened. Digital exploration of the canal is then carried out, and the canal is filled with a pad of rubber, which is sutured at three points by fine catgut sutures. The abdomen is then closed. It has been found from experience that rubber is a most suitable material as it is easy to use and can be cut to any required size. It does not need any nutrition from the body, and has an elasticity equal to that of normal tissues, it is indestructible, and can be rendered completely sterile.

439

## Thoracoplasty

P DREYFUS-LE-FOYER, R ETIENNE, C BRUNET, and O RENIE (*Rev Tuberc* February, 1938, p 130) review the experiences of the Aincourt sanatorium, where most of the patients are in an advanced stage of tuberculosis. With an accommodation for 300 patients at a time, it dealt with 1,061 patients between January, 1935, and January, 1937. Only thirty-five of these patients (3.3 per cent of the total) were selected for thoracoplastic operations, and only three of them could be considered as fulfilling all the indications for such treatment; the remaining thirty-two were borderline cases in this sense, yet as many as twenty-five achieved recovery as judged by clinical, radiological, and bacteriological standards. Several of them have returned to their families without signs of relapse. The authors attribute this large measure of success primarily to the team work developed between the physicians and surgeons of the institution. The fresh air, rest, and discipline also did much to consolidate the success of the operations. For purposes of comparison the authors give the results of treatment in 1936 for all their patients: cured, 13.55 per cent; improved, 27.95 per cent; stationary, 30.78 per cent; worse, 21.45 per cent; and dead, 6.25 per cent. The authors had no operative deaths, although at least one of their patients among the thirty-five suffered from heart disease.

1192 B

## Therapeutics

440

## Neosalvarsan for Bronchopneumonia

B EBENIUS (*Klin Wschr* November 13, 1937, p 1611) describes the results of the administration of neosalvarsan for bronchopneumonia occurring in two patients with cancer of the hypopharynx and one with cancer of the tongue. In each case 0.3 mg of neosalvarsan was given intravenously. The injection was followed by a rigor within one and a half hours in all three patients. The temperature fell to normal in twenty-four hours in two and in six hours in one patient. A rise of temperature is noted in some susceptible people after the administration of salvarsan. Four further patients were then treated; three of them had cancer, one erysipelas, and bronchopneumonia was not present in any of them. No rigor or rise of temperature was noted. The author believes that a salvarsan reaction is specific in cases of bronchopneumonia and that it kills a large number of organisms the toxins of which produce the rigor. When the toxins are dealt with the temperature falls. Further experiments are being carried out to determine whether salvarsan is specifically bactericidal to certain strains of pneumococci and haemolytic streptococci.

441

## Grenz Rays for Alopecia Areata

E LAST and R O STEIN (*Arch Phys Ther* February 1938, p 99) have used Grenz rays (Bucky rays) in forty cases of alopecia areata, some ten of which were of the malignant type in which Grenz rays have no specific effect on the alopecia though they produce a profound hyperaemia. The success of the treatment depends on the use of the correct dose. Doses over 1,400 r units may under certain conditions cause temporary epilation, but no permanent injury to the hair papillae. The authors use 800 to 1,000 r units. The dose can be repeated, if necessary, twice, at intervals of ten to twelve weeks. The erythema caused by the irradiation appears in about the third week and persists for a long period. The regrowth of the hair starts at about the end of the sixth week. The method has proved successful in cases where all other forms of therapy have failed.

## Laryngology

## 442 Oestrogenic Hormones in Atrophic Rhinitis

H MORTIMER, R P WRIGHT, and J B COLLIP (*Canad med Ass J* November, 1937, p 445) studied the cranial skiagrams of sixty-eight cases of atrophic rhinitis and ozaena and found that a large majority showed changes in the bones of the skull and face which indicated a dyspituitary state during or subsequent to the growth period. "Dyspituitarism" denotes an instability of function of the pituitary gland which tends at times to hypofunction, at other times to hyperfunction. In this condition the cranial bones have an abnormal mode of growth, especially in certain areas—for example, the well-recognized pathological changes in the lateral wall of the nose in atrophic rhinitis. But the changes in the mucous membrane of the nose cannot be explained by the pituitary factor, and the authors believe that the sex hormones play a part here. In the monkey crystalline female sex hormone produced changes in the nasal mucosa of an order opposed to those found in atrophic rhinitis. As a local treatment of the nose with dihydroxy oestrin was therefore tried in the authors' cases of ozaena. After removing all the crusts from the nasal cavity the oestrin is applied in the form of an oily spray. In milder cases the patient merely uses an alkaline spray before the oestrin spray. The improvement which resulted was more marked in the females than in the males, but there is no doubt

that the oestrin also had a beneficial effect on the middle conchal mucosa. It is claimed that oestrogenic hormone insufflation constitutes a mode of treatment for ozena and atrophic rhinitis considerably more effective than any other as yet available.

#### 443 Aural Vertigo

A. J. WRIGHT (*J. Laryng.* February 1938 p. 97) analyses seventy-three cases of aural vertigo from a clinical point of view. In all the patients except two some loss of hearing existed in the affected ear; in these two a history of temporary deafness during the attacks was obtained. In more than half the cases the first symptom was auditory and not vertiginous. In the former group deafness was the initial symptom in one third and tinnitus in the remaining two thirds. Patients with active middle ear suppuration were excluded from this review. The tympanic membrane on the affected side was normal in fifty-two cases. There was some degree of opacity in five and more or less extensive post-suppurative cicatricial changes in nine cases. The Eustachian tubes showed no pathological change in nine cases contrary to the view held by other observers. One or more foci of infection were noted in all cases; these foci consisted of infected teeth, tonsils, antra, gall bladder or uterus. Twenty-three cases in this series were treated surgically by the eradication of one or more septic foci and all were cured of the vertigo. The author concludes that the condition is a definite clinical entity which he calls "local labyrinthitis" and he defines it as a chronic progressive lesion of the labyrinth running a very irregular but long course and always producing some permanent damage as evidenced by loss of hearing. (See also *Journal* March 26 p. 668.)

#### 444 Effect of Tympanic Lesions on Hearing Acuity

J. E. BORLEY and M. HARDY'S experiments (*Arch. Otolaryng.* December, 1937 p. 649) are based on the assumption that cochlear potentials vary with changes in the intensity of the sound that reaches the cochlea. A cat's middle ear was exposed by removal of the bulla without injuring the tympanic membrane. The cochlear potentials are picked up by two electrodes, one the tip of a silver wire placed on the cochlea near the round window, the other a thin flat bar of silver placed in the sterno-mastoid muscle. These electrical potentials are passed through a suitable amplifier to an earphone in another room. If a normal person's hearing is then tested by a pure tone audiometer containing the leads from the cat's cochlea in the circuit the audiogram obtained indirectly represents the hearing power of the animal's ear. Under such test conditions the authors made incisions in the various quadrants of the cat's tympanic membrane and tested the hearing after these injuries. Incisions in some quadrants of the drum membrane produced a greater interference in the hearing than incisions in other quadrants. When a small piece of tracing paper soaked in liquid paraffin was used to repair the lesion a definite improvement in the transmission of sound occurred. Audiograms of patients with traumatic rupture of the tympanic membrane closely resemble those obtained from the cat's ear. This experimental evidence supports the view that changes in cochlear potential actually do parallel changes in hearing acuity.

#### 445 Double Abductor Paralysis

E. LUSCHER (*Schweiz. med. Wschr.* February 26 1938 p. 199) describes two cases of double abductor paralysis, a rare condition in which an operation originally introduced by Wittmaack was performed with very satisfactory results. When a patient suffers from double abductor paralysis he usually has to have a permanent tracheotomy. Various operations have been tried with the object of widening the aperture of the glottis so as to render the

tracheotomy unnecessary. Such operations aimed at a lateral displacement of one or both vocal cords and seriously interfered with the voice. Wittmaack introduced a new surgical principle because his operation effected a downward displacement of one cord and the other one then passes sideways between the normal cord and the one which has been displaced downwards. This results produced by the resection of the muscular process of arytenoid cartilage. The arytenoid cartilage with the attached vocal cord falls forwards and downwards and the level of the cord on the operated side rises to a distance of about 5 mm. Stenosis is relieved, the tracheotomy can be allowed to close and phonation remains surprisingly good.

#### 446 Otitis Media and Vitamin C

M. BAER (*Rev. Laryng.* February 1938 p. 165) attempts to establish a relation between poor states of nutrition due to anence or deficiency of certain vitamins and the development of otitis media. Twenty-six cases of acute middle ear suppuration were investigated, including suppuration in children, sifter connected with dental and gastrointestinal disturbances. In addition to these other predisposing factors such as racial predisposition, influenza infections. In order to concentrate on the vitamin factor cases with obvious predisposing factors were eliminated. In the remaining thirteen cases analysis of the urinary output of vitamin C gave figures which invariably indicated a deficiency. Treatment by administration of ascorbic acid was only started when the otitis had reached a condition at which it was unlikely to respond in any way to local treatment. In all the thirteen cases it was clearly demonstrated that the administration of vitamin C had a most beneficial effect in resolving the middle ear suppuration.

### Obstetrics and Gynaecology

#### 447 Hyperemesis Gravidarum

E. KEHRER (*Z. Geburtsh. Gynäk.* 1938 116 3 353) distinguishes between psychogenic hyperemesis occurring in those with hyperexcitability of the vegetative nervous system but not necessarily with neuropathic or hysterical attributes and the more severe toxic form which may be pernicious from the first or may be superimposed on the psychogenic form. After a detailed review of the pathology in which he stresses the importance of chloride loss and hypochloreaemia and of disturbance of glycogen from excessive vomiting and from hypersecretion of some of the anterior pituitary hormones he defines three successive stages in hyperemesis. In the first an unexplained primary component in the central nervous system causes exaggeration of physiological vomiting. The second component psychogenic in origin causes (1) vagotonia and hyperexcitability of the vomiting centre and (2) partial hyperpituitarism with hypersecretion of the gonadotropic hormones and those stimulating thyroid secretion and fat and carbohydrate metabolism. In the third stage characterized by disturbed metabolism, toxemia and hepatopathy there is a severe auto-intoxication due to the presence in excess of normal or abnormal metabolic products, there is loss of water, chlorides, carbohydrates, proteins and vitamins followed finally by degeneration of the liver. In an exhaustive discussion Kehrer deprecates local gynaecological treatment, advocates derivatives of bromine or luminal as sedatives and emphasizes the importance of psychotherapy. Admission to hospital eliminates disturbances from outside as well as from family influences. The rectal or parenteral exhibition of normal saline solutions is recommended or the intravenous administration of 10 ccm of 5 per cent saline (10 to 20 per cent) twice daily when hypochloreaemia is found. The combination of such treatment with glucose is found.



insulin therapy is often of value. Hypocalcaemia calls for the administration of calcium, preferably by intramuscular injection. Alkalis given in large amounts or intravenously may be dangerous, for alkalosis, not acidosis, is present in some cases. Suprarenal cortical extracts and vitamins C and/or B, have proved effective in some cases. Kehrer is less convinced of the efficacy of follicular, luteal, or male sex hormones, or of feeding through the duodenal tube, induction of labour is very rarely justified. Kehrer has abandoned his former opinion that the decision as to induction should be based on clinical findings rather than on biochemical investigations, and now thinks that these should be studied jointly and equally, oliguria is less important than in the nephropathies of pregnancy, ketonaemia is more important than ketonuria, increased bilirubinaemia than increase of urinary urobilinogen.

## 448

## Local Analgesia

R. TACHEZY (*Schmerz Narkose-anaesth* February, 1938, p. 185) discusses pain referred from viscera, and describes Head's zones of cutaneous hyperaesthesia, which are as follows in painful gynaecological conditions: in inflammation of the adnexa, an elongated area over the middle part of Poupart's ligament, the pain radiating outwards and down the lower limb; in extra-uterine gestation the pain is at the same spot, but radiates to the ribs and shoulder; uterine pain is felt above the pubes, cervical pain lower down in the same area and in the lumbosacral region. These localizations are useful not only in diagnosis but also in the treatment of severe and intractable pain which cannot be radically or quickly cured. The treatment consists of local infiltration of the subcutaneous tissues over a wide area in the painful region, usually one injection gives immediate relief, lasting eight to ten days, after which it may be repeated. Three injections have usually given lasting relief from pain. The author uses 0.5 per cent novocain. Of fifty-five cases he reports, thirty-six gave very good results, seventeen moderate results, and two were failures.

## 449 Liver Therapy in Hyperemesis Gravidarum

E. MUHLE (*Zbl. Gynak.*, March 19, 1938, p. 645) describes a case of hyperemesis gravidarum in the second month of the pregnancy in which he injected liver extract to counteract a severe anaemia. All the usual therapeutic methods had failed to give relief, but this was obtained after the first injection. In the past year he has treated in this way twenty cases, of which ten were severe, with only one failure. Only two patients required hospitalization. In all cases a diet poor in proteins and fats and rich in carbohydrates but with no-milk was prescribed. Rest in bed was advised where practicable, but not enforced. Intramuscular injections of liver extract were administered daily in severe cases, on alternate days in mild ones, until all the symptoms had disappeared. The author does not know of any contraindications to this treatment. There is no explanation of this favourable action of liver extract. The doses are too small to account for its rapid action, which is in a sense similar to that of liver in the treatment of bismuth and lead poisoning.

## 450 Alcohol Injection for Pruritus Vulvae

W. M. WILSON (*J. Amer. med. Ass.* February 12, 1938, p. 493) was prompted by the successful results of Stone's treatment of anal pruritus by alcohol injection to try it in pruritus vulvae; he now reports his results in forty-nine cases (of an average duration of eight years), in most of which more conservative measures had been ineffective and in none of which could a causal factor be found. At one sitting and preferably under general anaesthesia from 2 to 4 minims of 95 per cent alcohol were injected just beneath the dermis at each of a number of

points at least 1.5 cm apart, the amounts injected were kept low in elderly or arteriosclerotic patients or in those with vulval or anal varicosities. Oedema, thickening, and itching disappeared almost at once, and the improvement outlasted the return of normal vulval sensation three weeks later. Twenty-four patients had enduring relief from one injection, but in thirteen the injections were repeated, being lastingly successful in two, in only two patients was this treatment completely ineffective. In two patients incision was necessary for haematomata or necrosis. The effect of the alcohol is due first to degenerative changes in the cutaneous nerve fibres, second, and probably more important, is the rapid mobilization in the chronically inflamed subepidermal zone of polymorphonuclear leucocytes and of histiocytes from the reticulo-endothelial system.

## Pathology

## 451 Hormonal Control of Vas Deferens and Vesiculae

T. MARTINS, J. R. DO VALLE and A. PORTO (*Brazil med.* February 26, 1938, p. 225) have made a study of the vas deferens and seminal vesicles of rats, amounting in all to 140 organs. In Locke's solution *in vitro* the vas deferens and seminal vesicles of castrated animals showed spontaneous contractions, and were insensitive to stimulant drugs in general, and especially to parasympatheticotonics. The vas deferens of normal rats did not show any automatism. There were also qualitative differences regarding the type of reaction, the reaction of normal organs had always a tonic character, while the organs of castrated rats showed only rhythmical contractions with little or no tonic character. In the vas deferens of castrated rats which had been treated with oestradiol benzoate the castrate type of motility *in vitro* was exaggerated. Injection of the castrated rats with testosterone or testosterone propionate produced the normal type of reaction. Injection of progesterone in the doses given (a total of 5 to 18 mg in the course of ten to twenty days) failed to have any inhibitory reaction. The writers conclude that the motility of the vas deferens and vesiculae seminales is normally under hormonal control and the testicular and oestrogenic hormones have different actions, the former inhibitory and the latter stimulating.

## 452

## Thrombopenia

L. BLACHER (*Sang.* 1938, 12, 1, 26) discusses the pathology of Werthol's essential thrombopenia, and gives the results of his observations on four cases. (1) The bone marrow in congenital thrombopenia produces a sufficient number of platelets. (2) The state of the platelets in the splenic artery, vein, and parenchyma shows that in this disease the spleen is apparently endowed with an exaggerated capacity for retaining and breaking down blood platelets. Characteristic bodies known as "laminated splenic bodies" have been found in the parenchyma of the spleen and at times in the peripheral blood, these are taken to be a manifestation of splenic hyperfunction. (3) In congenital thrombopenia the "thrombodiagrams" of the peripheral blood are similar to those of the bone marrow. (4) The number of platelets per cmm of peripheral blood, even after injections of adrenaline, is in no way related to the experimental bleeding time; on the other hand, there is a definite relation between the bleeding time and the thrombocyte index, the quality of the platelets and the pathological activity of the liver. (5) Marked thrombopenia occurs in functional disturbances of the endocrine glands, particularly of the gonads. (6) In the four cases observed the thrombopenia remained stationary while the "haemorrhagic diathesis" appeared or disappeared in accordance with the periodic activity of the gonads. The author concludes by suggesting that this disease should in future be known as "dysfunctio-haemorrhagica hepato-lympho-toxicogenica."

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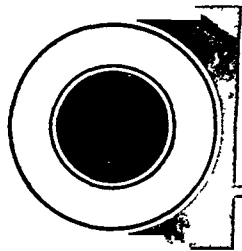
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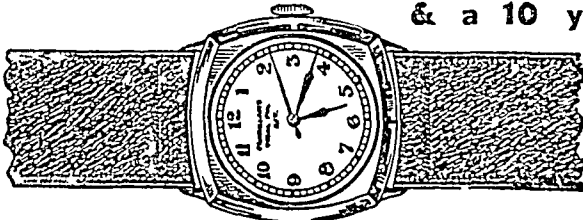
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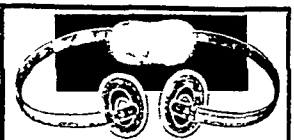
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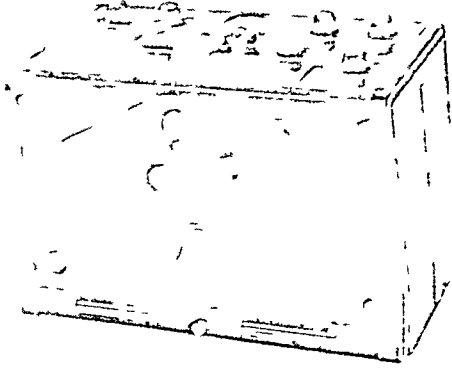
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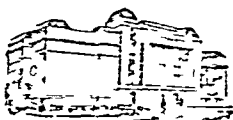
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Ends suffering from all forms of MENTAL ILLNESS are received for treatment on 14 lines as Voluntary Temporary or Certified. Private Patient at the Hill End Hospital. Convalescent or mild cases can be treated in a delightful country mansion with extensive grounds known as

## HIGHFIELD HALL,

situate about a mile away from the Hill End. FEES TWO TO THREE GUINEAS PER WEEK. For further particulars apply to the Medical Superintendent. W. J. F. JAMES L RCP DPM Supt. ST ALBANS, HERTS

under VOLUNTARY TEMPORARY PATIENTS  
at a weekly fee of TWO GUINEAS and on



## HARROGATE for health....

Health in the spa waters, which are specially suitable for treatment of Disorders of the Liver — congestion, cirrhosis, jaundice, cholecystitis, cholelithiasis, and tropical liver Diseases of the Skin — eczema, psoriasis, the coccal infections of the skin, etc the Chronic Rheumatic Diseases—Arthritis, Fibrositis, Neuritis, Gout, Hyperpiesis, Mucous Colitis, Functional Disorders of the Heart, Pelvic Disorders of Women, Convalescence from acute illness

.. and  
holiday

A wide range of Sulphur waters, strong and mild, and of Iron waters, both saline and pure chalybeate, is available for dealing with the large group of disorders amenable to Spa treatment Prescribed diets obtainable at hotels and boarding houses, without extra charge Complimentary and reduced price facilities for the Cure, Accommodation and Amusements are available for Members of the Medical Profession

Full descriptive Booklet of cure and holiday facilities from Spa Manager, Information Bureau, Harrogate, 1, or any LNER Office or Agency

### "IT'S QUICKER BY RAIL"

Cheap monthly return tickets to Harrogate from all stations Any train, any day

## TOR-NA-DEE SANATORIUM MURTLÉ DEESIDE ABERDEENSHIRE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS

Managing Director DAVID LAWSON, MD, FRSE

Southern aspect Low rainfall Pure bracing air Sheltered grounds Beautiful surroundings All modern equipment for diagnosis and treatment including operating theatre No extra charge for X Rays, Artificial Pneumothorax, Ultra-Violet Light, or other special treatment

Day and Night Nursing Staff All bedrooms have central heating electric light, hot and cold running water, and wireless (headphones) Comfortable and airy public rooms

Medical Superintendent J M JOHNSTON MB, MRCS DPH For terms and prospectus apply to the Secretary Telephone CULTS 107

## PENDYFFRYN HALL SANATORIUM PENMAENMAWR, NORTH WALES

All Modern Methods of Treatment Available

Ideally situated for the treatment of Tuberculosis Sheltered from E and NE winds Climate mild and bracing Low rainfall high average of sun here The Sanatorium is situated in its own park There are miles of graduated walks through pine gorse and heather rising to 1000 ft and commanding extensive sea and mountain views Central heating electric light X-ray installation Wireless in all rooms Full day and night nursing staff Special milk supply from a tuberculin tested herd Easily accessible from LONDON (4½ hours) MANCHESTER LIVERPOOL BIRMINGHAM and the North

Resident Physicians DENNISON PICKERING MD, J W PUGH MB BCH

For particulars apply to the Secretary Pendyffryn Hall Penmaenmawr North Wales

110 3

## THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect SSW sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by Artificial Pneumothorax (X-ray controlled) Tuberculin and Ultra-violet Rays are available when necessary without extra charge X-ray plant Fully equipped Dental Department Electric light Radiators hot and cold bins and Wireless in all rooms Up to date main drainage

Full day and night Nursing Staff Terms 3 gu to 14 gu a week inclusive MARGARET A HARRISON MB BS Lond Ptho in EDGAR & DAVENPORT MB BCh Consult Laryngologist CASSIDY DE W GIBB FRCS Edin Consulting Dental Surge GEORGE A SAUNDERS LDS

Apply Secretary The Cotswold Sanatorium Cranham Gloucester Tel 81 and 82 Witcombe Grams Hotel 121 Bird 7



# THE EXAMINING BOARD IN ENGLAND

BY THE  
ROYAL COLLEGE OF PHYSICIANS OF LONDON  
AND THE  
ROYAL COLLEGE OF SURGEONS OF ENGLAND

## DIPLOMA IN ANAESTHETICS (D.A., R.C.P. & S.Eng.)

The following clause in the regulations for the Diploma in Anaesthetics has now been withdrawn —

*Until May 1st 1938, it shall be open to the Royal Colleges on the recommendation of the Committee of Management of the Examining Board to grant the Diploma without examination to an Anaesthetist to a general hospital associated with a recognised medical school in the British Empire who has held this appointment for not less than ten years*

The Committee of Management has now been authorised by the Royal Colleges to consider applications up to December 31st 1938 for the award of the Diploma without examination from Anaesthetists who while not strictly eligible under the previous

conditions approach them so nearly as to give them in the opinion of the Committee the necessary experience and standing in the profession to justify their names being submitted to the Royal Colleges for the award of the Diploma

Enquiries should be addressed to the Secretary of the Board,  
8 11, Queen Square London, W.C. 1

## U. S. S. R.

**MEDICAL TOUR**, visiting Soviet hospitals and other medical institutions, leaves London Sept 7 by Soviet steamer for Leningrad, Moscow, Khar'kov, Kiev, returning to Hull Oct 2 — from £28 Or return overland

Opportunities will be given for study of special branches of the subject

Details from the Society for Cultural Relations with the U.S.S.R. 98 Gower Street London W.C.1

## UNIVERSITY OF LONDON

A Course of Two Lectures on THE PHYSIOLOGY OF THE DIGESTIVE GLANDS will be given by PROF B P BABKIN M.D. D.Sc. F.R.S.C. (Research Professor of Physiology in McGill University Montreal) at UNIVERSITY COLLEGE LONDON (Gower Street W.C.1) on JUNE 7th and 9th at 5 p.m. At the First Lecture the Chair will be taken by Prof C Lovatt Evans F.R.S. (Jodrell Professor of Physiology in the University) Lantern illustrations

ADMISSION FREE WITHOUT TICKET  
S J WORSLEY  
Academic Registrar

**NORTH EAST LONDON,  
POST-GRADUATE COLLEGE**  
PRINCE OF WALES GENERAL HOSPITAL  
N 15

The Faculty of the Hospital is limited to Medical Practitioners. Particulars from J BROWNING ALEXANDER M.D. Dean

## UNIVERSITY OF CAMBRIDGE

### DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY

The next Course of Study for the Diploma begins about October 4th 1938 and occupies about nine months. It comprises —

- Four months instruction in PHYSICS RADIOLOGY and PATHOLOGY
- Three months further instruction in RADIOLOGY and ELECTROLOGY together with three months clinical work in the Radiological Department of a hospital approved by the Managing Committee for the Diploma
- Two months experience as CLINICAL ASSISTANT in the Radiological Department of a hospital approved by the Committee. Hospitals in London in the Provinces and Overseas have been approved for this part of the Course

Examinations for Part I (Physics) will be held in February and July 1939 and for Part II (Radiology Electrophysiology and Pathology) in July and October 1939

The University has decided that the Diploma shall cease to be granted after 1941. The last Course for the Diploma will start in October 1940 and the last examination will be held in October 1941

The Courses are open to men and women whose medical qualifications are approved by the General Medical Council for purposes of registration and who satisfy the Committee that they have had sufficient post graduate clinical experience

Further information about the Courses may be obtained from —

G STEAD M.A. Secretary for the Diploma  
Cavendish Laboratory Cambridge or  
The General Secretary British Institute of Radiology, 32 Welbeck Street London W.1

**THE ROYAL  
CANCER HOSPITAL (FREE)**  
(Incorporated under Royal Charter)  
Fulham Road, London, SW3

A COURSE OF STUDY IN PHYSICS AND MEDICAL RADIOLOGY qualifying for the Diploma in Medical Radiology of the University of London and the Royal Colleges of Physicians and Surgeons will begin on MONDAY OCTOBER 3rd 1938 at The Royal Cancer Hospital Fulham Road London SW3. Full particulars can be obtained on application at the above address to the Secretary CLEMENT COBBOLD Secretary

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Are you preparing for any  
MEDICAL, SURGICAL, or  
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## "Guide to Medical Examinations"

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The D.P.H. and how to obtain it  
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Do not fail to get a copy of this Book  
before commencing preparation for any  
Examination. It contains a large  
amount of valuable information  
Dental Examinations in special dental  
guide

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The Secretary

### MEDICAL CORRESPONDENCE COLLEGE,

19, Welbeck Street, Cavendish Square,  
London, W.1

Sir—Please send me a copy of your Guide  
to Medical Examinations by return.

Name

Address

Examination in  
which interested

## ROYAL SOCIETY OF MEDICINE 1 Wimpole Street London W.1

### NORMAN CAMBIE FUND AND RESEARCH PRIZE

The Council of the Royal Society of Medicine has accepted as a trust the sum of one thousand pounds (£1000) presented by Mr Norman Cambie for the purpose of providing a prize of £20 every fourth year for the best original work in Otology carried out during the preceding four years of balance of the fund to be used for the purpose of awarding grants in aid of research work in Otology. The prize is open to any British subject whether lay or medical.

Copies of the regulations governing the award of the prize can be obtained from the Secretary of the Royal Society of Medicine 1 Wimpole Street W.1

The Committee of Award will consider applications for the prize and for grants in aid of research work in October 1938. Applications for the prize and for grants in aid must be received by the Secretary of the Royal Society of Medicine not later than September 30th 1938.

# THE TAVISTOCK CLINIC

(Institute of Medical Psychology)

MALET PLACE, LONDON, W.C.1

## A FORTNIGHT'S COURSE OF LECTURES

## on THE PSYCHONEUROSES

	3 0 p m	4 30 p m	5 45 p m
	General Psychosomatic Factors	Clinical Psychopathology	Psychological Mechanisms of Treatment
Monday, June 27th	H CRICHTON-MILLER MD MRCP 1 Synergic Aetiology	J A HADFIELD, F.R.C.P. 1 Physiological Factors in the Production of the Psychoneurotic Toxic Constitutional etc	H V DICKS, MD MRCP 1 Conflict and Repression
Wednesday June 29th	2 Toxaemia in Neurotic Disorders	2 General Aetiology of the Psychoneuroses	2 Displacement Projection Introjection Sublimation etc
Friday, July 1st	3 The Endocrines in Neurotic Disorders	3 Hysterical Manifestations	3 Symptom Formation
Monday, July 4th	4 The Reaction to Disability	4 Anxiety States	4 Treatment by Persuasion and Suggestion
Wednesday July 6th	5 The Pubertal Syndrome	5 Obsessions	5 The Aim of Analytic Treatment
Friday July 8th	6 The Climacteric Syndrome	6 Sex Perversion	6 Some Methods of Analysis

These Lectures are open only to REGISTERED MEDICAL PRACTITIONERS. FEE for the Course £2.2s. Cheques payable to the EDUCATIONAL SECRETARY THE TAVISTOCK CLINIC from whom tickets should be obtained IN ADVANCE

NATIONAL HOSPITAL FOR DISEASES OF THE HEART,  
WESTMORELAND STREET W.1

## THE ST. CYRES LECTURE

for the year 1938 will be delivered at the

BARNES HALL OF THE ROYAL SOCIETY OF MEDICINE 1 WIMPOLE ST W.1

by  
**DR. JOHN PARKINSON,**on  
**TUESDAY, JUNE 14th, at 5 p m**Subject **HYPERTENSION AND HEART DISEASE**

## THE TAVISTOCK CLINIC

(The Institute of Medical Psychology)

MALET PLACE, W.C.1

A Years Course in

**PSYCHOTHERAPEUTIC THEORY AND METHOD**

begins annually in October

Number to be admitted to the course is limited. For full particulars of the course and the fee to the EDUCATIONAL SECRETARY at the Clinic.

## CITY OF LONDON MATERNITY HOSPITAL

(Incorporated by Royal Charter)  
CITY ROAD E.C.1

The Hospital offers facilities to POSTGRADUATES for study of the work of the Hospital in Obstetrics and Gynaecology and to MEDICAL STUDENTS (and Practitioners) for a Refresher Course of two or four weeks (Midwifery Course (Residential) - 100 patients annually)

RALPH B. CANNINGS Secy

DIPLOMA IN OBSTETRICS  
DIPLOMA IN RADIOLOGY  
DIPLOMA IN LARYNGOLOGY  
AND OTOLARYNGOLOGY

For full particulars of the course and the fee to the EDUCATIONAL SECRETARY at the Clinic.

Town Hall  
 Stonehouse



## BARRY URBAN DISTRICT COUNCIL

### ACCIDENT AND SURGICAL HOSPITAL (31 Beds)

#### APPOINTMENT OF SURGEON (MALE)

Applications are invited for the above appointment. Candidates must not be over 45 years of age, must be duly qualified, registered and capable of undertaking any major operations and must have a good working knowledge of X-ray and Electrotherapy. Candidates must hold a Fellowship of one of the Royal Colleges of Surgeons or its equivalent.

Salary at the rate of £500 rising by annual increments of £50 to £900 per annum.

Non-resident but the successful candidate must reside near the Hospital. He must devote the whole of his time to the duties of his office and undertake any surgical work required in connection with maternity and child welfare centre and school clinic under the Medical Officer of Health who acts as Medical Superintendent. The successful candidate will not be allowed to engage in private practice and all costs, fees, allowances and payments of every kind which may be made to him must be paid over to the Council subject to certain exceptions the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the regulations made or to be made by the Council relative to their Officers. The successful candidate will be required to pass a medical examination. The appointment will be terminable by three months' notice in writing on either side.

Applications must be made on forms to be obtained from the Medical Officer of Health Public Health Department Woodlands Road Barry and should be sent (accompanied by copies of three recent testimonials) to the Medical Officer of Health so as to reach him not later than June 11th 1938. The forms of application will contain further particulars and list of duties.

T D HOWELLS

Clerk to the Council

Council Offices Barry  
May 21st 1938

## METROPOLITAN BOROUGH OF SOUTHWARK

### PART TIME ASSISTANT TUBERCULOSIS OFFICER

Applications are invited from registered medical men specializing in medicine for the appointment of a Part Time Assistant Tuberculosis Officer at a salary of £350 a year.

The number of sessions to be attended will be six per week.

In addition to their clinical experience candidates should have had practical experience in the diagnosis and treatment of tuberculosis.

The officer appointed will be required to act under the supervision and control of the Medical Officer of Health as the Chief Executive and Organizing Tuberculosis Officer.

The appointment will be subject to the successful candidate passing the medical examination required by the Council and to the provisions of the Shoreditch and Other Metropolitan Borough Councils (Superannuation) Act 1922 to 1937.

Forms of application will be supplied on sending a stamped addressed foolscap envelope to the undersigned.

Applications on the proper forms accompanied by copies of three recent testimonials should be sent to me endorsed Assistant Tuberculosis Officer so as to reach this office not later than noon on Friday June 3rd 1938.

D T GRIFFITHS

Southwark Town Hall  
Waltham Road S E 17  
May 19th 1938

## ROYAL HALLAM INFIRMARY (250 Beds)

Hospital recognized by the Royal College of Surgeons (England)

Wanted a HOUSE PHYSICIAN who will also have charge of Eye Ear Nose and Throat Department (Male unmarried). Candidates must be duly qualified and registered. Salary including services required in connection with Paying Patients Ward £175 per annum with residence board and laundry.

Particulars of the duties may be obtained from the undersigned to whom applications stating age and nationality together with copy testimonials should be sent.

May 16th 1938

A MIDDLELEY

Secretary

## TILBURY HOSPITAL ESSEX (Seamen's Hospital Society)

HOUSE SURGEON (male) required for six months as from July 1st. Salary £140 per annum with board residence and laundry. Applications with copies of three testimonials to be sent to the undersigned.

F A LYON

Seamen's Hospital Society  
Greenwich S E 10

May 4th 1938

## COUNTY BOROUGH OF SUNDERLAND

CHERRY KNOWLE  
(Sunderland County Borough Mental Hospital)  
Ryhope near Sunderland

### APPOINTMENT OF MEDICAL SUPERINTENDENT

Applications are invited from duly qualified and registered Medical Practitioners for the appointment of Medical Superintendent of Cherry Knowle. The salary will be £1000 per annum advancing subject to satisfactory service by annual increments of £50 to £1200 per annum plus emoluments valued for purposes of superannuation at £200 per annum.

In addition to the usual duties devolving upon him as Superintendent of Cherry Knowle the person appointed will be required to advise the Committee on all the mental health services of the Borough such as mental deficiency out-patient and after care treatment and child guidance and to carry out the other duties set out in the terms and conditions of appointment.

At Cherry Knowle a general and diagnostic block and an early treatment block are being built and other improvements are being carried out. These will be completed next year when the accommodation of the Hospital will be for approximately 700 patients.

Form of application and particulars of the terms and conditions of appointment may be obtained from me and applications addressed to me and endorsed on cover Medical Superintendent Cherry Knowle together with copies of three recent testimonials must be delivered to my office not later than Friday June 10th next.

Canvassing either directly or indirectly until after the first selection of candidates by the Committee will be a disqualification.

G S MCINTYRE

Town Clerk and Clerk to the Visiting Committee  
Sunderland  
May 16th 1938

## SOUTH WEST YORKSHIRE JOINT BOARD FOR THE MENTALLY DEFECTIVE

### RESIDENT MEDICAL SUPERINTENDENT

The Joint Board invite applications from registered Medical Practitioners having had training and experience in the institutional treatment of mentally defective persons for the post of RESIDENT MEDICAL SUPERINTENDENT at the St Catherine's Certified Institution Doncaster. The accommodation will comprise 480 beds.

The salary will be £950 per annum rising by annual increments of £50 to £1100 per annum inclusive of emoluments less a deduction of £100 per annum in respect of rent and rates of house to be provided.

The successful applicant will be required to devote the whole of his time to the services of the Joint Board and to carry out all such duties as they may from time to time direct including super-vising duties in relation to any other institution or institutions which the Board may establish for the care and treatment of mentally defective persons.

The person appointed will be an Established Officer for the purposes of the Asylums and Certified Institutions (Officers' Pensions) Act 1918.

Form of application and list of duties can be obtained from the undersigned to whom applications endorsed Medical Superintendent St Catherine's must be delivered on or before June 8th.

Canvassing directly or indirectly will be deemed a disqualification.

CHAS L DES FORGES

Municipal Offices Clerk to the Joint Board  
Rotherham  
May 1938

## THE RADCLIFFE INFIRMARY OXFORD

Applications are invited for the following posts on the Honorary Medical Staff of the above hospital:

- 1 PHYSICIAN
- 2 DERMATOLOGIST

The appointments are open to the present Assistant Physicians and Assistant Dermatologist. Twenty five copies of applications and testimonials which will be forwarded to the members of the selecting committee must be sent to the undersigned from whom further particulars may be obtained not later than Saturday June 11th 1938.

A G E SANCTUARY

May 1938 Administrator

## NORFOLK AND NORWICH HOSPITAL Norwich (417 Beds)

Applications are invited for the post of HOUSE SURGEON. Salary £120 per annum with board residence and laundry. Candidates (male) must be unmarried and must possess registered qualifications.

Applications stating age nationality etc together with copies of testimonials should be forwarded to the undersigned not later than Tuesday June 7th.

FRANK INCH

House Governor and Secretary  
May 27th 1938

## THE URBAN DISTRICT COUNCIL OF ABERDARE

### EDUCATION COMMITTEE

#### APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from registered medical women (unmarried or widowed) under the age of 45 and with at least three years experience of the practice of their profession for the above post. In making the appointment consideration will be given to the undermentioned qualifications:

- (1) The possession of the Master of Midwifery diploma of the Society of Apothecaries.
- (2) Special experience in Obstetrics and Gynaecology.
- (3) Special experience in the diseases of infancy and childhood.
- (4) The possession of a registrable diploma in Sanitary Science, Public Health or State Medicine.

The duties will include school medical inspection supervision of midwives attendance at Ante-natal and Infant Welfare Clinics and other public health duties as may be prescribed from time to time. The duties of the respective offices will be carried out under the general direction of the Medical Officer of Health and the successful candidate must devote her whole time to the service of the Council and the Education Committee. She will be required to reside in the district and contribute to the Council's Superannuation fund. The salary will be at the rate of £600 per annum rising by annual increments of £25 to a maximum of £700 per annum. Three months' notice will be required to terminate the appointment.

Application forms may be obtained from the Medical Officer of Health 43 High Street Aberdare.

Applications together with copies of three recent testimonials must reach the undersigned on or before June 6th 1938.

T J LEWIS

Director of Education  
Education Offices  
Aberdare  
May 20th 1938

## COUNTY BOROUGH OF BRIGHTON

### SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of male JUNIOR RESIDENT MEDICAL OFFICER.

Salary £251 per annum with board and lodging. The appointment is for a period of six months.

The post is designated under the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination before being appointed to the position.

Particulars and form of application can be had from the undersigned.

Applications must be delivered at my office before 10 AM on Monday June 13th.

DUNCAN FORBES

Medical Officer of Health

Royal York Buildings Brighton 1  
May 21st 1938

## MANCHESTER ROYAL INFIRMARY

### CHIEF ASSISTANT TO THE CLINICAL SURGICAL DEPARTMENT (Non resident)

The Board of Management invite applications for the above appointment.

Candidates should be Fellows of the Royal College of Surgeons of England.

The duties require attendance at the Infirmary on seven half days per week. The appointment is for one year renewable for a further period subject to the provisions of the By-laws as to notice. Salary £350 per annum.

Further information may be obtained from the undersigned to whom applicants must send 10 copies of their application and testimonials by Thursday June 9th 1938.

By Order

F J CABLE

General Superintendent and Secretary

May 23rd 1938

## MANCHESTER ROYAL INFIRMARY

### JUNIOR ASSISTANT MEDICAL OFFICER IN RADIOLOGICAL DEPARTMENT

The Board of Management invite applications for the above whole time appointment. Applicants must be registered and hold a Medical and Surgical qualification and the D.M.R.C. or equivalent.

The appointment (non resident) is for twelve months renewable for a further period of twelve months subject to the provisions of the By-laws as to notice. Salary is at the rate of £350 per annum.

Applicants must state age and send fifteen copies of their application and testimonials to the undersigned by Thursday June 9th 1938.

By Order

F J CABLE

General Superintendent and Secretary

May 23rd 1938

# HIS MAJESTY'S COLONIAL SERVICE COLONIAL MEDICAL SERVICE

## A VACANCY EXISTS FOR A WOMAN MEDICAL OFFICER IN ZANZIBAR

Candidates must be British subjects of European parentage under 40 years of age, must possess a medical qualification recognised in the United Kingdom, have had a hospital appointment as a House Physician, and have had special postgraduate experience and training in Maternity and Child Welfare work.

Salary £600 a year, rising by annual increments of £50 to £640 and then by annual increments of £40 to £700 a year. The appointment is on the permanent pensionable establishment subject to a probationary period of two years.

Duties: The selected officer will be required to take charge of the medical and health services in Zanzibar and Pemba.

Free Passages are provided on first appointment and when taking leave.

Quarters: Free furnished quarters will be provided.

Forms of application may be obtained from the Director of Recruitment (Colonial Service), Buckingham Gate, London, S.W.1. Completed applications must be received by June 11th 1938.

## COUNTY BOROUGH OF RICHDALE

### ASSISTANT MEDICAL OFFICER OF HEALTH

The Health Committee invite applications for the post of Assistant Medical Officer of Health, a salaried medical practitioner (men or women) holding a D.P.M. in Public Health or similar qualification. Salary £500 rising by annual increments of £50 to £700 per annum.

The successful candidate will act under the general direction of the Medical Officer of Health and the duties will be mainly in connection with Child Welfare, will be working with the Social Medical Service and Family Welfare. A Clinical Experience in the medical treatment of Venereal Diseases will be necessary.

The appointment will be subject to the Local Government (Officers of Medical Officers and Health Visitors) Regulations 1930.

Forms of application may be obtained from the Medical Officer of Health, Public Health Office, Richdale, and must be returned to him accompanied by copies of three recent testimonials and endorsed by Assistant Medical Officer of Health on Monday June 13th 1938.

Town Hall, HARRY BAXX, Town Clerk  
Richdale, May 23rd 1938

## HULL CORPORATION HEALTH DEPARTMENT

Hull Municipal Maternity Home and Infants Hospital, (104 Beds)

### JUNIOR RESIDENT MEDICAL OFFICER (Women)

Applications are invited from unmarried or widowed or divorced medical practitioners for the appointment of JUNIOR RESIDENT MEDICAL OFFICER at the above Institution. Salary £100 per annum to either with board and residence at the Maternity Home. The appointment will be for six months with a possible extension for a further period of six months.

Applications can be made to be obtained from the undersigned not later than Saturday June 11th 1938.

NICOLAS GEBBIE, M.D.  
Medical Officer of Health

Health Department,  
Goodhall Hall,  
May 1938

## CHELTEHAM GENERAL AND EYE HOSPITALS.

(176 Beds. Four Residents)

Required for the FRCS D.L.O. and D.O.M.S. Examinations.

Applications are invited for the following appointments (male) vacant July 1st:  
1 ONE HOUSE PHYSICIAN  
2 ONE HOUSE SURGEON for General Surgical work  
3 ONE HOUSE SURGEON for Eye and Ear, Throat and Nose Departments.  
Salary £140 a year with board, residence, and laundry.

There are two House Surgeons for General Surgical work, in addition to which one is attached to the Orthopaedic and Gynaecological Department and the other to the Genito-Urinary and Radiant Departments.

Applications for the post desired together with copies of testimonials to be sent to the undersigned.

J. CUMMING SMITH F.R.C.S. Secretary  
The General Hospital  
Cheltenham,  
May 24th 1938.

## UNIVERSITY OF CAMBRIDGE

### DEPARTMENT OF MEDICINE

Visiting Lectures in the Department of Medicine and Pathology, the University of Cambridge.

The Department of Medicine and Pathology of the University of Cambridge is seeking a Visiting Lecturer in the Department of Medicine and Pathology for the year 1938-39.

The Lecturer will be required to give lectures in the Department of Medicine and Pathology, and to be available for consultation in the Department of Medicine and Pathology.

The Lecturer will be required to be a British subject, and to have a D.P.M. in Medicine or Pathology, or an equivalent qualification.

The Lecturer will be required to be available for consultation in the Department of Medicine and Pathology, and to be available for consultation in the Department of Medicine and Pathology.

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## UNIVERSITY COLLEGE DUBLIN (University of St. Andrews)

A full-time ASSISTANT Lecturer in the Department of Anatomy, University of St. Andrews, is required. The salary offered is £1,000 per annum. The duties of the appointment will be to give lectures in the Department of Anatomy, and to be available for consultation in the Department of Anatomy.

Leave by Col. D. W. G. B. OLIVER, M.A. 1938

## NEWCASTLE UPON TYNE EYE HOSPITAL

### HONORARY OPHTHALMIC SURGEON

Appointments are invited for the post of Honorary Ophthalmic Surgeon at the Eye Hospital, Newcastle upon Tyne. The duties of the appointment will be to give lectures in the Department of Ophthalmology, and to be available for consultation in the Department of Ophthalmology.

The Lecturer will be required to be a British subject, and to have a D.P.M. in Ophthalmology, or an equivalent qualification.

The Lecturer will be required to be available for consultation in the Department of Ophthalmology, and to be available for consultation in the Department of Ophthalmology.

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# ROYAL LONDON OPHTHALMIC HOSPITAL

(Moorfields Eye Hospital)  
City Road E.C.1

## PATHOLOGIST AND CURATOR

Applications are invited for the office of PATHOLOGIST AND CURATOR. Candidates must be registered Medical Practitioners.

The Pathologist and Curator will be appointed for one year and will be eligible for reappointment yearly but shall not hold this office for more than five years.

Applications stating age and qualifications with copies of testimonials must be received by the undersigned not later than June 7th 1938.

A copy of the regulations governing the post will be sent on application.

A. J. M. TARRANT  
Secretary

# THE SOUTH LONDON HOSPITAL FOR WOMEN

Clapham Common S.W.4  
(140 Beds)

A General Hospital for Women and Children. Applications are invited from medical women for the unmentioned appointments.

HOUSE PHYSICIAN HOUSE SURGEON each for a period of six months from July 1st 1938.

Salary at the rate of £100 per annum with board residence and laundry.

Candidates are requested to call on members of the Hon. Medical Staff before Saturday June 11th by which date applications and copies of testimonials must reach the Secretary at the Hospital.

# EAST HAM MEMORIAL HOSPITAL

Shrewsbury Road E.7  
(100 Beds)

Applications are invited for the post of HOUSE SURGEON to Special Departments and CASUALTY OFFICER (Male) for six months commencing July 1st. Salary at the rate of £120 per annum with board residence and laundry.

Applications stating age, nationality, experience and full particulars together with copies of three recent testimonials should reach the undersigned by June 16th.

REGINALD PERRY  
Secretary

# GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL

London W.1

Applications are invited for the post of HONORARY ASSISTANT SURGEON. Candidates should be Fellows of the Royal College of Surgeons of England and they are requested to call upon the present members of the staff. Applications stating age, qualification and experience and enclosing copies of recent testimonials should be received by the undersigned on or before June 10th.

F. P. CARROLL  
Secretary Superintendent

# GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL

London W.1

There are vacancies for CLINICAL ASSISTANTS to commence duties at once. Applications stating age, qualifications and experience together with copies of three recent testimonials should be received on or before June 10th by the undersigned from whom further particulars may be obtained.

F. P. CARROLL  
Secretary Superintendent

# DREADNOUGHT HOSPITAL GREENWICH

S.E.10  
(Seamen's Hospital Society)

HOUSE SURGEON required for six months as from July 1st. Salary £110 per annum and a proportion of fees with board residence and laundry. Candidates must be male and single. Applications with copies of three testimonials to be sent in on or before July 8th to the undersigned.

F. A. LYON  
Secretary

# DREADNOUGHT HOSPITAL GREENWICH

S.E.10  
(Seamen's Hospital Society)

HOUSE PHYSICIAN required for six months as from July 1st. Salary £110 per annum and a proportion of fees with board residence and laundry. Candidates must be male and single. Applications with copies of three testimonials to be sent in on or before July 8th to the undersigned.

F. A. LYON  
Secretary

# THE ELIZABETH GARRETT ANDERSON HOSPITAL

Euston Road N.W.1

The Managing Committee invite applications from fully qualified medical women for the following appointment.

HONORARY ASSISTANT PSYCHIATRIST to the Out-patient Department. Applicants should have the D.P.M. or M.D. in physiological medicine. Duties to commence September 1st 1938. Further particulars to be obtained from the undersigned to whom applications with copies of three testimonials should be sent not later than Friday June 24th 1938.

JEAN R. MURRAY  
Secretary

# THE ELIZABETH GARRETT ANDERSON HOSPITAL

Euston Road N.W.1

The Managing Committee invite applications from fully qualified medical women for the appointment of—

HONORARY ASSISTANT PHYSICIAN. Applicants must hold the M.D. degree and be members of the Royal College of Physicians. Duties to commence September 1st 1938. Further particulars to be obtained from the undersigned to whom applications with copies of three testimonials should be sent not later than Friday June 24th 1938.

JEAN R. MURRAY  
Secretary

# THE ELIZABETH GARRETT ANDERSON HOSPITAL

Euston Road N.W.1

The Managing Committee invite applications from fully qualified medical women for the post of MEDICAL REGISTRAR—non resident. Honorarium £100 per annum. Duties to commence August 1st 1938. Further particulars of the post to be obtained from the undersigned to whom applications with copies of three testimonials should be sent not later than Friday June 24th 1938.

JEAN R. MURRAY  
Secretary

# THE QUEEN'S HOSPITAL FOR CHILDREN

Hickney Road E.2  
(204 Beds)

The Board of Management invite applications for the post of OPHTHALMIC SURGEON. Candidates must be Fellows of the Royal College of Surgeons of England or of another recognized College. Attendence required one half-day weekly in Out-patient Department. The Ophthalmic Surgeon will also have charge of beds.

An honorarium to cover travelling expenses will be paid. Applications with copies of three recent testimonials should be sent to the undersigned not later than June 15th 1938.

CHARLES H. BESSELL  
Secretary

# THE QUEEN'S HOSPITAL FOR CHILDREN

Hackney Road E.2

HOUSE PHYSICIAN required July 1st 1938. Six months appointment. Salary at the rate of £100 per year with board lodging and laundry. Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than three testimonials on or before June 8th 1938.

CHARLES H. BESSELL  
Secretary

# THE QUEEN'S HOSPITAL FOR CHILDREN

Hackney Road E.2  
(204 Beds)

A TEMPORARY VACANCY has occurred in the department of PSYCHOLOGICAL MEDICINE. Applications are invited and should be sent with copies of recent testimonials to the undersigned as soon as possible.

Candidates must be medically qualified. Applications should be sent to the undersigned not later than Friday June 17th 1938.

# THE LONDON CHEST HOSPITAL

Victoria Park E.2

(Bus Tram and Rail Cambridge Heath L and N.E. Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st. Six months appointment. Salary at the rate of £100 per annum. Board residence and laundry provided. Applications with copies of testimonials (three) should be sent to the Secretary on or before Wednesday June 8th 1938.

# NATIONAL CHILDREN'S HOSPITAL

Harcourt Street Dublin

Required HOUSE SURGEON for a period of six months as from July 1st 1938. Salary 50 guineas per annum. Apply REGISTRAR.

# THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E.1  
(Formerly East London Hospital for Children)  
(135 Beds)

An OUTPATIENT MEDICAL OFFICER is required on July 1st 1938 by the above Hospital. The appointment is for six months and is renewable for another six months subject to agreement by both parties. The holder of this post will be the official deputy for the Resident Medical Officer. Salary at the rate of £175 per annum with board residence and laundry.

Candidates who must be properly registered in this country are invited to send in their applications addressed to the Secretary by first post on Wednesday June 1st with copies of not more than three recent testimonials and evidence of having held a responsible hospital appointment. Forms of application and copies of the rules can be obtained from the Secretary Superintendent.

# THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E.1  
(Formerly East London Hospital for Children)  
(135 Beds)

A HOUSE SURGEON is required on July 1st 1938 by the above Hospital. Candidates are invited to send in their applications addressed to the Secretary by first post on Wednesday June 1st accompanied by copies of not more than three recent testimonials and evidence of having held a responsible hospital appointment. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry.

Candidates must be properly registered in this country. Forms of application and copies of the rules can be obtained from the Secretary Superintendent.

# THE SALVATION ARMY THE MOTHERS HOSPITAL LOWER CLAPTON ROAD CLAPTON E.5

Applications are invited from Medical Women for the post of SENIOR RESIDENT MEDICAL OFFICER vacant July 1st 1938. Salary £150 per annum with board residence and laundry. The appointment is for twelve months but under special circumstances an appointment of six months might be considered.

Applications with testimonials must be sent to the Secretary on or before Tuesday June 14th 1938.

FRED HAMMOND  
Secretary

# THE SALVATION ARMY THE MOTHERS HOSPITAL LOWER CLAPTON ROAD CLAPTON E.5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant July 1st 1938. Salary £80 per annum with board residence and laundry. The appointment is for six months.

Applications with testimonials must be sent to the Secretary on or before Tuesday June 7th 1938.

FRED HAMMOND  
Secretary

# THE HOSPITAL FOR WOMEN

Soho Square London W.1

Applications are invited for posts of HONORARY CLINICAL ASSISTANTS to the SURGEONS in charge of Outpatients. The appointments will be for attendance at one or two Outpatient sessions per week for a period of six months commencing July 1st 1938. Sessions are held at 1.45 every weekday except Saturday. Applications must reach the undersigned by Friday June 17th 1938.

J. P. HEMING  
Secretary

# THE HOSPITAL FOR WOMEN

Soho Square London W.1

Applications are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months commencing July 1st 1938. The salary is at the rate of £100 per annum with board residence and laundry.

Applications and testimonials must reach the undersigned by Friday June 17th 1938.

J. P. HEMING  
Secretary

# ST GEORGE'S HOSPITAL S.W.1

Applications are invited for the post of RESIDENT ANAESTHETIST. Remuneration at the rate of £100 per annum with board residence and laundry. Applicants should have some experience of administration of Anaesthetics. Applications accompanied by copies of not more than two recent testimonials should be sent to the Dean of the Medical School on or before June 1st. The appointment commences on July 1st 1938 for four months.

JAMES M. CHURCHILL  
Secretary

# **APPLICATIONS ARE INVITED FOR A RADIOLOGIST** in connexion with the Radium B units at the WESTMINSTER HOSPITAL ANNEX to Fitz Street, Avenue, Hampstead

Candidates must be registered medical practitioners. Preference will be given to candidates for position or holding for the D.M.R.E. The appointment is full time and will be for one year.

Five copies of applications and of three testimonials should be sent to the undersigned from whom the amount of the salary and other emoluments can be obtained at Westminster Hospital Board Secretary SW 1 in care of Mr. J. H. June 11th CHARLES M. POWER Secretary

## **CHELSEA HOSPITAL FOR WOMEN** Arthur Street SW3

Applications are invited for the post of SURGEON to the Hospital. Candidates must hold the Fellowship of one of the Colleges of Surgeons of England, Edinburgh or Ireland and the Fellowship or Membership of the British College of Obstetricians and Gynaecologists.

The Senior Surgeon to Outpatients is a casual date for the post and should be held for three months before a vacancy for a SURGEON TO OUTPATIENTS candidates for which should be qualified as above.

Applications for either of both posts are accompanied by copies of three recent testimonials should be forwarded to the undersigned not later than June 11th next.

GEO W COOLING Secretary

## **CHELSEA HOSPITAL FOR WOMEN** Arthur Street SW3

### **JUNIOR HOUSE SURGEON (MALE)**

Applications are invited for the above post vacant July 1st. The appointment is for six months at a salary of £100 per annum with board and laundry. At the expiration of this term he will be expected to proceed to the Senior post for six months at a salary of £100 per annum.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

GEO W COOLING Secretary

## **CONNAUGHT HOSPITAL WALTHAMSTOW E17**

(115 Beds with Four Resident Medical Officers)

Applications are invited for the post of RESIDENT SURGICAL REGISTRAR (male) to commence duties July 1st. The applicant should be a Fellow of one of the Royal Colleges of Surgeons and have a knowledge of a manual alive work.

The appointment will be for six months in the first instance (renewable) with remuneration at the rate of £200 per annum with board remuneration and laundry.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

R. HALTON HARRISON Acting Secretary

## **CONNAUGHT HOSPITAL WALTHAMSTOW E17**

(115 Beds with Four Resident Medical Officers)

**CASUALTY OFFICER (male)** required to commence duties July 1st.

The appointment will be for six months with remuneration at the rate of £110 per annum with board remuneration and laundry.

Applicants stating age, nationality, qualifications and experience accompanied by copies of not more than three testimonials must be delivered to the undersigned not later than Saturday, June 11th 1938.

R. HALTON HARRISON Acting Secretary

## **ST PETERS HOSPITAL FOR STONE ETC** Hematta Street, Covent Garden WC2

The appointment of CLINICAL ASSISTANTS to the undersigned members of the Honorary Staff who attend the Outpatients Department at the time indicated will be considered at an early date. A fee of five guineas becomes payable to the fee of this Hospital on appointment and before Tuesday, June 14th.

Mr John Sandrey Monday 3.0 to 6.30 p.m.  
Mr Alban Andrews Tuesday 2.0 to 5.0 p.m.  
Mr Officer Ward Wednesday 3.0 to 7.0 p.m.  
Mr F J F Barnston Thursday 3.0 to 7.0 p.m.

Mr R. Ormer Ward Fridays 9.0 to 11.30 a.m. (women and children)

Mr Alban Andrews Fridays 3.0 to 6.0 p.m. (male outpatients)

Mr John Sandrey Saturdays 2.0 to 6.0 p.m. (male outpatients)

BEECHY ROGERS Secretary

## **MILD MAY MISSION HOSPITAL** Victoria Street B1 1C 1

Applicants are invited for the post of ASSISTANT CASUALTY OFFICER (male) to commence duties July 1st. The appointment is for six months with board and laundry. The salary is £100 per annum.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

## **MILD MAY MISSION HOSPITAL** Victoria Street B1 1C 1

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) to commence duties July 1st. The appointment is for six months with board and laundry. The salary is £100 per annum.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

## **NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM** Queen Square WC1

### **HOUSE PHYSICIAN**

The Board of Management invite applications for the post of House Physician which will be held for six months commencing on July 1st. The salary is £100 per annum with board and laundry.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

## **PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN** St. Quintin Avenue North Kensington W10

(75 Beds)

**HOUSE PHYSICIAN (male)** required for six months from June 1st 1938. Salary at the rate of £100 per annum with board and laundry.

Applicants with copies of three recent testimonials should be forwarded to the undersigned not later than May 11th 1938.

## **PITNEY HOSPITAL LOWER COMMON** SW 15

(6 Beds including 1 Private Ward)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) to commence duties July 1st. The appointment is for six months with board and laundry. The salary is £100 per annum.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

## **PLAISTOW MATERNITY HOSPITAL** Honorary Anaesthetist

Applications are invited for the above post. The ANAESTHETIST appointed will be required to give assistance when asked to do so by members of the Honorary Medical Staff and to deliver about two lectures per annum to midwives.

Honorary remuneration is £20 per annum. The duties will be as compared by copies of three recent testimonials should be forwarded to the undersigned by June 11th.

## **PLAISTOW MATERNITY HOSPITAL** Honorary Anaesthetist

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

Mr John Sandrey Monday 3.0 to 6.30 p.m.  
Mr Alban Andrews Tuesday 2.0 to 5.0 p.m.  
Mr Officer Ward Wednesday 3.0 to 7.0 p.m.  
Mr F J F Barnston Thursday 3.0 to 7.0 p.m.

Mr R. Ormer Ward Fridays 9.0 to 11.30 a.m. (women and children)

Mr Alban Andrews Fridays 3.0 to 6.0 p.m. (male outpatients)

Mr John Sandrey Saturdays 2.0 to 6.0 p.m. (male outpatients)

Mr R. Ormer Ward Fridays 9.0 to 11.30 a.m. (women and children)

Mr Alban Andrews Fridays 3.0 to 6.0 p.m. (male outpatients)

Mr John Sandrey Saturdays 2.0 to 6.0 p.m. (male outpatients)

Mr R. Ormer Ward Fridays 9.0 to 11.30 a.m. (women and children)

Mr Alban Andrews Fridays 3.0 to 6.0 p.m. (male outpatients)

Mr John Sandrey Saturdays 2.0 to 6.0 p.m. (male outpatients)

## **THE GORDON HOSPITAL FOR RECTAL DISEASES** Vauxhall Bridge Road SW 1 (6th Floor)

Applicants are invited for the post of RESIDENT SURGICAL OFFICER (male) to commence duties July 1st. The appointment is for six months with board and laundry. The salary is £100 per annum.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

## **ST MARY'S HOSPITAL** NOTICE

### **ANAESTHETIST & THE DENTAL DEPARTMENT**

Applicants are invited for the post of ANAESTHETIST to the Dental Department. The appointment is for six months with board and laundry. The salary is £100 per annum.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

## **ST MARY'S HOSPITAL** THIRD ASSISTANT PATHOLOGIST

Applicants are invited for the post of THIRD ASSISTANT PATHOLOGIST. The appointment is for six months with board and laundry. The salary is £100 per annum.

Candidates must forward their applications, including particulars and accompanied by copies of three recent testimonials, to the undersigned not later than June 11th next.

## **SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN** Paddington E13

Applications are invited for the posts of RESIDENT SURGICAL OFFICER and RESIDENT HOUSE PHYSICIAN (male) to commence duties July 1st. The appointment is for six months with board and laundry. The salary is £100 per annum.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

## **SAINT MARY'S HOSPITAL FOR CHILDREN** THE RECTORY City Road London EC1

Applicants are invited for the post of SURGEON (male) to commence duties July 1st. The appointment is for six months with board and laundry. The salary is £100 per annum.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

## **CHARING CROSS HOSPITAL** ASSISTANT OBSTETRIC PHYSICIAN

Applicants are invited for the post of ASSISTANT OBSTETRIC PHYSICIAN to the Charing Cross Hospital. The appointment is for six months with board and laundry. The salary is £100 per annum.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

## **LONDON HOSPITAL** MEDICAL FIRST ASSISTANT AND REGISTRAR

Applicants are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR. The appointment is for six months with board and laundry. The salary is £100 per annum.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

## **LONDON HOSPITAL** MEDICAL FIRST ASSISTANT AND REGISTRAR

Applicants are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR. The appointment is for six months with board and laundry. The salary is £100 per annum.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday, June 11th 1938.

Mr John Sandrey Monday 3.0 to 6.30 p.m.  
Mr Alban Andrews Tuesday 2.0 to 5.0 p.m.  
Mr Officer Ward Wednesday 3.0 to 7.0 p.m.  
Mr F J F Barnston Thursday 3.0 to 7.0 p.m.



# APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Secretary, 7, Drumshough Gardens, Edinburgh)

## (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE</b>	<b>PUBLIC HEALTH</b>
ABERTYSWYG MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Medical Officer)	MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE (Assistant Medical Officer for Health and Sanitation)
BLAENWON MEDICAL SOCIETY (Chief Medical Officer)	NEATH AND DISTRICT (Medical Officer)	COUNTY OF DORSET (Assistant Medical Officer for Health)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	GOMORE VALLEY GLAMORGAN (Medical Officer)	<b>DISPENSARY APPOINTMENTS</b>
LLWYNPIA, CLYDACH VALE PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OSWALDLEY (Medical Officer)	LIVERPOOL CITY (Medical Officer)

## (b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association B.M.A. House Tavistock Square, W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Federal Society Appointments)	The Medical Secretary New South Wales Branch 135 Macquarie Street, Sydney N.S.W.	<b>VICTORIA</b> (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St. East Melbourne Victoria.	<b>WESTERN AUSTRALIA</b> (Contract and Lounge Practises)	The Hon. Sec. Victoria Australian Branch British Medical Association "Sunder House" 205 St. George's Terrace, Perth Western Australia.
<b>QUEENSLAND</b> (Bursary Associate Fellowship Societies Institute)	The Hon. Sec. Queensland Branch Medical Association B.M.A. House Wickham Terrace Brisbane B.17				

May 25 1938

By Order of the Council

G. C. ANDERSON, Secretary

### NORTHAMPTON GENERAL HOSPITAL (151 Beds)

The Board of the Hospital (Honorary) and Department of Psychological Medicine. Candidates must be Graduates in Medicine of one of the Universities of the United Kingdom or Members or Licentiates of the Royal College of Physicians of London and shall not be considered for any dispensary nor engaged in paid practice. Further particulars may be obtained from the undersigned to whom formal applications accompanied by copies of two recent portrait photographs must be sent on or before June 1st 1938. The present Temporary Honorary Physician and Temporary Honorary Assistant Physician will be available for the post. GORDON S. STURTRIDGE, M.B. Superintending May 1st 1938

### CITY MENTAL HOSPITAL HUMBERSTONE, Leicester

Wanted, LOCAL TENENS ASSISTANT MEDICAL OFFICER from Mid June 1938 to relieve Mental Hospital duties and to assist with the treatment of Schizophrenia. Experience of Mental Hospital practice is desirable. Terms, salary and allowances to be agreed. Applications by letter with three references to a Local Superintendent.

### COUNTY MENTAL HOSPITAL Rainhill, near Liverpool.

ASSISTANT MEDICAL OFFICER (Female) from early required for approximately 12 months. Eight guineas per week with board and laundry. Applications by letter with three references to the County Mental Hospital near Liverpool.

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### DERBYSHIRE HOSPITAL FOR SICK CHILDREN (54 Beds)

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### THE ST HELENS HOSPITAL LANCASHIRE.

Applications are invited for the position of SENIOR HOUSE SURGEON (male) to this Hospital at a remunerative salary. The Hospital is a large modern hospital and is situated in a beautiful garden. Applications with three testimonials to be sent to the undersigned on or before June 1st. The Hospital is recommended by the County Board for the purpose of the Department in Child Health. St Mary's Gate, ARTHUR N. WHISTON, Secretary Derby

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Applications are invited for the post of SURGICAL REGISTRAR to the Ear, Nose and Throat Department. The post is a full-time position and is a very attractive one. The salary is £200 per annum with residence. Applications with three testimonials to be sent to the undersigned on or before June 1st. The Hospital is recommended by the County Board for the purpose of the Department in Child Health. St Mary's Gate, ARTHUR N. WHISTON, Secretary Derby

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The appointment is one of four Resident Medi-  
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is for a period of six months with salary at a  
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Candidates must be legally qualified and re-  
ferred Selected candidates will be required  
attend a meeting of the Medical Committee  
interview

Applications stating age with copies of let-  
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**L J KNOWLES**  
Secretary

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Applications should be forwarded to the  
Secretary from whom further details of the  
appointments may be obtained and should be received  
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# ROYAL LONDON OPHTHALMIC HOSPITAL (Moore's Eye Hospital) City Road, E.C.1

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Copy of test card and the programme to be carried out in the school should be sent to the Secretary, L.C.C. School of Optics, 10, Abchurch Lane, London, E.C.4, by June 1, 1938.  
A. J. M. TARRANT  
Secretary

# THE JESSOP HOSPITAL FOR WOMEN Sheffield (151 Beds)

The Board of Management invite applications for the post of SENIOR RESIDENT OFFICER (male) to be filled.  
The appointment is for six months in the first instance from July 1st 1938.  
Salary £100 per annum plus board and laundry.  
Previous residential experience essential.  
The duties include charge of the Maternity Department, 6 beds, and general supervision of the Gynaecological Department.  
Applicants should state age and experience with general of recent residence in a hospital and forward immediately to the undersigned.  
DAVID OSWALD  
Superintendent and Secretary

# THE JESSOP HOSPITAL FOR WOMEN Sheffield (151 Beds)

The Board of Management in Sheffield invite applications for the post of HOUSE SURGEON (male) to be filled for a period of six months, commencing July 1st 1938.  
Salary £100 per annum to either with board and laundry.  
Applicants should state age and experience with general of recent residence in a hospital and forward immediately to the undersigned.  
DAVID OSWALD  
Superintendent and Secretary

# VICTORIA HOSPITAL, BLACKPOOL (182 Beds)

HOUSE SURGEON (Male) to the General Departments (Eye, Ear, Nose and Throat and Others).  
Applications are invited for the above appointment, which will become vacant on July 1st.  
There are four vacancies open.  
Appointments are for six months. Salary at the rate of £15 per annum with board and laundry.  
Applicants with copies of three recent testimonials should be sent to the undersigned.  
GENERAL SUPERINTENDENT

# THE ROYAL LIVERPOOL UNITED HOSPITAL

## STANLEY HOSPITAL, LIVERPOOL 5

There will be vacancies on July 1st next for ONE HOUSE PHYSICIAN (male) and ONE HOUSE SURGEON (male). The appointments will be for a period of three months. Salary at the rate of £100 per annum with board and laundry.  
Candidates must be in the Medical Register and send their applications with copies of three recent testimonials, addressed to the undersigned by June 1st 1938.  
L. RICHMOND  
Superintendent

# THE MARIE CURIE HOSPITAL (Centre for Treatment of Cancer by Radium and X Rays)

Applications are invited from qualified medical officers for the post of RESIDENT MEDICAL OFFICER (if three to six months). Salary at the rate of £100 per annum.  
Applicants to be sent with copies of four recent testimonials to the Secretary, Marie Curie Hospital, 10, Abchurch Lane, London, E.C.4.

# WARNEFORD HOSPITAL, OXFORD

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DAVID OSWALD  
Superintendent and Secretary

# THE HOSPITAL FOR SICK CHILDREN Great Ormond Street, London, W.C.1

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The appointment is for one year.  
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Candidates must be qualified to hold a general qualification in practice and have held a responsible position in a General Hospital.  
Applicants must be received by mail on or before May 31st, 1938, and candidates must be present at an interview by the Medical Committee at 4.45 p.m. on Wednesday, June 1st, 1938.  
Further particulars and forms of application are obtainable from the undersigned.  
HERBERT P. PUTHERFORD  
Secretary

# ST. PAULS HOSPITAL FOR DROLOGICAL AND SKIN DISEASES En. of Street, London, W.C.2

Applications are invited for the post of HOUSE SURGEON. Candidates must be qualified and registered. Salary £100 per annum with board and laundry.  
The appointment is for three months in the first instance and the holder will be eligible for the post of Resident Medical Officer. The holder's appointment will be renewed if he is working in the Surgical Ward and in the Outpatient Department.  
Applicants with copies of recent testimonials to be submitted not later than June 11th. The successful candidate will be required to take up duty about the 15th of June.  
J. P. KEY CHISLETT  
Secretary

# THE MANOR HOUSE HOSPITAL Gower Green, Leamington, N.W.11 (140 Beds)

Applications are invited for the post of JUNIOR MEDICAL OFFICER. Salary at the rate of £100 per annum with board and laundry.  
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Further particulars and forms of application are obtainable from the undersigned.  
JAMES W. LINKHORN, F.R.C.S.  
Secretary

# KING EDWARD MEMORIAL HOSPITAL Exeter (145 Beds)

Applications are invited for the post of HOUSE SURGEON (male) to be filled.  
The duties include charge of the Maternity Department, 6 beds, and general supervision of the Gynaecological Department.  
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DAVID OSWALD  
Superintendent and Secretary

# WOOD GREEN AND SOUTH-GATE HOSPITAL (140 Beds)

Applications are invited for the post of Gynaecological Surgeon. The duties include charge of the Maternity Department, 6 beds, and general supervision of the Gynaecological Department.  
Applicants should state age and experience with general of recent residence in a hospital and forward immediately to the undersigned.  
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# WEST SUFFOLK GENERAL HOSPITAL Bury St. Edmunds (114 Beds)

Applications are invited for the post of HOUSE SURGEON. The duties include charge of the Maternity Department, 6 beds, and general supervision of the Gynaecological Department.  
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5 N.E. COAST—Middle and better working class PRACTICE over £1,150 p.a., in seaport town. No panel. Private residence for sale. Premium £750 to include furnishings etc. of consulting rooms.

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15 LONDON, S.E.22—PRACTICE in suburban district. Receipts past year £1,284. Panel 700. Good house with garage and nice garden for sale or rent. Premium two years purchase.

16 NEAR MARBLE ARCH—Old established PRACTICE about £1,900 p.a. Panel about 1,300 offering ample scope in near future. Also midwifery. Well built detached double fronted leasehold house with garage and garden for sale. Premium two years purchase.

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18 LONDON, N.7—PRACTICE averaging about £2,000 p.a., including valuable appointments and panel 1,700. Small house (3 bedrooms), garage and small garden, for sale or rent. Premium £4,400 or near offer.

19 S.W. OF ENGLAND—PARTNERSHIP in Practice averaging about £3,200 in market town. Panel over 3,000. Well built house (6 bedrooms etc.) garage and acre of garden. Price £2,200. One third share at first at two years purchase. Hospital.

20 LONDON, S.W.—PARTNERSHIP in mixed class Practice about £4,350 p.a. in residential suburb. Panel 2,500. Very nice house with garage and quarter acre garden for sale. Two fifths share at first at two years purchase.

21 S. OF ENGLAND—PARTNERSHIP in Practice over £3,600 p.a. in market town about 80 miles from London. Panel 1,700. Very charming old world house. Price about £1,350 freehold. Modern hospital. Premium one half share two years purchase. Partner should be aged about 35.

22 MIDDLESEX—PARTNERSHIP in steadily increasing town Practice about £2,000 p.a. Panel 1,800. House with 5 bedrooms, garage and garden to rent. Premium one half share two years purchase. Applicant should be English or Scottish.

23 N. MIDLANDS—PARTNERSHIP in Practice in residential district near progressive town. Attractive modern house (4 bedrooms) with large garage and good garden for sale. Share of £1,100 p.a. for disposal. Premium £1,600. Good reason for special terms.

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26 S. COAST—Non dispensing PRACTICE, £1,250 p.a. in health resort. No panel but ample scope. Commodious well built residence with garage and garden for sale. Premium £2,500.

27 CORNISH COAST—PARTNERSHIP in non dispensing Practice nearly £3,000 in favourite resort. Panel 1,200. House obtainable. One third share at two years purchase. Good anesthetist required. Short Assistantship.

28 S. MIDLANDS—PARTNERSHIP in country Practice, £2,660 p.a. Panel about 1,550. Choice of two houses to rent. Small well equipped hospital. Premium two fifths share £1,800. Partner should be aged 30/35, with leaning towards medicine.

29 LONDON, N.12—PRACTICE doing about £401 in growing district. Panel 158. Attractive modern double fronted labour saving house (4 bedrooms etc.) for sale. Premium £750.

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**31 S COAST—PARTNERSHIP in Practice** £4770 p.a. in residential town and health resort. Panel 600. Semi-detached house (5 bedrooms) garage and garden to rent. Premium one fourth share £2500.

**32 W OF ENGLAND—PARTNERSHIP in Practice** about £2800 in first rate residential town. Panel about 3000. House obtainable. Good scope. One third share at first at two years purchase.

**33 MIDLANDS—PARTNERSHIP in old established Practice** £3270 p.a. in manufacturing town. P.a. 138.0. Modernized house (4 bedrooms) and professional accommodation. Good garage and garden for sale or rent. Premium one half share £3270.

**34 LONDON SW**—Good class PRACTICE about £1000 in residential part near West End. Fees £115 upward. Rent of consulting rooms £200 p.a. on lease. Premium two years purchase.

**35 LONDON EC**—Old established City PRACTICE averaging about £1700 p.a. Panel 316. Premises run on lease. Good scope. Prem. one and a half years purchase.

**36 HOME COUNTIES—PARTNERSHIP in increasing middle-class Practice** about £1600. Panel about 100. Modernized house for sale or rent. Scope. Cottage hospital. Premium one half share £1600.

**37 S OF ENGLAND—PARTNERSHIP in Practice** over £600 p.a. in growing seaport town. Panel 525. One fifth share at two years purchase. Prelim. Assistantship.

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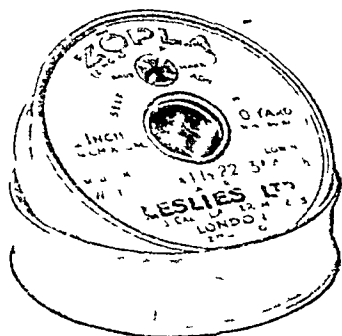
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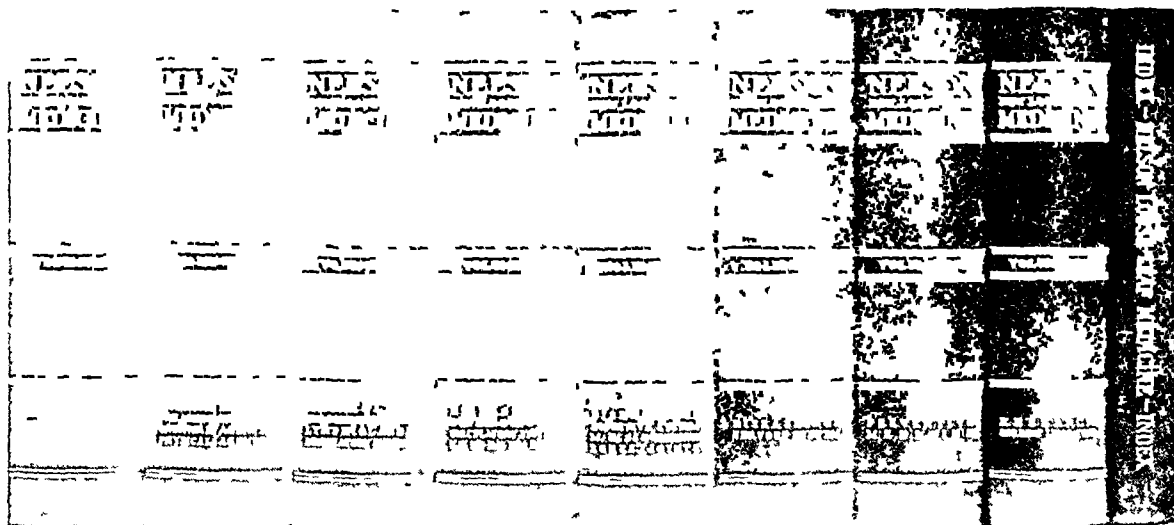
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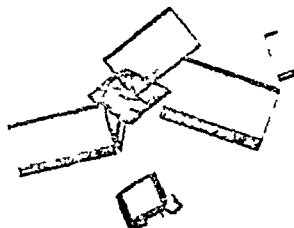
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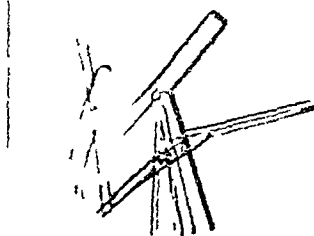
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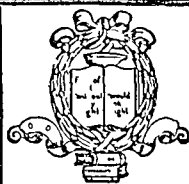
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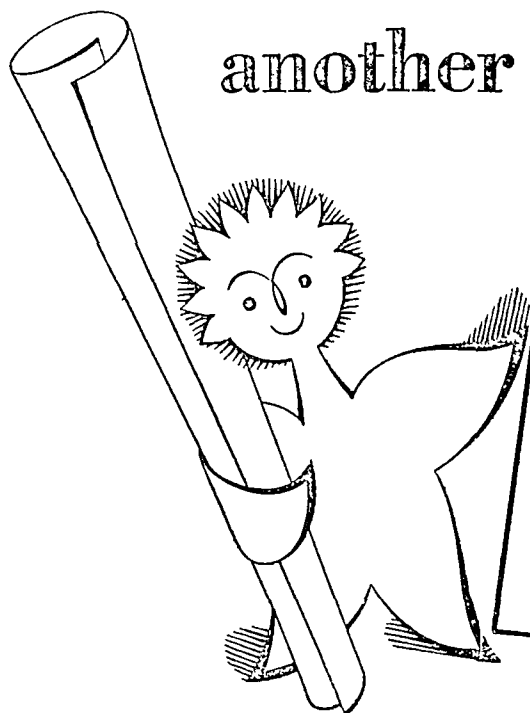
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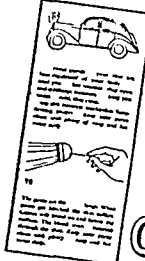


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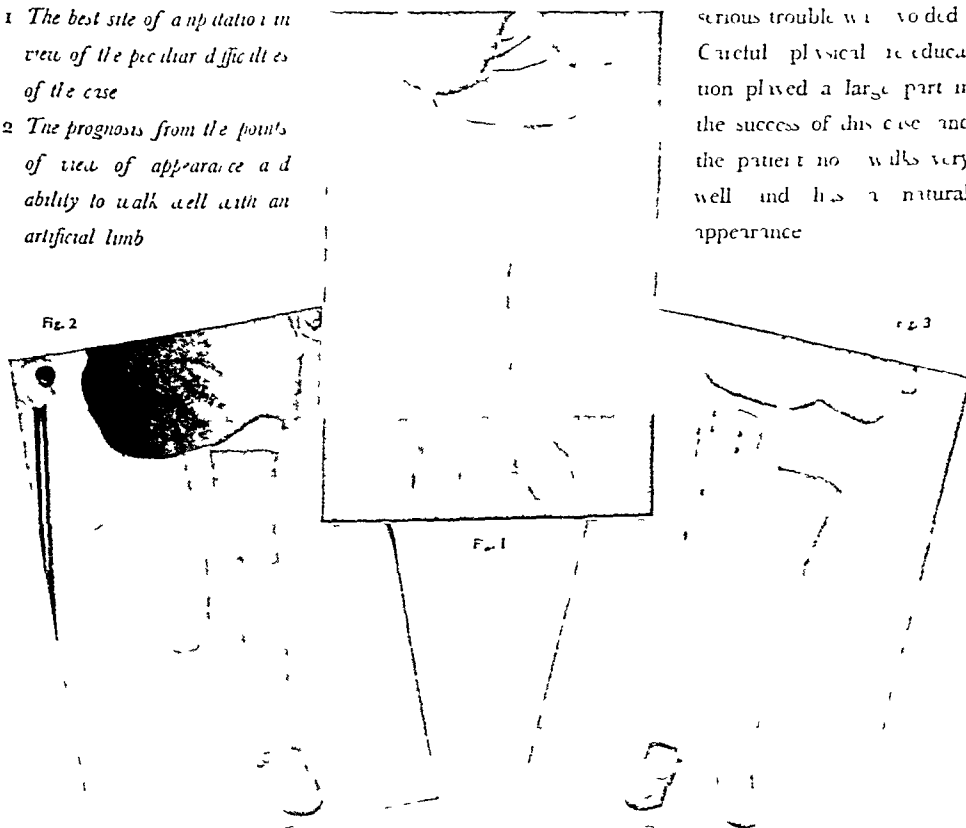
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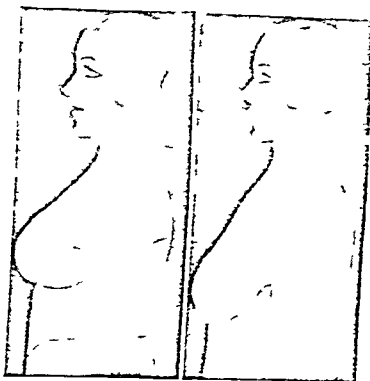
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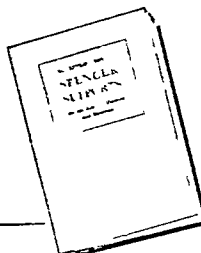
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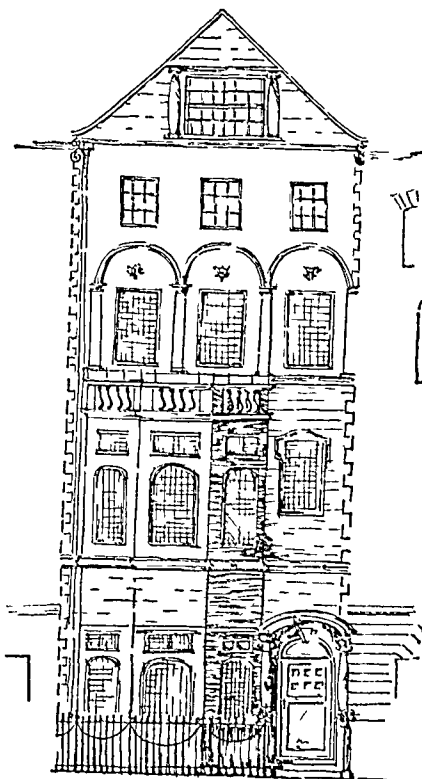


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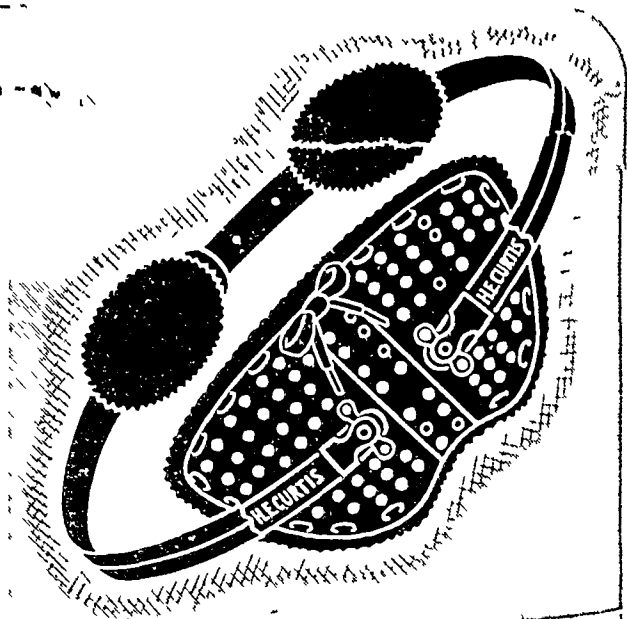
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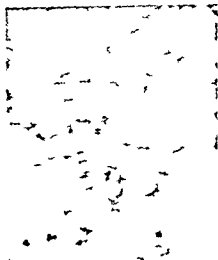


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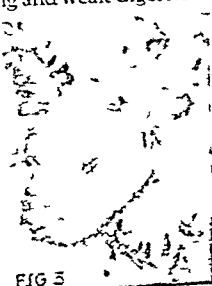


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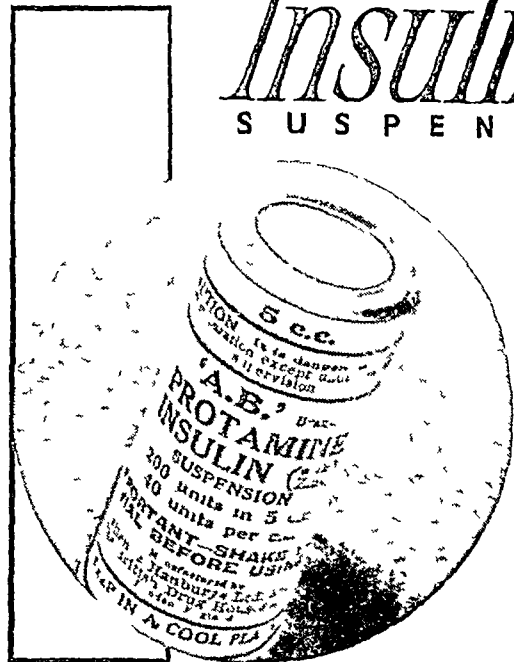
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10 c.c. (400 units) 4/6	

INSULIN 'A B' was the first British insulin offered commercially to the medical profession, and has a world-wide reputation for its strictly safeguarded sterility, its carefully standardised strength, its freedom from toxic reactions and its stability in hot climates.

Full particulars will be sent free to members of the Medical Profession.

Joint Licensees and Manufacturers

The British Drug Houses Ltd Allen & Hanburys Ltd

## Indigestion

is often relieved by a change from ordinary astringent tea to the mild and delicious

# <sup>6</sup>Ty-phoo<sup>9</sup> TEA

Many doctors  
write us in confirmation

Read what one of them says

I take this opportunity of expressing my great satisfaction with Ty phoo tea. I always recommend it to anybody suffering from any form of dyspepsia.

**18,000 DOCTORS ARE UPON OUR BOOKS**

Write to TY PHOO TEA LTD Dept BMJ  
Birmingham 5 for a FREE sample

(This offer applies only to the British Isles. We regret that we cannot send Ty phoo Tea abroad.)



## Prescribing with Confidence

*The advantages of Rhinitol in the treatment of*

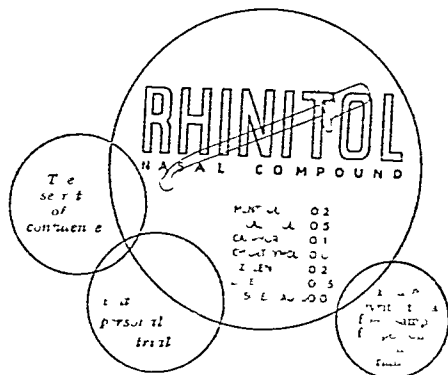
### COLDS

NASAL CONGESTION and CATARRH

and all other affections of the upper respiratory tract are —

- 1 Its very low ephedrine content.
- 2 Its property of emulsifying with body fluid owing to the vasogen vehicle
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## COLLIRON

(COLLOIDAL IRON HYDROXIDE 10%)

For the effective treatment of

## Secondary Anaemia, Debility and Fatigue

Colliron replaces with advantage all the older forms of pharmaceutical iron as it is readily assimilated non constipating and does not aggravate the digestive troubles which frequently accompany the anemias

The dosage of Colliron

Adults—20 minims three times daily after meals

Children—5 to 10 minims three times daily after meals

Colliron is issued in bottles

4-fld oz	- 3/-	16-fld oz.	9/8
8-fld oz	- 5/4	40 fld oz	- 22-
		80 fld oz	- 40/-



**Evans Sons Lescher & Webb Ltd.**  
Liverpool and London

A PRODUCT OF  
THE EVANS BIOLOGICAL INSTITUTE

## INFANTILE ECZEMA RAPIDLY ALLEVIATED \*

As a medical man you will agree that one of the principal difficulties in treating cases of eczema in children is the interference by the patient provoked by the intense irritation. Successful local treatment therefore calls for a soothing dressing. It is this property of Sphaonol Peat Ointment which makes it so valuable. The peat distillate which it contains soothe from

the first application. At the same time, these healing anti-peat distillates assist in the growth of normal skin. In case you have had no personal experience of Sphaonol we shall be pleased to send you a clinical size sample free of charge if you will write to Peat Products (Sphaonol) Ltd., Dept. B.M.J. 21 Bush Lane London E.C.7.

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OF PEAT

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OINTMENT  
SUPPOSITORIES, ETC

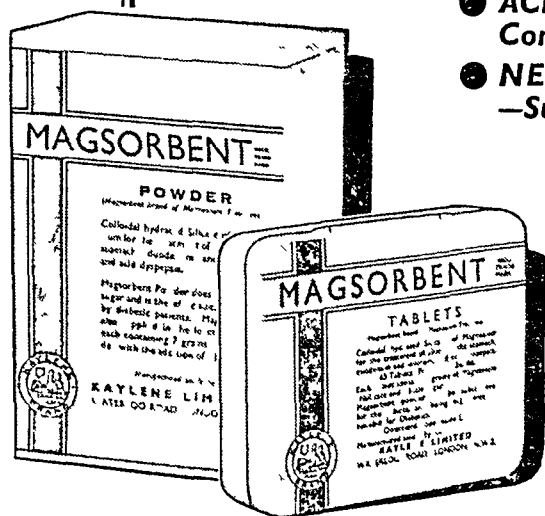


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The safe and effective **ANTACID** for the treatment of CHRONIC PEPTIC ULCER, HYPERCHLORHYDRIC DYSPEPSIA and ACID FERMENTATION



- **ACIDITY — Complete Control**
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REDUCED PRICES — Magsoorbent Powder  
2 oz 1/6, 5 oz 3/-, 16 oz 8/9, 3 lbs 23/-  
Tablets—65 for 2/4, 250 for 7/9, 600 for 15/-

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**HAY FEVER**  
**ASTHMA**  
**BRONCHITIS**  
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*"One drachm doses (0.5 gm Caffeine Iodide) are worthy of a trial. There appears to be far less liability to iodism with this preparation than with potassium iodide"*

*Medical Press and Circular, May 20th, 1936, p. 454*

## "EUPNINE VERNADE"

(ANTI-DYSPNOEIC)

*The original stable solution of Caffeine Iodide*

**RELIEVES lung congestion**

**PROMOTES diuresis**

**STRENGTHENS the heart**

Reduced Prices 100 cc 4/- 50 cc 2/4

**WILCOX, JOZEAU & CO, LTD,**

North Circular Road, LONDON, NW 2, and 19, Temple Bar, DUBLIN

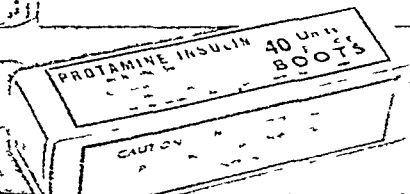
# PROTAMINE INSULIN (with Zinc) SUSPENSION BOOTS

The fall in blood sugar after injection of Protamine Insulin (with Zinc) Suspension is gradual, and the Insulin carbohydrate metabolism reproduces closely the continuous secretion of Insulin as it takes place in the normal person



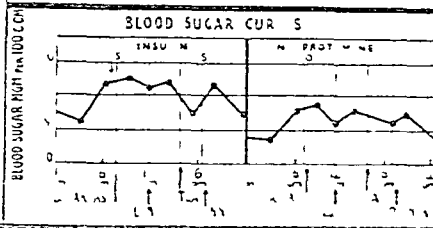
With small doses (under 30 units) the risk of hypoglycaemia is less than with Insulin in the treatment of Diabetes with Protamine Insulin (with Zinc) Suspension is particularly valuable in general practice. Supplied in rubber capped vials in the following strengths—

10 units per c.c.	5 cc vial (200 units)	• • •	2/6
	10 cc vial (400 units)	• • •	4/6
30 units per c.c.	5 cc vial (100 units)	• • •	4/6



B 37/356-B

## RELATIVE HYPOGLYCAEMIC EFFECT OF PROTAMINE INSULIN (WITH ZINC) SUSPENSION BOOTS INSULIN



Blood sugar curve for a 65 year old male with Diabetes Mellitus treated with Protamine Insulin (with Zinc) Suspension. The curve shows a more gradual and sustained effect compared to the Insulin curve.

Full details of the treatment of Diabetes Mellitus with Protamine Insulin (with Zinc) Suspension are given in our booklet, a copy of which will be sent on request to the —

WHOLESALE SUPPLIERS OF  
BOOTS' PURE DRUGS LTD.  
NOTTINGHAM

## VITAMIN B<sub>1</sub> B.D.H.

The importance of Vitamin B<sub>1</sub> in metabolic processes is being increasingly realised. At the same time, clinical experience is confirming that the usual dietary is deficient in this important substance. Such minor deficiencies as are commonly met with can be adjusted by the administration of Vitamin B<sub>1</sub> as included in Multivite.

There are, however, certain pathological conditions of fairly high incidence which indicate a more serious deficiency of Vitamin B<sub>1</sub> and require treatment with the pure vitamin in considerably larger doses

than are practicable through the medium of Multivite.

For the treatment of these more serious deficiencies, symptoms of which may include constipation, anorexia, bradycardia and neuritis, Vitamin B<sub>1</sub> B.D.H. is available in the form of solutions—2 mg (1000 international units) per c.c. and 10 mg (5000 international units) per c.c.—for parenteral administration and in the form of tablets—1 mg (500 international units) per tablet—for oral administration.

Samples of any of the above will be sent on request.

THE BRITISH DRUG HOUSES LTD LONDON N 1

B 37/356-B

# MEDISOAPS

(MIDGLEY)

## THE TREATMENT OF THE SCALP

The following are selected from the 49 Formulæ as being of special interest in this connection—

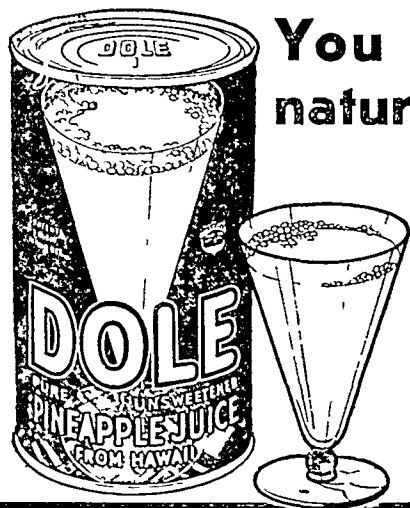
* No 9 SULPHUR	10%	* No 45 PHENOL	5%
* No 99 "	5%	SULPHUR	5%
* No 4 " (Alkaline)	10%	† No 57 RESORCIN	1½%
† No 71 SULPHUR	5%	* No 29 FORMALDEHYDE	5%
RESORCIN	1½%	* No 12 MERCURY PERCHLORIDE	1½%
† No 41 SULPHUR	10%	* No 21 MERCURY AMMONIUM	5%
RESORCIN	1½%	CHLORIDE	3%
SALICYLIC ACID	1½%	† No 20 THYMOL	

Price per tablet (°) 1/- (†) 1/3

*A Clinical Index to the Medisoap formulæ will be sent on request*

Medisoaps are made by CHARLES MIDGLEY LTD, Manchester, and are distributed by

**EVANS SONS LESCHER & WEBB LTD.**  
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**You can recommend this natural fruit juice with . . .**

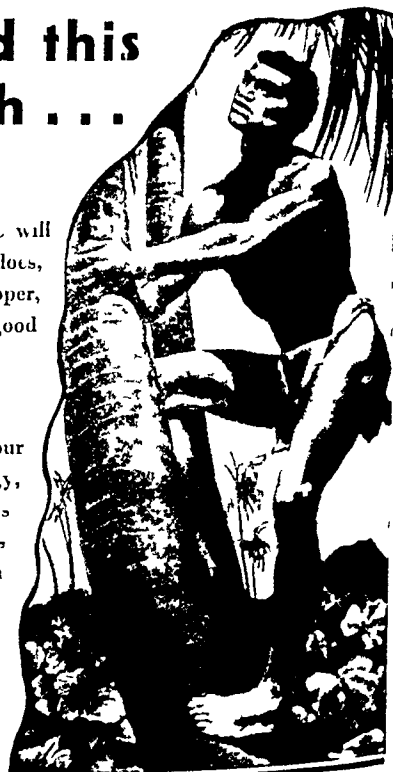
### CONFIDENCE

that Dole Hawaiian Pineapple Juice will be of benefit, containing as it does, Calcium Oxide, Magnesium Oxide, Copper, Manganese and Iron, and being a good source of Vitamins A, B and C

### CONFIDENCE

that your patients will follow your advice to drink this invigorating, tangy, delicious juice of sun ripened pineapples. Children especially will appreciate this choice addition to their menus when they might balk at some equally beneficial but less tasty drink.

● Write us on your letterhead and we will send a sample tin. 2000 Doctors have already availed themselves of this offer.



#### Here is a Typical Analysis of Dole Pineapple Juice

Mositure	85.3%
Ash	0.1%
Fat (ether extract)	0.3%
Protein (N x 6.25)	0.3%
Crude fibre	0.02%
Titratable acidity as citric acid	0.2%
Reducing sugars & invert sugar	12.1%
Calculated other than sugars (by difference)	0.38%

**DOLE PINEAPPLE JUICE** *from Hawaii*

J K HUSBAND & CO LTD 10 EASTCHEAP LONDON EC3

*Dole Pineapple Juice comes from Hawaii where the pineapples are sun ripened. That is the juice is as natural.*



# MANDECAL

(Calcium and Calcium Mandelate) BDH

The outstanding advantage of Mandecal in the treatment of urinary infections lies in the fact that it is palatable and causes no gastric discomfort as is sometimes experienced by patients taking other forms of mandelic acid. Further, the characteristic immiscibility of calcium mandelate has been overcome in Mandecal, which is a fine powder mixing readily in water to form a suspension easily taken in a draught. Finally, in Mandecal therapy the collateral administration of ammonium chloride is usually unnecessary, the pH of the urine being maintained at the correct level by the action of Mandecal alone.

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## ETHER SOLUBLE TAR PASTE

INDICATED IN

**ECZEMAS, PRURITUS,  
PSORIASIS, etc**

PRESCRIBE AS

**"E.S.T.P." (Martindale)**

Issued in 2 ½ and 8-oz. pots

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The obvious advantage of Detoxicated Vaccines is that large doses can be administered without causing serious reactions. This is of great value in the treatment of cases where any given bacterial disease is already established. In such cases toxic vaccines are apt only to aggravate the symptoms whereas moderate doses of the appropriate detoxicated vaccine can be given safely without further aggravation of the disease.

We have always upheld the superiority of detoxicated vaccines but some authorities prefer the toxic varieties because they believe that it is important to obtain more or less marked reactions in order to produce a satisfactory immunity.

The toxic vaccines have the advantage of cheapness. The detoxicated vaccines are more expensive for the obvious reason that the dosage is nearly one hundred times greater, so that much larger quantities of bacteria are used in their preparation.

We supply both the detoxicated and the toxic varieties of vaccines in order to cater for the two different schools of thought in this matter. A booklet, giving details of our full range of Detoxicated and Ordinary Vaccines, will gladly be supplied on request.

**GENATOSAN LTD.,**  
VACCINE DEPARTMENT  
LOUGHBOROUGH, LEICESTERSHIRE

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**Extract of the Entire Gastric Mucous  
Membrane in a Stable Agreeable Solution**

The entire constituents of the stomach, enzymes, activated principles, the enzymes unchanged by chemical action or manipulation. It is a gastric juice concentrate, acidity approximately 0.25% absolute hydrochloric acid, loosely bound to protein, 25% glycerin.

EXTRACTUM GASTRICUM is of high proteolytic potency—index of the concentration of the extract, the degree to which the gastric mucosa constituents are brought into solution.

The usual dose is one to two teaspoonfuls, diluted with a little cold water.

*Extractum Gastricum is put up in 6-ounce unlettered bottles without literature*

Originated and Manufactured by  
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Agents  
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## *Pure Fluid* MAGNESIA

### FOR ACIDOSIS

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## PITUITARY EXTRACT B.D.H.

(POSTERIOR LOBE)

*Pituitary extract of uniform potency doubly standardised  
for pressor effect and for oxytocic power*

#### PRESSOR EFFECT

Used in the control of hæmorrhage as, for example, in typhoid fever Pituitary Extract B.D.H. is also injected prophylactically about a quarter of an hour before operations upon the nose and throat as a safeguard against hæmorrhage. In large doses the rise of blood

pressure produced is utilised in the treatment of surgical shock.

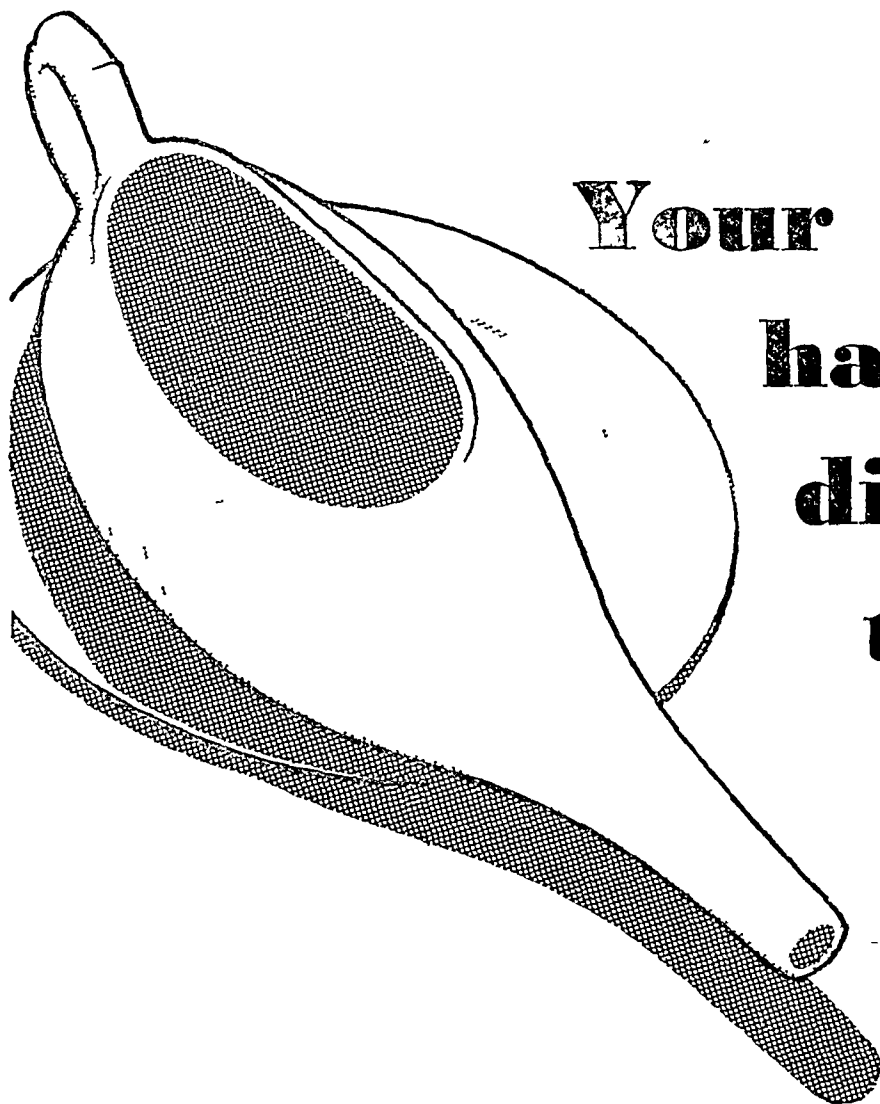
#### OXYTOCIC ACTION

Employed for the induction of labour in the absence of mechanical obstruction, and for the control of post-partum hæmorrhage.

*Literature and sample on request*

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Dr S. J.



# **Your patient has acute digestive trouble**

You prescribe a strict diet The patient must take nothing that can in any way aggravate his complaint Milk and "slops" alone leave him depressed and weak.

When the digestion must be kept at rest, the unique stimulating properties of Brand's Essence are never contra-indicated Brand's contains no meat fibre or any other irritant matter—precipitates no solids in stomach or intestines and is easily and quickly assimilated

A copious flow of gastric juice is stimulated, but the acid is competently controlled at all times through adsorption by proteins The Essence can safely be administered even in cases of gastric ulcer Strength is maintained chiefly through Brand's proteum-sparing action

## **BRAND'S CHICKEN OR BEEF ESSENCE**

*is never contra-indicated*

BRAND & CO., LTD., SOUTH LAMBETH ROAD, LONDON, S.W 8



Formula

Intestinal glands	003 grm
Biliary extract	010 "
Lacue ferments	- 00,
Agar agar	- 00,
Fiat tablet - -	- 0 ,

Initial Daily Dose  
Two Tablets

*Laxatives*, it is well known now adds must have two essential characteristics

1 I find no biological reason the must  
accord with and immune in force on the  
natural population of the  
2 They must be capable of capturing the  
the one that has a more  
and the rate of capture is constant  
when the adjustment is made

Taxol in bottle and cruet

*Zaxol* has no effect on the central nervous system and no depressing effect on the respiratory system, but it does depress the heart which results in a low pulse rate. The relaxation of the heart is an important part of the correction of the heart and the restoring the circulation which has diminished in circulation. The stimulating action is gentle and does not cause the weakened tissue or efforts to build it power which would culminate in aggravation of the condition.

*Taxol* does not habit forming. It reduces the intestine to reumption of normal function unaided, thanks to the biological nature of its action. It contains no narcotic drug of violent and brutal action to which the measure can become accustomed. On the contrary, many stubborn cases of constipation after a course of *TAXOL* exert a tonic and regular peristalsis.





# THE MEDICAL CASE FOR A WHOLE WHEAT CRISPBREAD



**W**HEAT has always been Man's first choice among the cereals, whenever climatic conditions did not prevent his getting it. That remains true of all bread, either white or wholemeal, either soft or biscuit-crisp. And Vita-Weat, the wheaten crispbread with the **WHOLE** of the wheat left in it, has advantages which entitle it to a very high place among the staple foods of the world.

## ITS CALORIFIC VALUE

Bread is the 'energy component' and Vita-Weat, since it contains only 3 per cent. of water, has a fuel value nearly twice that of ordinary bread—according to *The Practitioner* its caloric value is 2,132 per lb.

Each section of such a crisp bread—each slice, so to speak—has a caloric value of 37. That is to say that in meeting what is probably the greatest requirement of a national staple food Vita-Weat is almost twice as effective as the other kinds of wheaten bread.

## STARCH AND DIGESTION

A crisp bread, obviously, calls for a more thorough chewing than a soft 'crumb' bread and mastication is therefore more healthily promoted. The starches and cellulose in Vita-Weat are also 'converted' into a more digestible form by the special processes which go to make a good crisp bread—just as toast and croutons have become greatly more digestible than bread is in its quite unconverted starch form. When the whole wheat berry is used the bran and fibre are thoroughly disintegrated.

The result is therefore, that the weight which guarantees a 'converted' starch places on the

digestion is almost entirely eliminated where Vita-Weat has been prescribed.

## VITA-WEAT AND ITS ADVANTAGES

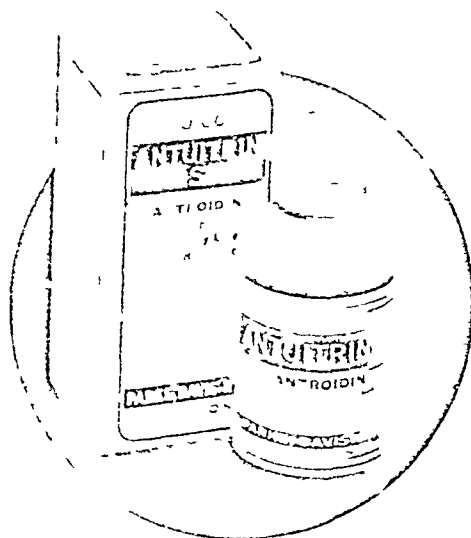
In addition to these great advantages of superior fuel-value and digestibility Vita-Weat retains the 'protective' elements of the wheat-berry which are frequently rejected in the 'refining' of white flours. Proteins, vitamins and minerals in which bread is normally deficient are present and the 'balance' of this crispbread as a food is therefore increased.

The use of Vita-Weat can be shown to be especially desirable in cases of mild anaemia, liability to infection, lack of appetite, poor digestion, diabetes, obesity and as a food of 'protective' value to the teeth.

*A little booklet has been prepared for the medical profession briefly summarising the medical case for a whole wheat crispbread and it will gladly be sent post-free to any doctor on application to Peek Frean & Co., Ltd., Keetons Road, London, S E 16.*

**Vita-Weat**

THE BRITISH  
WHOLE WHEAT CRISPBREAD



# ANTUITRIN S<sup>®</sup>

(ANTROIDIN)

*A solution of the anterior-pituitary-like sex hormone derived from pregnancy urine*

Antuitrin S contains the anterior pituitary-like sex hormone which consists of a luteinizing hormone and a smaller quantity of follicle-stimulating hormone

## THERAPEUTIC INDICATIONS

**FEMALE** Functional uterine bleeding amenorrhoea and oligomenorrhoea Dysmenorrhoea Abortion, habitual or threatened

**MALE** Cryptorchidism Impotence Aspermia

**EITHER SEX** Delayed puberty Genital infantilism Frohlich's syndrome (adipose genital dystrophy) Acne vulgaris Sterility

Antuitrin S<sup>®</sup> is standardized to contain 100 rat units per c.c. and is issued in rubber capped vials of 10 c.c. A comprehensive brochure describing the properties of Antuitrin S<sup>®</sup> is available to members of the medical profession on request

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# "HERE'S MY RECOMMENDATION"

says OLD HETHERS



The best barley water is that made freshly from Robinson's 'Patent' Barley. But an equally good and more convenient alternative is Robinson's Barley Water ready prepared for use and sold by the bottle. Made from Robinson's 'Patent' Barley it is available in a choice of two popular flavours—lemon or lime.



## ROBINSON'S BARLEY WATER

KEEN, ROBINSON & CO, LTD, Carrow Works, Norwich

# CRUNCHY FOODS AND THE DIGESTION

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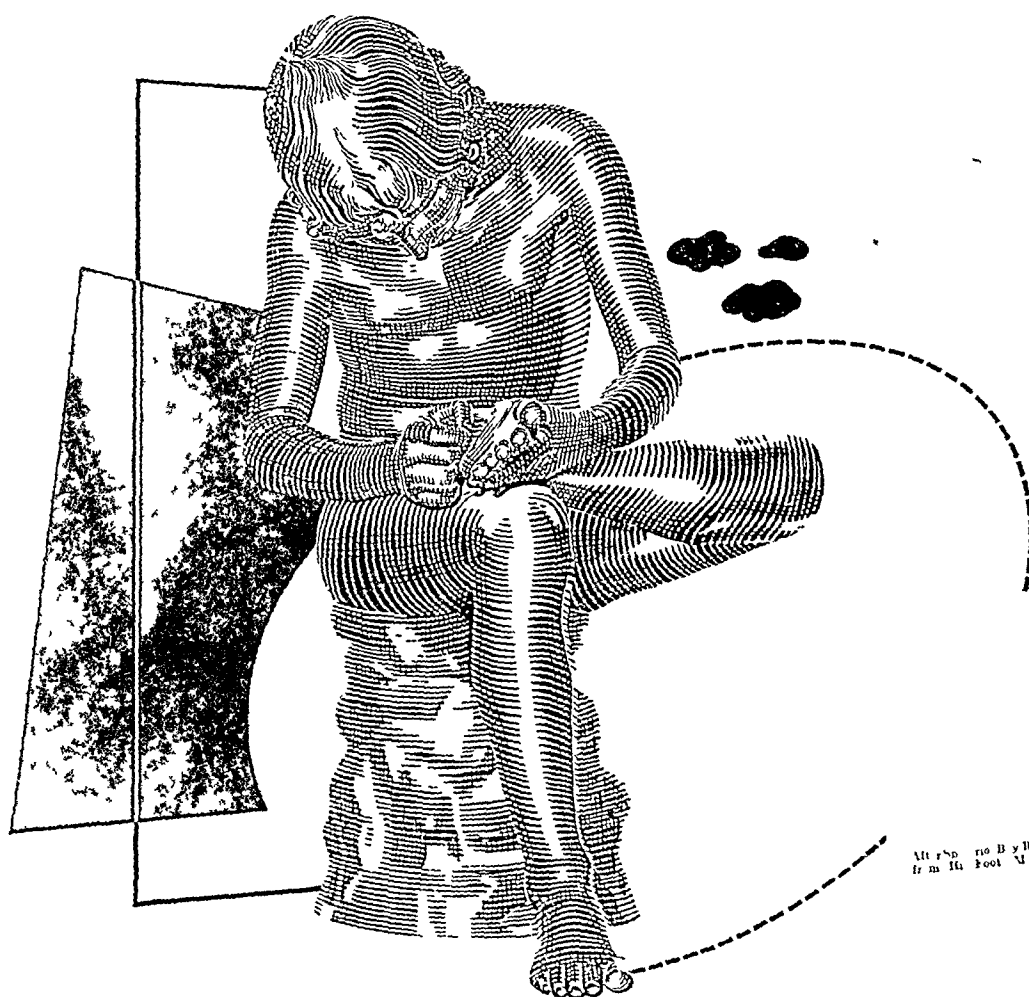
It is generally recognised by dieticians that hard foods are more easily digested than soft ones. The explanation commonly advanced is that soft foods are often swallowed in insufficiently chewed masses, whereas hard foods cannot be swallowed until they are properly broken up by the teeth, and in consequence the digestive juices have a larger surface area to work upon and their action is more effective.

Many physicians therefore recommend that the normal diet should contain a fair proportion of hard, dry food. They find that Ryvita, eaten regularly with meals, supplies a valuable factor in which the modern diet is otherwise deficient. Free samples of Ryvita for distribution to patients will gladly be supplied on request.

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THE RYVITA COMPANY LIMITED  
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*Bakeries in Birmingham*

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Metaphen is a powerful antiseptic  
It is the most effective disinfectant

## 250 TO 1,500 TIMES MORE GERMICIDAL THAN PHENOL

*depending upon the organism used in the test*

Amongst the numerous advantages of Metaphen (Abbott) the powerful antiseptic properties of the drug are of course the most important. In tests made under properly controlled conditions Metaphen has been shown to have a phenol coefficient of 250 to 1,500 depending upon the organism tested. Metaphen is relatively non-toxic to human tissue, is not painful on application, does not cause irritation or dermatitis, and does not precipitate in the presence of serum. Solutions of the drug

are stable when exposed to air. Metaphen is recommended in infections of the genito-urinary tract, eye, ear, nose, throat and skin. It is of value as a general antiseptic in surgery and for the disinfection of equipment. Metaphen is supplied through pharmacists in a variety of useful forms, the most widely employed of which are: Tincture Metaphen, a tinted alcohol acetone-queous solution prepared especially for use as a pre-operative skin disinfectant and for all other uses for which a power-

ful but sterile antiseptic tincture is indicated. Metaphen Solution 1:10, an aqueous solution which is recommended for general use in surgery, urology, obstetrics, gynaecology, and in eye, ear, nose, mouth and throat practice. Requests for descriptive literature and trial quantities are welcomed.

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# METAPHEN

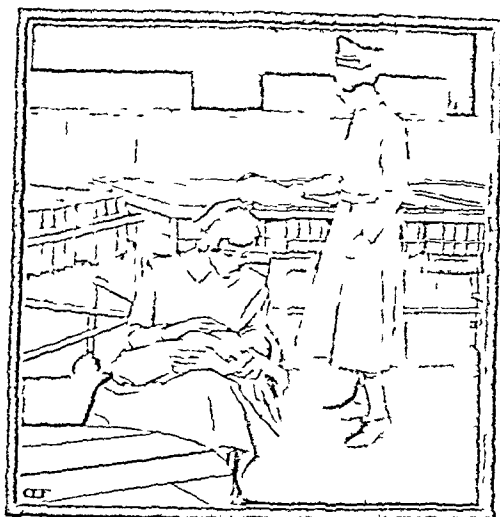
PLEASE SEND LITERATURE ON METAPHEN TO

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*Sodium Iso-amyl Ethyl Barbiturate*

Conservatism in the choice of a hypnotic for the woman in labour may avoid severe respiratory depression of the child at the time of delivery 'Sodium Amytal' affords desirable rest and relaxation to the mother during much of the period of labour without causing notable narcotization of the baby 'Sodium Amytal' brand sodium iso-amyl ethyl barbiturate is supplied in 1-grain and 3-grain 'Pulules' brand filled capsules in bottles of 40 and 500

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*Distributing Agent in Britain for*

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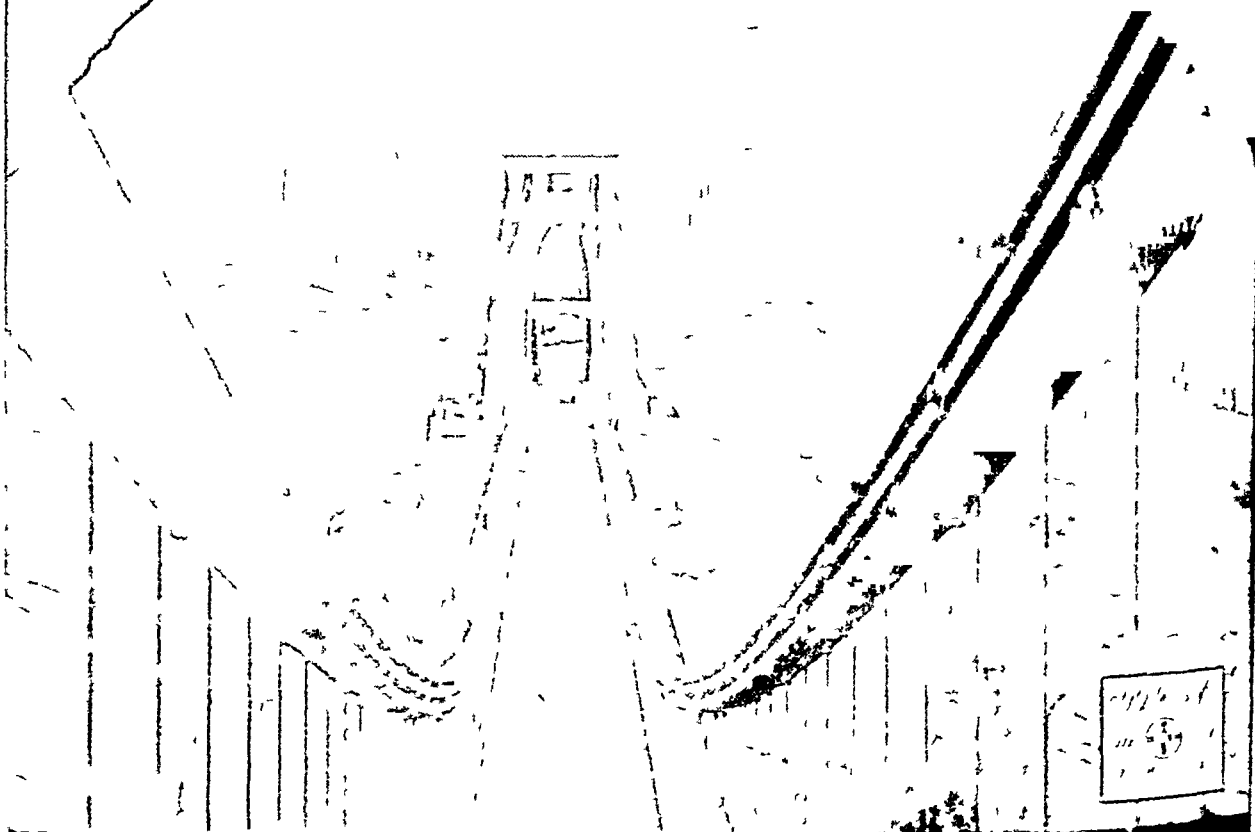
# Taking the Strain...

A nervous like patient can bear just so much strain and strain.

In high blood-pressure, where this strain may be too great, PROTHEONAL offers relief and protection.

It is sedative and antispasmodic, containing prominal theobromine and iodine.

TRADE MARK **PROTHEONAL** BRAND  
THEO-METHALONYL



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OFFICE IN DUBLIN: Molesworth House, 21-22, South Frederick Street, Dublin.

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A POWERFUL URINARY  
ANTISEPTIC



‘Cystazol’ is a combination of Hexamine with Sodium Benzoate its action depends on the liberation of formaldehyde from the decomposition of the hexamine that takes place in the urine which has been rendered acid by the sodium benzoate moiety

‘Cystazol’ is employed with advantage in cystitis bacilluria or all types pellagra gonorrhoea and septic conditions of the urinary tract generally

## COMPRESSED TABLETS of ‘Cystazol’

Supplied in bottles of 20 and 50  
160 and 400 mg tablets at  
1/6 2/6 3/6 and 4/6

## EFFERESCENT GRANULES of ‘Cystazol’

Supplied in bottles of 20 and 50

Drugs, lit. affar and clinical  
trial sample will be sent post free  
on application

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EFFICIENCY ESTABLISHED BY BIOLOGICAL TESTS AND CLINICAL USE

## AN EXTRACT OF ADRENAL CORTEX FOR THE TREATMENT OF ADDISON'S DISEASE

AND OTHER CONDITIONS

EUCORTONE is an extract of adrenal cortex containing the hormone cortin. It is highly successful in Addison's disease. Particularly striking is its rapid restoration of appetite, weight, strength and feeling of well being

Successes have now been reported from the use of adrenal cortical extract in various other conditions including neurasthenia, psoriasis, and hyperemesis gravidarum.

IN ACUTE TOXAEMIA OF BURNS—*Lancet* 1935 June 20th p 1400

Three cases of acute toxæmia from burns were treated with EUCORTONE and recovered. In 140 of the cases, death within a short time could have been predicted almost certainly. In the investigators' experience of these conditions recovery under any methods of treatment previously used had not occurred. The investigators attributed the recovery in these cases with every confidence to EUCORTONE

EUCORTONE is biologically standardized on adrenalectomized animals. It has now been further purified and concentrated. It is practically free from nitrogen and adrenaline contains no irritant or toxic substance and is sterile. One c.c.m. of the extract is equivalent to 75 grams of adrenal cortex or about 110 grams of the whole gland. EUCORTONE is administered intramuscularly, intravenously (in crises) and subcutaneously (in chronic cases)

TRADE

# EUCORTONE

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(CORTIN, A & H)

Price Rubber capped bottles of 10 c.c.m. 25/- Particulars and literature on application.

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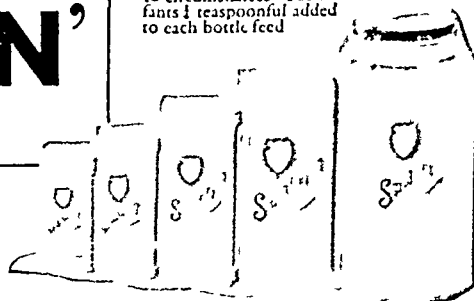
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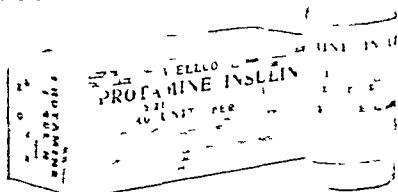
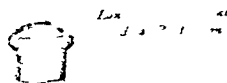
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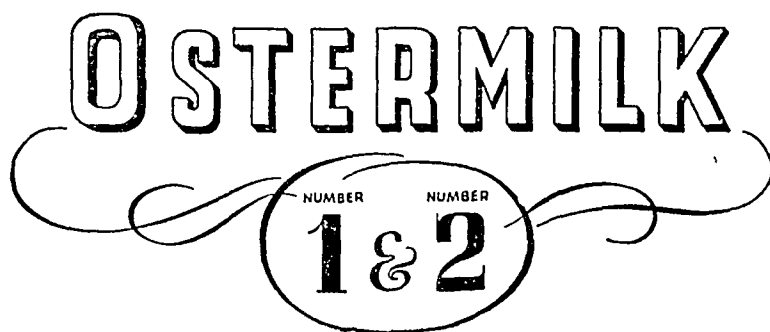
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# BRITISH MEDICAL JOURNAL

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## THE CHANGING GROUND OF SURGERY\*

BY

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The student of surgery must be grounded in a teaching that has the foundation of tradition or in other words the continuous approval of the best minds of many years behind it only when his feet have been thus firmly planted on the solid rock of accepted doctrine can he advance to greater heights along paths of his own discovery. But the practising surgeon should contemplate change rather than immutability for in the simmering theories of to-day are crystallizing the orthodoxies of to-morrow. Change is always with us and it is interesting to look over the period of our own experience and to consider how far surgery has changed in that time what have been the forces impelling those changes and in what direction they are likely to lead us in the immediate future.

We must take into account that gradual rise in the station and training of the surgeon himself that has been in progress over many centuries but has reached its culmination only in the present one. Surgery originated in the need for members of the religious orders who first had a monopoly of medical practice to employ what we should now call technicians for the manual part of their work. This view of the subservient position of surgery which inspired the now coveted title of *Mister* persisted till the war in the practice of admitting abdominal emergencies to medical wards where the physician made the diagnosis and summoned his colleague to hear his views and carry out his suggestions. It was often justified for though many instances might be cited of surgeons who were scientists and men of letters the majority reached their positions by force of character decision and manual dexterity, and few had a scholastic record equal to that of their medical contemporaries or undertook postgraduate study in any science but anatomy. Now however the scholars and best students in our medical schools seek surgical posts and having become surgeons find their College taking the lead in research of every kind and offering them facilities to work out their own ideas and help and encouragement in their difficulties.

Thirty years ago it was the highest praise to call a surgeon a brilliant operator to-day such an encomium carries the same slight as to say that a girl has a kind heart—the implication that more important merits are lacking. The operation is regarded as part of a plan of treatment which precedes and follows it till its object has been attained rather than an isolated *tour de force* and interest centres more in measures to eliminate its risks and counteract its effects than in the development of spectacular technique. The details of asepsis have been improved one by one till chance infections are almost unknown. The sterilization of gowns and dressings is

now certain rather than hoped for the air in most modern theatres is conditioned—that is washed filtered and rendered bacteria free before being put into the room some enthusiasts have even introduced a ring of mercury-vapour lamps round the operating light following the suggestion of Hart of Connecticut to sterilize the air over the working field itself. But air and dust borne organisms are usually non pathogenic or of low virulence and do not constitute a danger comparable to that of the human streptococcal carrier. It has lately been shown that where a presumably clean case has been infected by a streptococcus an identical organism can nearly always be recovered from the throat of some member of the operating team who may as yet have no symptoms. The risk of such infection disappears if masks containing a layer of callophane are worn by all those taking part in the operation.

### Synthetic Drugs for Infections

For declared streptococcal infections we have a new and in most cases a potent remedy in sulphanilamide. This drug is no more than two years old but it is familiar and used by all of us. In surgery apart from its value in chance infections it has entirely altered the outlook in some of our commonest and most distressing problems notably infections of the hand. A tendon sheath or tissue space infection formerly meant a ruined hand usually a ruined life. Following Kanavel's anatomical researches the operative treatment was put on a sound basis and many hands were saved with perfect function but in all except the earliest cases the result was still imperfect. By the use of sulphanilamide in combination with early and correct incision the period of active infection and necessary drainage is now reduced to a minimum and the good function that can only come with early healing results.

Almost more encouraging than the particular applications of sulphanilamide is the general promise that it brings. Since the days of Pasteur chemists have been chasing the ideal of an agent lethal to bacteria that will act in the body. They have produced a series of antiseptics said to be effective in septicaemia when given intravenously but proved in practice to do more harm to the host than to the invader. Salvarsan seemed to promise a new era but the group of arsenical preparations it introduced were soon found to be active against protozoa but not against bacteria. With the standardization of the arsenicals and the increasing production of drugs by synthesis rather than extraction with the apparent limitation of remedies to the amelioration of symptoms and the lack of any of proved efficacy in bacterial diseases it seemed that the pharmacologist was bound to disappear.

## THE CHANGING GROUND OF SURGERY

## Duodenal Ulcer

the rush and the excitement of the modern world, the methods of surgery are changing, so that we never prepare a lecture to students in the same way that diseases are changing in the passing years, that diseases are not what they were. They, too, have their enemies, and natural immunity, medicine, surgery, and public health have all combined to eliminate the favourites of pre-war days.

## The Decline of Syphilis

Bacterial diseases, like tribal migrations, are most calamitous when they first descend on a populace unprepared for them, with time, resistance is organized, the invaders weaken and finally disappear. Syphilis ravaged the world at the close of the fifteenth and beginning of the sixteenth century, it remains a scourge, but its manifestations, even in untreated cases, are becoming milder. Tuberculosis is even more evidently doomed to extermination by the gradual development of natural immunity. Its incidence and its mortality have both dropped steadily during the last fifty years, and the satisfaction which we as doctors might take from this fact is shaken by the notable absence of any acceleration in the downward curve when Koch discovered the organism or when open-air treatment was advocated. The youngest student to-day will probably see tuberculosis vanish from the face of the earth.

Medicine, or rather therapeutics, by the improved drug treatment of syphilis has abolished almost entirely the third stage of that disease. In 1910 about one quarter of the patients whom I saw on surgical and dermatological out-patient rounds came for some manifestation of tertiary syphilis. In the last six months I have found only a single gumma, and that a doubtful one. Surgery, by the routine repair of herniae and the early treatment of urethral stricture, has almost wiped out strangulation and extravasation of urine, the 'high lights' of a pre-war emergency week. Radium and x-ray therapy have claimed most cancers, apart from those of the alimentary canal. Public health and improved economic conditions have reduced the incidence of gastric ulcer and put rickets and osteomyelitis into the ranks of the rare and disappearing diseases.

Lest you should think that these remarks are a prelude to a swan song of surgery, I would hasten to say that there is always a new generation of disease knocking at the door. The very advance of civilization, which has removed those troubles due to poverty and ignorance, is bringing others peculiar to itself. I can mention only two factors that seem to be operative: the rush and the strain of the competitive element, and the constant feeling of insecurity in modern life, and the unnatural diet, consisting largely of foodstuffs preserved to be eaten long after their time of preparation and far from their place of origin and therefore robbed for canning purposes of all portions that cannot be proved to have a high nutritive or vitamin value. These factors are responsible for the appearance of new diseases and the increase in old ones due to nervous stress, the other for the apparently increasing incidence of infections of the alimentary tract. Both bring new problems to surgery.

Duodenal ulcer is essentially a disease of civilization, and we shall appreciate more fully if we try to dissociate it in our minds from gastric ulcer. The chief causes of gastric ulcer seem to be sepsis, undernutrition, or faulty diet, and trauma caused by insufficient mastication and the angulation of ptosis, the typical gastric ulcer patient is a timid, depressed, and sedentary old lady, with poor muscle tone and a low acid curve. Duodenal ulcer, on the other hand, is associated with worry, overwork, and the excessive smoking that accompanies these two, the duodenal patient is a live wire, a go getter, a high pressure salesman, a hundred per cent man, thin, restless, with a small stomach and hyperchlorhydria. His type is increasing, and so undoubtedly is duodenal ulcer, and for the first time it is becoming fairly common in women. While this increase in duodenal ulcers is undoubted, I cannot support it by my own figures, since my records concern cases coming to operation, and in them gastric ulcers predominate largely. I find that much of my time at the out-patient department is spent persuading gastric ulcer patients to have an operation and duodenal patients not to have one. Gastric ulcer, if medicine has not cured it early, is a surgical disease, and the results of excision are excellent. Duodenal ulcer is the outcome of high pressure living: if the patient can be persuaded to mend his ways the ulcer will disappear without surgery, if he cannot, surgery, unless it is of a most drastic nature, will give him only temporary benefit. One of the most manifest changes in the surgical outlook within recent years is that the great body of men of experience and judgment are agreed that in duodenal ulcer operation should be reserved for the complications—perforation, stenosis, and severe haemorrhage—and not be looked upon as a cure for the ulcer tendency.

## Operation for Graves's Disease

Graves's disease, again, is a malady which is very constantly associated with emotional shock. Many of the functions of the thyroid gland are understood, but its place in the complicated corporation of ductless glands, whether that of a director or merely of a bulky foreman, is not yet unravelled. Crile looks upon the thyroid as the regulator of constant energy output as the adrenals are of intermittent outbursts. He points out that the great majority of animals are either hunters or hunted, always alert for attack or escape, always ready to spring from rest to intense activity. Two creatures alone are lords of all they survey—man on the earth and whales in the ocean—and in them alone does the thyroid exceed the adrenals in weight. The definite association of thyroid activity with the important phases of woman's life—puberty, menstruation, and pregnancy—and the frequency of all thyroid diseases in females, might be cited in further support of Dr Crile's contention that thyroid dominance is the mark of a superior place in the scale of creation. Be that as it may, Graves's disease has hitherto been almost exclusively in women, and chiefly in young women of the age when emotional crises are common. Within the last few years an increase which is apparent to every surgeon interested in thyroid work has been noted in the incidence of Graves's disease in men, almost entirely of intermediate social position. The millionaire may be worried, but they are not serious enough to affect the thyroid, the labouring man can put all his troubles on the broad shoulders of the State, but the clerk with 40 with an increasing family and no promotion in the small business man threatened by poverty

the schoolmaster uncertain whether he can hold in his job—these people must carry their responsibilities alone and they are showing the strain by developing hyperthyroidism. It is indeed fortunate that the active treatment of Graves' disease has been transformed within the same period from a clumsy and fairly sound procedure to one of the safest and most satisfactory in surgery. One cause is the worthy circle (for not all circles are vicious) that good results bring patients at an early stage and fitter patients mean yet better results. Another is the use of iodine which though it has no curative action yet enables the physician by doses checked against frequent basal metabolic estimations to bring any goitre patient to the condition of a normal individual for a few days and to predict to his surgical colleague when that time will come. Yet another is the standardization of operative procedure to a bilateral subtotal excision of the thyroid gland leaving no more than two cubic centimetres of gland tissue on each side in the tracheo-oesophageal groove. Most important is the division of labour between the physician and the surgeon the former accepting responsibility for the preparation for living the date of operation and for the after care the latter content to work under orders and do no more than guarantee to return a live patient with a respectable scar covering a job neatly done.

### The Problem of Arterial Hypertension

Most alarming among the problems presented to surgery to day is that of arterial hypertension. High blood pressure with its consequences is nothing new and many famous men have died of apoplexy or lost their fire in the dotage of cerebral softening. But they were old and reached this last infirmity of noble minds after a long life of scorned delights and laborious days. The tragedy of the present time is that men and women are succumbing to the stress before they have time to bring their ideas to maturity or to reap the reward of their labour. Still under 30 they are stricken with intolerable headaches and failing vision and find themselves unable to concentrate without a further increase in these distressing symptoms which are the outcome of a systolic pressure that may be from 200 to 300 mm. of mercury.

Such a problem has naturally received the fullest attention from research workers particularly in America where this scourge of the intellectual is increasing rapidly. Hypertension does not occur spontaneously in animals but it can be produced by applying a clamp to the renal pedicles and closing it gradually. If the arterial supply is so reduced that the nutrition of the kidneys is impaired albumin and casts appear in the urine and a condition comparable to the hypertension of renal disease in man is reproduced. But by gradual occlusion a point can be reached short of renal damage where the systolic pressure of the animal is raised and remains up as long as the clamps are kept on the pedicles. The hypertension thus produced resembles non renal or essential hypertension in man but is certainly not identical. Experimental hypertension persists as long as the obstruction to the blood supply of the kidneys is maintained. It is not a reflex effect for it remains when all nerves to the kidney have been divided and even when one kidney is removed and the second transplanted to the thigh—an irrefutable denervation. It may be lowered by various operations such as transection of the cord designed to dilate the arterioles of a wide area but this depression is temporary. It appears likely therefore that the hypertension is due to some pressor substance produced in the kidney when its blood supply is jeopardized.

In man on the other hand the blood pressure can be lowered in many ways. Surgical alleviation of these victims of an intellectual machinery that has run its bearings was first suggested by the profound fall in systolic pressure that follows a spinal anaesthetic and the operations performed to day have all been designed to remove the vasoconstrictor impulses from a large part of the splanchnic vascular bed. Whether the resulting benefit is due to reduced peripheral resistance in the arterial tree or whether as seems more likely in view of the experimental evidence mentioned above it depends upon the denervation of the renal vessels alone—the removal of Nature's renal clamp—is uncertain. Many alternative procedures are undergoing trial. Their relative merits are still undecided the choice of suitable patients varies from surgeon to surgeon and the benefits that may be expected from any or all of them have still to be assessed.

### Operations for Raised Blood Pressure

Heuer at the Cornell Medical Centre New York performs lumpectomy and divides the anterior roots of the lower six dorsal nerves. Max Peet at Ann Arbor does a bilateral extrapleural operation above the diaphragm. By removing no more than an inch of the eleventh rib on each side he is able to resect the three splanchnic nerves as they reach the diaphragm and the two lowest ganglia of the thoracic sympathetic chain. He insists that the least splanchnic must be found and excised if possible as it carries the renal vasoconstrictors. Adson at the Mayo Clinic approaches the splanchnic nerves just below the diaphragm through a long incision along the outer border of the erector spinae from the eleventh rib to the iliac crest. Retracting the kidney in its fatty envelope forwards he follows the last dorsal nerve to the crus of the diaphragm and finds the great splanchnic nerve. He divides this and drawing out the semilunar ganglion which it enters removes the greater part of it coagulating it by diathermy before cutting to avoid the risk of haemorrhage. In addition to the three splanchnic nerves he removes the upper two lumbar ganglia. Crile at Cleveland denervates the adrenal and removes the semilunar ganglion through a smaller lumbar incision working with long blunt dissectors and scissors guided by touch.

Each of these operations appears to have its advantages and drawbacks its successes and failures. To the visitor with little personal experience who must base his opinion largely on technical criteria Peet's operation appears the best. It is the only one apart from Heuer's in which both sides can be done at a sitting it is bloodless and though the field is limited access to all parts of it is adequate and vision excellent. Adson's operation is in his hands a masterpiece of neat work. The important part is however carried out at the limits of a deep dissection aided by exact retraction and well placed lights and it would seem that any chance bleeding at this stage would be controlled with considerable difficulty. These doubts apply with greater force to Crile's blind operation which would probably be very dangerous in the hands of any surgeon not possessing his unrivalled experience and delicate touch. Division of the anterior spinal roots inside the theca seems needlessly severe in its approach and destructive in its scope.

The results obtained after operations for hypertension seem to vary in the most remarkable manner even in groups that should be comparable—that is in patients of similar age with an identical clinical syndrome and treated by the same operation. As might be expected therefore surgeons differ considerably in their indications for opera-

tion, in their criteria of operability, in the enthusiasm with which they regard this branch of surgery, and in their outlook on its future. At one extreme Adson will only accept for treatment a small group of picked patients. They must at any rate be under 50, and preferably under 40, and must have a sound heart and good kidneys. They are first put to bed and their blood pressure taken every hour for twenty-four hours or longer to establish a normal. They are then subjected to several tests. Five per cent pentothal sodium is given intravenously till there is no further drop in blood pressure, three grains of sodium amytal by mouth every hour for three successive hours, and six half-grain doses of sodium nitrate at half-hourly intervals. If the blood pressure returns to normal, or nearly normal, with all these tests that patient is considered suitable for operation, but if it does not it is assumed that the hypertension is due almost entirely to organic changes in the arterial tree and that it will not be improved with surgery. At the other extreme is Max Peck, who finds that some of the cases that appear most unfavourable show dramatic improvement, if not cure, and, while he carries out a thorough preliminary investigation and vasodilator tests, is willing to operate on any case that does not show obvious renal damage.

One of the wisest surgeons in the United States, himself a neurosurgeon, told me that he felt as yet quite unable to foresee the ultimate outcome of this work, but he thought it was well worth continuing. A symptomatic improvement seems to occur in every case—that is, the patients lose their headaches, and their vision improves—but in many of these there is no appreciable drop in the systolic pressure to explain the improvement. Some, though their pressure remains unaltered, become sensitive to drugs such as cyanates to which they were formerly resistant. Many show a fall in blood pressure of about half the amount by which they exceed the normal, but after a few months they start to climb, and by the end of the year have reached their former figure. A few return to normal or near normal, and remain at that level. Four years ago a surgeon of about 40 was forced by a rising blood pressure, inability to concentrate, headaches becoming at times intolerable, and failing vision to resign his university post and abandon his practice. He underwent the operation of bilateral splanchnicectomy, and immediately lost all his symptoms and returned to a normal blood pressure. He obtained another post at a university in another State, and has been in full work ever since, his blood pressure showing no tendency to rise again. I had not the good fortune to meet him, but I met many of his colleagues, and they all agreed that he was now able to work as hard as any of them. To my question as to whether he was as good a man as before his symptoms appeared they replied that he had lost some of his fire, he was not the "go getter" he used to be, but he was still a fine surgeon. Many of us are apt to become less energetic between 40 and 44 without the excuse of an operation to explain it, and would count the loss of some enterprise a small price to pay for rescue from idleness, imminent blindness and impending death. It is cases like this—and they are by no means rarities—that illustrate the real value of surgery in hypertension, and provide a reason for its fuller study.

#### Increased Incidence of Appendicitis

That infections of the alimentary tract are on the increase is undeniable to one who surveys the change in surgery over even a brief period. I was sufficiently impressed by this increase in 1923 to attempt an experimental

investigation of its cause that formed the basis of a Hunterian lecture the following year. In that lecture I sought to prove that bacteria are normally carried through the intact wall of the alimentary tract, and that in conditions of injury or stasis the number passing through is considerably increased. I suggested that such stasis is in almost inevitable sequel of the modern dietary, which differs from that of our ancestors in two main respects: the high degree of preparation to which our cereals are subjected, robbing them of many vitamins, and the smaller and still lessening amount of indigestible material, chiefly cellulose, which we consume.

Whatever its cause, the most striking manifestation of this increase is seen in appendicitis, which first appeared as a relatively common disease at the beginning of the century and has since become more frequent every year. Some would explain this appearance and increase by saying that appendicitis was formerly just as common but seldom diagnosed. The clinical acumen of our predecessors cannot be assessed, but their post mortem reports survive in their detailed thoroughness, and it is very unlikely that the association between peritonitis and a gangrenous appendix would have escaped the eyes of men like Gull and Wilks. Bright described infection of the vermiform appendix in 1839, but did not look upon it as a common disease. Others, again, ignore this increase in their attempt to find statistical support for a revival of the pre-Listerian treatment of appendicitis by procrastination. They point to a slight rise in the total mortality for appendicitis in Britain over a ten-year period as evidence that early operation has not lowered the death rate, omitting to allow for any increase in the total incidence of the disease. An examination of the hospital records of South-East London, however, shows that during the same period, while the number of deaths has risen by 8 per cent only, the number of operations for acute appendicitis has increased by 260 per cent.

#### Irritable Bowel and Ulcerative Colitis

Ulcerative colitis is another alimentary tract infection which, though old, has become common only during the present century and a subject for surgical attention during a much more recent period. The term is used, somewhat loosely, to describe a group of disorders of the large intestine characterized by the passage of frequent loose stools containing mucus and often blood. Three conditions at any rate must be excluded before the label of ulcerative colitis is applied. The first and most important is that of "irritable bowel" or "maltreated bowel," which becomes a disease when it is labelled mucous colitis. The distal colon is richly set with mucous cells whose purpose is to lubricate the normal excreta in transit, and whose habit is to pour out mucus when abnormal constituents appear. The bowel consciousness instilled by infant training becomes, in those lacking the interests of work or a family—that is, the wealthy—an absorbing passion that has made the fortunes of countless drug manufacturers, fashionable physicians, health resorts, and irrigation parlours. The vested interests that profit by the colitis complex are indeed so powerful that it is only a few bold spirits like Hurst who have dared to point out that habitual constipation is usually the result of habitual purgation, that intestinal intoxication is caused not by stasis but by the drugs given to relieve it, and that Plombier's treatment can wreck the healthiest colon in a few weeks. The patient with mucous colitis can never always be put right if her drug chest, which will be too full to overflowing, is emptied into the dustbin and she put on a rational diet and exercises.

The second condition that must be excluded is multiple polyposis a disease that may be suspected when there is a history of others in the family similarly affected and that can usually be recognized by sigmoidoscopy or contrast radiography. Apart from its complete intractability polyposis nearly always goes on to cancer and therefore demands excision—segmental in those rare instances where part of the colon can be proved to be free total colectomy in the majority. The third condition to be excluded and treated by the appropriate serum is bacillary dysentery. There remains a large group that must be classed as true ulcerative colitis a disease for which specific streptococci have been held responsible by Bargen and others but about whose primary cause no agreement is yet possible.

The medical treatment of ulcerative colitis does not concern us here except to know that it sometimes fails and that these failures provide a new problem for surgery. Between the successes and the worst failures those patients who have gone progressively downhill and are poisoned and bloodless lies the intermediate and most important class of those that are bound to fail but are not yet at the point of death and therefore provide the most promising material for surgical treatment. When the colon has at last been got to heal after prolonged ulceration when its wall is thick rigid and fibrous and the scars on its mucous coat are covered with a single layer of non glandular epithelium it may at last be a reasonably efficient sewer while it is flushed out repeatedly and asked to transmit no more than paraffin lubricated pulp but it cannot function as a colon and is bound to ulcerate afresh on the first attempt to restore normal diet at the first period of lowered resistance.

### Surgery of the Ulcerated Colon

The surgical treatment of the ulcerated colon may be divided into three stages—rest excision and restoration. Rest of the diseased bowel can be obtained only by complete transverse division of the ileum six or eight inches above its termination. Appendicostomy and caecostomy have both passed into disavour the feeble flushing of the colon which they allow does not appear to be as effective as washing out through the rectum and neither of them rests the colon to an appreciable extent. Transverse ileostomy however diverts the whole intestinal flow to the surface. The colon no longer filled with bacterial pabulum mechanically irritated or stimulated to contract rapidly becomes more healthy. It is not to be expected in the advanced type of case in which such a grossly destructive operation as colectomy has come to be considered that it will recover sufficiently to function again but the discharge becomes one of purulent mucus rapidly decreasing in amount bleeding gets less or stops entirely and the absorption of toxins is diminished when infected fluids no longer reach the ulcerated surfaces and mass movements do not and the lymphatic and venous flow. Almost as important as the mechanical exclusion is the fact that the diet need no longer be chosen to spare the colon. Part of the difficulty in treating the disease is to provide a diet that gives a minimum residue yet is varied appetizing and sufficient in all elements. After ileostomy the patient may be fed on anything and everything and this alone causes a marked improvement. To start with the ileal efflux is watery and almost continuous dehydration is apparent and the skin round the opening is sore. But the capacity to absorb water is soon acquired and the outflow takes the consistency of putty and is discharged at intervals that may be as long as four hours.

As soon as the patient's condition will justify a further operation the diseased colon is removed. It can usually be resected down to the lower part of the pelvic colon or even the pelvic rectal junction in one stage but no more need be done than the difficulties at the time and the reaction of the patient to operation will allow the proximal end of the remaining colon being brought to the surface when the incision is closed to form the start of the next stage. With the patient fit again after colectomy restoration is undertaken if it is considered advisable when the disability and the gain to be attained are set against the difficulty and severity of the operation. When the lower half of the pelvic colon and the rectum have been spared restoration implies no more than implanting the ileum in the stump of the pelvic colon and is obviously the right course to be adopted. But since ulcerative colitis usually starts in the rectum and affects the rectum and pelvic colon more than any other part excision of the rectum is necessary in most cases to eradicate the disease. It also seems an essential preliminary to satisfactory water absorption from the ileum. When the rectum has been excised restoration or the normal means implantation of the distal ileum in the anal sphincter and implies first a conservative excision of the rectum which in the presence of ulceration and perirectal fibrosis may be almost impossible and later a difficult dissection to reopen the old rectal bed and transfer to it the mobilized ileum.

### Regional Enteritis

Crohn's disease or regional ileitis can lay as just a claim as any to be a new disease for it was first described as an entity by Crohn Ginzburg and Oppenheimer in 1932. Single cases had been reported as rarities by previous observers but these authors were able to study a series in Mount Sinai Hospital and to establish the clinical and pathological features of the condition. Since their paper it has been shown that the changes peculiar to this infection are not limited to the lower ileum but may occur higher and even in the jejunum so that regional enteritis is probably a better term than regional ileitis.

Regional enteritis is a non specific granulomatous infection of unknown aetiology progressing steadily and ultimately fatal unless treated surgically. The affected segment of bowel is thickened rigid and red or purple in colour. Its lumen is reduced usually to the diameter of a pencil or even smaller. On laparotomy the appearance is characteristic the thickened rigid bowel the sharp demarcation at each end of the affected segment and the extensive involvement of the mesentery over the same area being unlike anything else. In microscopical section the wall of the intestine is seen to be almost entirely replaced by vascular granulation tissue with large foreign body giant cells but all tests for the tubercle bacillus are negative.

Clinically Crohn's disease may be met with in many puzzling forms. Perhaps the most typical picture is that of a young man or woman who has been ailing for two or three years losing weight steadily and showing obvious anaemia. During this period there have been attacks of cramp like abdominal pain accompanied by mild diarrhoea and a moderate pyrexia. Other cases progressing more rapidly resemble subacute appendicitis indeed the differential diagnosis from recurrent appendicitis may be very difficult for there is usually tenderness and often a lump in the right iliac fossa and only occasionally can this be recognized as a tubular ileum.



because of the mesenteric oedema that obscures its outlines. Others develop spontaneous mucocutaneous fistulae. In others, again, the symptoms of obstruction predominate. A barium meal will often solve the puzzle by showing a narrow rigid channel replacing the normal outline of the lower ileum.

The treatment of regional enteritis is essentially surgical. No spontaneous cures have been reported, and without operation fistulae appear or obstruction supervenes. Many patients are too ill to stand resection when they are first seen and in them an anastomosis must be made between the ileum above the disease and the transverse colon in order to rest the affected segment and avert obstruction. A few so treated may regain their health without further operation, but Mixer has found that in the majority treated by excision alone the disease is not arrested, but continues to spread. Resection of the affected segment with as much as possible of its mesentery and at least two inches of healthy bowel above and below it must therefore be looked upon as the correct treatment, to be undertaken as a primary operation in those who are able to stand it and after excision in those who are gravely ill. Since the disease commonly affects the terminal ileum, resection usually implies removal of the caecum and ascending colon in addition. It is as yet too early to speak with any certainty about the permanence of cure. Berg had no recurrences in thirty-two resections among Crohn's cases, but others have seen them. Sherris and Jackson report two separate recurrences in the same patient, each following a wide resection.

### Two Conditions for Surgical Advice

In discussing changes in surgery we must beware of accepting the view that change and progress are synonymous, that what is new is better than what went before, or even necessarily good. The study of diseases newly arrived or newly handed over to surgery provides us with interest but our enthusiasms should be reserved for those changes, often very simple ones, that lead us to something better. If we consider any condition now treated by surgery and ask ourselves, 'How can we improve the results we are getting to-day?' we can find two simple answers: first, by getting the disease at an earlier stage, before it has spread widely, before it has injured adjacent parts before the patient is ill; secondly, by modifying our operation to give the best possible results. Both of these demand not genius not brilliance or technical skill, but independent observation and constant hard work. Disease in its early days is betrayed by symptoms, signs belong to its later and less happy stages. By watching our patients carefully, by listening without prompting by recording their story, however irrelevant it may appear at the time and by comparing our notes with the exact knowledge brought to us later in the operating theatre, the laboratory bench or the post-mortem room we shall acquire a store of material from which we may be able to build new clinical pictures—pictures that we shall recognize when they come again that may allow us to disentangle new diseases from the mixed class in which they are now hidden and to recognize old ones at an earlier stage. I need only remind you that it was by such methods nothing more dramatic than Moynihan first discovered the picture of duodenal ulcer, showed it to be not a rare disease but one of the commonest, and laid the foundation of a reputation that has seldom been equalled. But it is a lesson my colleague Ryle has made contribute to our clinical science that stand as models of accurate

observation, conscientious recording, and painstaking analysis.

An outstanding example of that careful study of results which allows an old operation to be remodelled, so that it is virtually a new one and certainly a better one, is provided by the work of Dukes and Gabriel in cancer of the rectum. Dukes's dissections have shown that the spread of this growth is entirely upward in hopeful cases, have laid the foundation for a safer and more satisfactory operation, and have justified the revival of conservation of the sphincters in high and early growths. Gabriel's careful study of results has shown that what the pathologist predicts does actually take place.

### Problems for Solution

There are few problems that we cannot hope to resolve by inquiry along these two lines. We are all depressed by our results in cancer of the stomach. But if we can trace some clinical feature in the earliest phase of departure from health common to all those patients who later come with advanced growths, we may hope to get more in that very small group where radical resection is possible. If we can discover, by detailed microscopical dissection of the removed specimen, where the resections we now perform are not wide enough and learn by the study of post-mortem examinations where recurrences appear after operations that seemed hopeful at the time, we shall have knowledge that will enable us to modify and to extend our surgery in directions that will increase the proportion of cures.

Other growths will be brought within our reach by means no more spectacular. The first successful resection for cancer of the oesophagus was twenty-five years ago, but till 1936 the operation had only succeeded six times, and the mortality was within a decimal point of 100 per cent. Six months ago I saw three cases successfully treated by Garlock of New York, and two more by Wooley of Toronto—that is, five in one year by two surgeons. We may predict that the mortality of this operation, in the hands of expert surgeons, will be reduced below the present mortality in cancer of the stomach, and that the cure rate will be much higher, for oesophageal growths are of lower malignancy. We only need the clinical picture that will allow us to recognize the disease before obstruction appears.

Change is everywhere, and change is desirable, for change is life. Only when we are dead do our osteoblasts and osteoclasts cease their tireless moulding and rebuilding, and our skeletons remain a changeless memory of the shell that once held our sorrows, hopes, and fears. It is good to live in a period of change, to be concerned with the changes that are taking place in our art, to know that they are changes for the better, and to realize that among our fellow countrymen and fellow townsmen are names that will always be remembered as leaders of the advance.

At the annual meeting of the international committee of the campaign against charlatanry held during the Brussels Medical Congress on April 17 when Dr Robert d'Ernst of Geneva was elected president, the following expressions of opinion were adopted: (1) The title of doctor before the surname shall be exclusively reserved for doctors in medicine, surgery and obstetrics. (2) The practice of physiotherapy shall be reserved exclusively for qualified doctors. (3) Glasses shall only be supplied by opticians on a doctor's prescription.

# THE COMPOSITION OF THE BLOOD IN PREGNANCY

BY

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In this country studies of the composition of the blood during pregnancy have been mostly confined to the haemoglobin and cellular elements, other constituents such as calcium and phosphorus which are also important during gestation seem to have attracted little attention. The same can be said of the enzymic phosphatase which is concerned with the metabolism of these elements. These blood constituents and the haemoglobin were determined in pregnant women attending the Blackburn Corporations ante-natal clinics and tests of the bactericidal power of whole blood against streptococci of human origin were also carried out in the hope that the results would throw some light on the susceptibility of the subject to puerperal infection. The original aim had been to secure at least 200 subjects and to classify them so far as possible aetiological in accordance with the signs and symptoms of illness during pregnancy labour and the puerperium. Unfortunately the number of volunteers fell off rapidly after the first few months and it was consequently decided to wind up the study when analyses of the blood of 101 subjects had been made. The results are published in the hope that they will prove of some value to those contemplating a similar type of inquiry.

## The Investigation

This began in July 1936, and lasted for about one and a half years. The subjects consisted of all those attending the ante-natal clinics who agreed to have their blood sampled. They were not chosen for health economic or any other reasons but it is not claimed that the volunteers are an average sample. It is possible that the material may have been biased by self selection.

About 17 ml of blood were necessary for the analyses and as it appeared unlikely that many women would submit themselves to more than one blood sampling a suitable period of gestation had to be chosen for this. The seventh month was selected. The final months were avoided because of the likelihood of objections by the subjects in view of the near approach of labour and the early months because it seemed probable that the period of gestation would not have advanced far enough to induce detectable alterations in the composition of the blood.

The blood was taken in the ante-natal clinics at about 11 a.m. and the haemoglobin percentage was estimated at the same time. One sample was taken for biochemical analyses and another for the bactericidal test. The former amounting to about 12 ml was allowed to clot and the analyses were done on the serum. The sample for the bacteriological test was about 5 ml and was drawn separately into a sterile test tube containing enough powdered potassium citrate to prevent coagulation. The samples were delivered to the laboratory of the Royal Infirmary Blackburn about half an hour after being drawn. Determinations of inorganic phosphorus and

phosphatase were generally completed by about 3 o'clock on the same day and that of calcium the next morning. The bactericidal test was usually finished on the morning of the second day after sampling. The following were the methods employed.

**Haemoglobin.** Dare Inorganic phosphorus and phosphatase. Bodanvsky (1932-3 1933) adopted from Kuttner and Lichtenhan (1930) Calcium Clark and Collip (1925).

**Bactericidal Test.**—A primary broth culture of streptococci from a case of puerperal septicaemia was grown. A tube of blood broth was then inoculated with this culture and after growing for about fifteen hours it was put in the ice-chest and kept there for the parent culture for the tests. Every week cultures were conducted to see if this parent culture was still virulent and on dates of ordinary bloods were inoculated from it. A tube growing to fifteen hours the broth was diluted with 10 ml of 0.9% saline to the required standard (Burroughs' Wellcome No. 10). This strength was used throughout the week to inoculate the blood samples. Three standard loopfuls of the culture were added to each 5 ml of whole blood and incubated for three hours when a subculture was made on plate and examined after eighteen hours incubation for streptococci.

The haemoglobin estimations were done by D. T. Hey, and in a few cases by other medical officers of the Health Department Blackburn all of whom had had previous experience with the Dare instrument. The biochemical and bactericidal tests were carried out by one of us (J.R.) in the laboratory of the Royal Infirmary, with the technical assistance of Messrs. Floyd and Pomret.

## Results

The average values and ranges are shown in Table I. The mean values are haemoglobin 7.3 per cent.

TABLE I.—Haemoglobin (Dare) Calcium Inorganic Phosphorus and Phosphatase Contents of Serum Averages and Ranges and Bactericidal Power of Blood of Women at the Seventh Month of Pregnancy

	Hb per cent	Calcium mg./100 ml	Inorganic phosphorus mg./100 ml	Phosphatase Dare's Units	Bactericidal Power—Streptococci	
					No. Growth	Growth Sp. per
Mean	7.3	9.34	2.7	2.3	7	2
Standard deviations	1.23	1.25	0.55	0.95		
Ranges	4-10.3	6.0-13.7	1.3-4.0	1.0-6		
Number examined	93	90	97	9		99

calcium 9.34 mg inorganic phosphorus 2.7 mg. and phosphatase 2.39 units per 100 ml of serum. Growth of streptococci indicating a low bactericidal power of the blood occurred in twenty-two of the ninety-nine women tested.

The literature on the subject of the haemoglobin and cellular contents of blood in women is voluminous and it will only be possible to refer to those publications which are the most relevant. Recent work on the haemoglobin content of the blood of pregnant women has been summarized by Boycott (1936) but unfortunately the exact period of pregnancy is not stated so that comparison with our figures is not strictly applicable.

## HAEMOGLOBIN CONTENT

In thirteen healthy American women at the twenty-sixth to thirty-fifth week of pregnancy Diekmann and Wegner (1934a) obtained an average value of 12.2 grammes of haemoglobin per 100 ml equivalent to

88.4 per cent (Haldane). The average value obtained in our series, 77.8 per cent (Dare), is equivalent to 90.2 per cent on the Haldane scale, since 100 per cent haemoglobin on the former instrument is equivalent to 16 grammes of haemoglobin, and 100 per cent on the Haldane instrument is equivalent to 13.8 grammes of haemoglobin per 100 ml. The average value found in our series therefore differs but slightly from the figure obtained by the above-named workers.

It is well known that the haemoglobin content of the blood falls during pregnancy. Dieckmann and Wegner (1934a) found that it fell steadily in thirteen healthy women to a minimum of 88.4 per cent at the seventh month after which it increased slightly until the end of the period. The fall in haemoglobin has been attributed to hydramnia and the findings of Dieckmann and Wegner (1934a) go to support this view. They observed that an increase occurs in the total plasma of the blood, and that the amount of the increase is relatively greater than that which takes place in the total number of red cells and in the total haemoglobin in the body. There is, however, evidence of the occurrence of actual anaemia, presumably physiological. Thus the same observers (1934b) found that

the saturation index,  $\frac{\text{Haemoglobin per cent}}{\text{Volume of packed red cells per cent}}$ , is below that in the non-pregnant state from the sixteenth week until full term.

The Dare instrument reads approximately 10 per cent lower than the Haldane and since values less than 80 per cent on the latter scale are generally considered to be indicative of anaemia, we may regard 70 per cent as the critical point on the Dare scale. But since Dieckmann and Wegner (1934a) showed that the haemoglobin falls by about 15 per cent on an average at the seventh month of pregnancy compared with the non-pregnant state we may regard 60 per cent on the Dare scale as the approximate critical point when dealing with pregnant women at the seventh month. On this basis seven of the subjects were anaemic (see Table II). Values falling within the

TABLE II—Distribution of Values of Haemoglobin and of Calcium, Inorganic Phosphorus and Phosphatase of Serum of Women at the Seventh Month of Pregnancy

Haemoglobin per cent				Calcium mg./100 ml.				Inorganic Phosphorus mg./100 ml.				Phosphatase Units per 100 ml.			
Below 60	60-69	70-79	80	Below 8	8-8.9	9-9.9	10+	Below 2	2.0-2.9	3.0-3.4	3.5+	Below 2	2.0-2.9	3.0-3.9	4+
18	23	47		11	26	38	21	11	54	21	11	14	39	34	10
75 tested				76 tested				97 tested				97 tested			

range 60 per cent to 70 per cent may be regarded as on the borderline of anaemia. There were eighteen such cases in the series making twenty-five out of the ninety-five tested or 26 per cent who were either definitely anaemic or on the borderline of being so. Two women whose haemoglobin was less than 60 per cent passed through pregnancy, labour and the puerperium without any significant signs or symptoms of ill health. It has been observed by many practitioners that low even very low haemoglobin values are compatible with fairly good health. On the other hand the risk involved in diagnosing anaemia on inspection only is shown by the fact that a few women who were diagnosed clinically as anaemic had haemoglobin values ranging from 70 to 87 per cent.

#### BLOOD CALCIUM

The range for blood calcium in normal adults is given as 9 to 11.5 mg per 100 ml by Peters and van Slyke (1931). Mull and Bill (1933) found that the blood calcium in 94 per cent of 207 healthy non-pregnant women of child-bearing age was from 10 to 11.5 mg per 100 ml. The same workers (1934) observed that, on the average, the minimum value in 900 healthy pregnant women was reached at six weeks before term between June and December, the mean being 9.89 mg. When labour set in between January and June a slightly lower minimum of 9.61 mg, on the average, was obtained. The last figure indicates a fall of about 11 per cent compared with the middle point of the range they obtained in non-pregnant women. On the same basis our average value of 9.34 mg for ninety-six women indicates a fall of about 13 per cent at the seventh month.

Of the total of ninety-six determinations of calcium, thirty-seven (39 per cent) are less than 9 mg per 100 ml. The remarkable constancy of the blood calcium level in health, as well as the literature cited above, suggests that values below 9 mg are too low for good health, but we have no evidence to indicate the exact cause of these low values. It should, however, be pointed out that nearly all the 101 cases received from the clinics supplemented with vitamins A and D and some also of iron.

In 120 healthy and unhealthy pregnant women Ishok and Toussaint (1936) obtained values of from 5.4 to 13.2 mg, with a mean of 9 mg, per 100 ml. The mean for those of the group who were suffering from leucorhoea was 9.5 mg and for cases of hyperemesis 10.1 mg. The results obtained by De Wesselow and Wyatt (1924), by Nicholas, Johnson, and Johnston (1934), and by Labignette (1937) did not indicate any definite effect of eclampsia or nephritis on the calcium level. On the other hand, Laffont and Bourgaud (1936) obtained values of 7.6 and 7.8 mg in two cases of eclampsia.

#### INORGANIC PHOSPHORUS

According to Peters and van Slyke (1931) the inorganic phosphorus in healthy adults varies from 2.5 to 5.5 mg per 100 ml. Mull and Bill (1933) in their series of 207 healthy non-pregnant women of child-bearing age found that the range of values was 3.2 to 4.4 mg under 30 years and 2.6 to 4.2 mg over 30 years. The same authors (1934) in their series of 900 pregnant women found that the inorganic phosphorus reached an average minimum of 3.24 mg at the seventh month. This value is definitely higher than the average obtained in our series (2.74) and also higher than that obtained by Schwirthe (1936) (3.05) from sixteen German women between the fourth and seventh months of gestation. The same authors also found for thirty-three healthy non-pregnant women a mean of 3.3 mg. These data seem to suggest that higher values are to be obtained in American women than in European women, but the evidence is not enough to make any definite statement on the point. Mull and Bill (1934) found that the inorganic phosphorus level was affected by the season but that it was lowered by ingestion of food and by advancing age. In our series no evidence could be discerned of an effect of the season but the numbers were undoubtedly too small to draw any definite conclusion to be come to on this point. The amount of the fall found by Mull and Bill (1934) in pregnancy advanced was slight—from 3.53 mg at three and a half months to 3.24 mg at the seventh month on an average. A similar fall was observed by Meranze and Rothman (1937) between the first and

seventh months—namely 333 mg to 300 mg. The evidence therefore indicates that the serum inorganic phosphorus like calcium falls during gestation but apparently not so much as calcium.

De Wesselow and Wyatt (1924) state that the plasma inorganic phosphorus in the nephritic toxæmia or pre-eclampsia may be as high as 5 mg, but only one of the cases they cite bears this out. They point out, however, that inorganic phosphorus would only be definitely raised in grave cases of retention of excretory products.

Attention has been drawn in recent years to the significance of the product  $\text{Ca} \times \text{P}$  which is stated to be about 20 in health. Since both these blood constituents fall during gestation it follows that the product should be somewhat less than 20. The mean value of the product in our series is 25. In the series of Mull and Bill (1935) it averaged just over 31.

#### PHOSPHATASE VALUES

The range of phosphatase values in adults is given by Bodansky (1932-3, 1933) as 1 to 4 units. Meranze, Meranze and Rothman (1937) found that it rose throughout pregnancy from an average of 208 units at the third month to 479 units at the seventh and to 1033 units at the ninth in 201 subjects. The range of values was very wide especially in the later months, those at the third, seventh and ninth months being 164 to 304, 216 to 555 and 566 to 2448 respectively. The average of their series at the seventh month 479 units is distinctly higher than that obtained in our series 289 and their values are at a higher level than ours, their range at the seventh month being 216 to 555 compared with 10 to 50. These observers however used a modification of Robert's (1933) method which gives higher values numerically than Bodansky's so that the figures are not strictly comparable. Cayla and Fabre (1935) found a mean of 16 units (not Bodansky units) in five non-pregnant women aged 16 to 25 years and a mean of 30.8 in fifteen pregnant women between six and a half and nine months. The evidence therefore goes to show that pregnancy causes the phosphatase to rise steadily.

Inspection of the phosphatase values suggested that they were higher in those women who exhibited evidence of illness sufficient to cause some degree of incapacitation during these periods than in those who remained in good health. Unfortunately the number of subjects was too small the complaints too diverse, and the clinical information too incomplete to attempt to divide those whom we shall call "ill" for shortness into groups in accordance with the aetiology of their illnesses. Much as we dislike grouping patients with widely varying signs and symptoms such as those of toxæmia and puerperal pyrexia under one head the trend of values was too definite to be ignored. Accordingly the phosphatase values of all the "ill" subjects numbering fifty-two were averaged and the mean compared with the mean for the well subjects numbering forty-five. The ill group gave an average of 309 units per 100 ml and the well group one of 267. The difference 0.42 is slightly more than is likely to occur by chance the S.E. (standard error) of the difference being  $\pm 0.18$ . The distribution of values showed that six were below 2 units and nine above 4 units in the "ill" group compared with eight values below 2 units and one above 4 units in the well group. These results suggest that the difference between the two groups was real and also that the state of the metabolism of calcium and phosphorus was more satisfactory in the "well" group since a high phosphatase level is generally understood to indicate some disorganization in the

metabolism of these elements. Although we cannot attach any definite significance to these results we are nevertheless of the opinion that they should be recorded.

No definite relation could be discerned between the state of health of the subjects during pregnancy, labour or the puerperium and the concentrations of haemoglobin, calcium and phosphorus in the blood. The differences between the mean values for these constituents in the well and in the ill groups were found to be without statistical significance nor did the distribution of values reveal anything definite. Of the twenty-five subjects with haemoglobin below 70 per cent., ten were in the well group and fifteen were in the ill group—that is 22 per cent. and 29 per cent. of the respective categories. Of thirty-seven patients with calcium below 7 mg, sixteen belonged to the well and twenty-one to the ill group—that is 35 per cent. and 40 per cent. of the respective categories. In view of the fact that the differences between the means in the two groups are not statistically significant it is probable that little importance can be attached to them.

#### THE BACTERICIDAL TEST

Nineteen bloods were tested bacteriologically, and twenty failed to inhibit the growth of streptococci. Two of the subjects developed puerperal pyrexia according to the Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926. The blood of one of these cases inhibited the growth of streptococci while the other failed to do so. The bactericidal action of the seventh month therefore did not give any indication of the susceptibility of the subjects to streptococcal infection during the puerperium. It must however be remembered that between the time of the test and the puerperium about three months elapsed during which the powers of resistance may have altered. Furthermore we do not know whether and to what extent other women than those who developed fever were exposed to infection.

It will be of interest to give some further details of the two cases of pyrexia. One of these was diagnosed as genuine puerperal pyrexia and the cause of the fever in the other case was attributed to mastitis. In the case of true puerperal pyrexia labour was normal but on the third day afterwards the temperature rose rapidly to 102 F, falling again to normal on the fifth day. During pregnancy this patient had had sciatic pains and a vaginal discharge and had been ill with influenza two weeks before confinement. The blood picture at the seventh month was haemoglobin 56 per cent, calcium 9.2 mg, inorganic phosphorus 2.6 mg and phosphatase 29 units per 100 ml. The blood inhibited the growth of streptococci. In the other case the temperature reached 102 F on the fifteenth day and 100 F on the sixteenth. The right breast was red and painful but the inflammation rapidly yielded to conservative treatment and the patient was normal on the nineteenth day after labour. During pregnancy there was a persistent mitral systolic murmur but no other signs or symptoms of illness. The blood picture at the seventh month was haemoglobin 87 per cent, calcium 11.3 mg, inorganic phosphorus 2.3 mg and phosphatase 25.4 units per 100 ml. The blood failed to inhibit the growth of streptococci. There was therefore nothing noteworthy in the blood findings of either subject.

#### Summary

The haemoglobin and bactericidal power of the blood against haemolytic streptococci and the calcium, inorganic phosphorus and phosphatase contents of the serum were

determined in 101 women at the seventh month of pregnancy attending ante-natal clinics in Blackburn.

In the series seven women out of ninety-five tested (7 per cent) were considered to be definitely anæmic, and eighteen (19 per cent) probably slightly so. In thirty-seven out of ninety-six tested (39 per cent) the calcium level was less than 9 mg per 100 ml, which is believed to be abnormally low. The product calcium  $\times$  phosphorus was 25 on the average. The blood of twenty-two women out of ninety-nine tested (22 per cent) failed to inhibit the growth of streptococci, and of these, one developed pyrexia during the puerperium, fever also occurred during the puerperium in a patient whose blood inhibited growth at the seventh month. A review of the literature indicates that the serum calcium and phosphorus fall and the serum phosphatase rises gradually as gestation advances.

In addition to the several individuals mentioned in the text who co-operated in this research and to whom our thanks are due we also wish to express our gratitude to the following: Dr D. W. Auchincloss for assistance and advice in biochemical methods; Dr A. Bradford Hill for assistance and advice in statistical analysis; Professors Dible and McLeod, for advice on bacteriological methods; and Dr Colebrook, for supplying the culture of hæmolytic streptococci.

## REFERENCES

- Bodansky, A. (1932-3) *J. biol. Chem.* **98**, 197, and (1933) **101**, 93.  
 Boycott J. A. (1936) *Lancet* **1**, 1165.  
 Civil J., and Fabre, F. (1935) *C. R. Soc. Biol. Paris*, **120**, 748.  
 Clark E. P. and Collip J. B. (1925) *J. biol. Chem.* **83**, 461.  
 De Wesselow O. L. M. and Wyatt J. W. (1924) *Modern Views on the Toxicæmia of Pregnancy*, p. 84 Constable, London.  
 Dieckmann W. J., and Wegner, C. R. (1934a) *Arch. intern. Med.* **53**, 188.  
 ——— (1934b) *Ibid.* **53**, 345.  
 Ishok G. and Toussaint G. (1936) *Rev. d'Hyg.* **58**, 435.  
 Kuttner I. and Lichtenstein, L. (1930) *J. biol. Chem.* **86**, 671.  
 Labigette, P. (1937) *Rev. franç. Gynec. Obstet.* **32**, 51.  
 Lilfont A. and Bourguet, R. (1936) *Bull. Soc. Obstet. Gynec. Paris* **25**, 578.  
 Lichwintz S. (1936) *Zbl. Gynak.* **60**, 1882.  
 Merinze, I. Merinze, D. R., and Rothman, M. M. (1937) *Amer. J. Obstet. Gynec.* **33**, 444.  
 Mull, J. W., and Bill, A. H. (1933) *J. Lab. clin. Med.* **18**, 1034.  
 ——— (1934) *Amer. J. Obstet. Gynec.* **27**, 510.  
 Nicholas, H. O., Johnson, H. W., and Johnston, R. A. (1934) *Ibid.* **27**, 504.  
 Peters J. P., and van Slyke, D. D. (1931) *Quantitative Clinical Chemistry*, **1**, 808, 1097, Baillière, Tindall and Cox, London.  
 Roberts, W. M. (1933) *British Medical Journal* **1**, 734.

## CHANGES IN BLOOD PRESSURE AND RESPIRATORY VOLUME FOLLOWING A SPINAL ANAESTHETIC

BY

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There is always a fall of blood pressure following the administration of a spinal anaesthetic. This has been attributed to (1) vasomotor paralysis of the legs and trunk, causing vasodilatation and loss of blood in effective circulation, and (2) diminution of respiratory excursion due to intercostal paralysis causing a decline in negative intrathoracic pressure during inspiration and a decrease of the venous return to the heart. The occurrence of a fall in respiratory volume has been ascribed to abdominal and intercostal paralysis and to medullary anaemia following the fall in blood pressure.

Observations on the changes in systolic and diastolic blood pressure and in respiratory volume after the administration of a spinal anaesthetic were carried out in twenty-three cases, using the following technique: the anaesthetic was crystalline novocain, in amounts varying between 0.100 and 0.150 grammes (average 0.126 grammes) in solution in cerebrospinal fluid (average 1.88 ccm) injected fairly slowly (four seconds) into the third lumbar space. This anaesthetic is completely absorbed in five to ten minutes by the spinal nerves near the site of injection, thus there are no secondary changes due to spread of the anaesthetic to higher regions during the progress of the operation. Repeated observations, commencing four to ten minutes before injection of the anaesthetic, were made of brachial systolic and diastolic blood pressure and also of the volume of expired air. For the latter purpose a simple airtight mask of chloroplast was devised, adherent to the patient's face and attached to the valve apparatus of a nitrous oxide apparatus, which was in turn connected to a meter, read every two minutes. The following readings obtained by these methods give some information on the relation of the fall in blood pressure to the changes in respiratory volume.

### Relation of Blood pressure Fall to Respiratory Changes

It was found that there is a sharp fall amounting on an average to 40 per cent of the initial systolic and 36 per cent of the initial diastolic blood pressure, the mean time of onset being 2.6 and 2.2 minutes after the administration of the spinal anaesthetic. The variation in this fall in blood pressure, considered as a percentage of the original value, while not very great, is proportional to the level of anaesthesia attained. The average level was up to the seventh rib, the highest and lowest being up to the third and tenth ribs respectively. There is also a fall in respiration, which occurs on an average one minute later than the fall in blood pressure (in two cases slightly before, in two cases synchronously, and in nine cases after). This decline amounts to 41 per cent of the initial respiratory volume. These falls are regular, with a tendency to be biphasic in the case of blood pressure and a similar less pronounced tendency in the case of respiration. The fall ceases after 13, 12½, and 13½ minutes in the cases of systolic and diastolic blood pressure and respiration respectively. There follows a recovery of systolic and diastolic blood pressure and

The Council of the Royal Society of Arts gives notice that the next award of the Swinney Prize will be made in January, 1939 the ninety-fifth anniversary of the testator's death. Dr Swinney died in 1844, and in his will he left a sum of money to the Royal Society of Arts for the purpose of presenting a prize, on every fifth anniversary of his death, to the author of the best published work on jurisprudence. The prize is a cup of a value of £100, and money to the same amount. The award is made by a joint committee of the Royal Society of Arts and the Royal College of Physicians of London which appoints special adjudicators. The prize is offered alternately for medical and general jurisprudence, but if at any time the committee is unable to find a work of sufficient merit in the class whose turn it is to receive the award, it is at liberty to recommend a book belonging to the other class. On the last occasion (1934) the prize was awarded for general jurisprudence. It will, therefore, be offered on the present occasion for medical jurisprudence. Any person desiring to submit a work in competition or to recommend any work for the consideration of the judges should do so by letter, addressed to the Secretary of the Royal Society of Arts, John Street, Adelphi, London, W.C.2, not later than November 30, 1938.

respiration of  $7\frac{1}{2}$ ,  $10\frac{1}{2}$  and 14 per cent of their initial values respectively which occupies about eight minutes.

It would appear from these observations that the fall in blood pressure is at least in part independent of changes in respiratory volume. It was found that if the respiration volume was maintained at the initial level—for example by CO inhalation—the decrease in blood pressure occurs but it takes longer (average eighteen minutes) and is more markedly biphasic. Recovery of blood pressure follows as before.

The effect of maintaining respiration was subsequently demonstrated by the induction of hyperpnoea by CO inhalation. If a flow of  $1\frac{1}{2}$  litre per minute is administered (of which about  $1\frac{1}{4}$  litre per minute is inhaled) respiration is increased by about 45 per cent of its initial volume, the rise being regular and rapid of almost instantaneous

64 per cent and 6 per cent of their initial values. The suggestion that medullary anaemia is the cause of the fall in respiratory volume is not borne out by the findings that the Trendelenburg position while raising the brachial and to a greater extent the cranial blood pressure does not result in an increase of respiratory volume.

It was noted that in cases of hypertension with arteriosclerosis the initial high systolic blood pressure fell very rapidly, the fall being a greater percentage of the initial blood pressure and the final blood pressure being as low as or lower than in normal cases. In these cases the Trendelenburg position has the effect described above bringing the blood pressure up to about the normal low level. Subsequent induction of hyperpnoea by CO inhalation has less than the usual effect in raising blood pressure. This increased decompensation occurring in cases of hypertension is shown by comparing the initial systolic blood pressure with the initial and final values of the function  $S'2D-20$ . On an

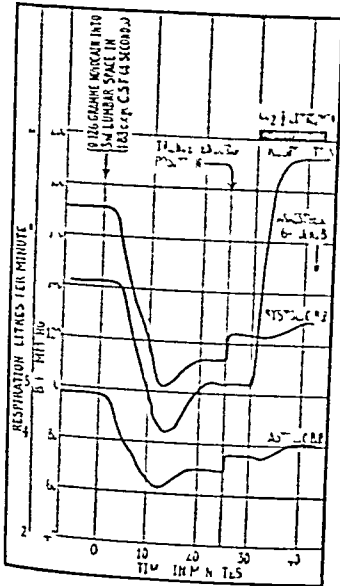


CHART 1

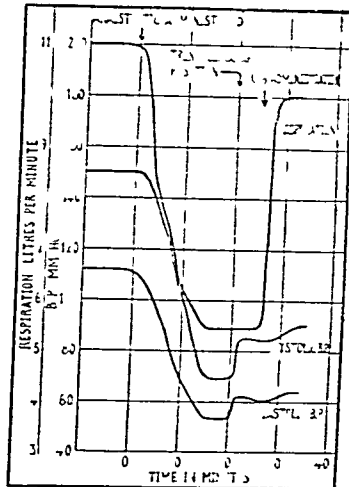


CHART 2

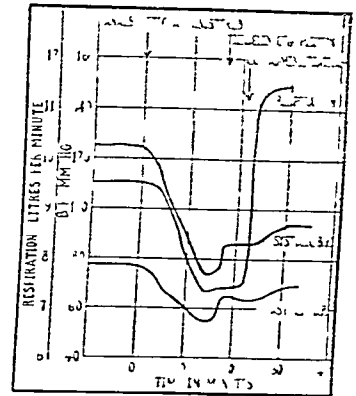


CHART 3

CHART 1—Average variation of blood pressure and respiration following the administration of a spinal anaesthetic

CHART 2—Variation of blood pressure and respiration following the administration of a spinal anaesthetic in a case of hyperpnoea

CHART 3—Variation of blood pressure and respiration following the administration of a spinal anaesthetic in a case with normal initial blood pressure

onset and attaining its maximum in three to four minutes. About 36 minutes after the beginning of CO inhalation there is a rise (completed in another four minutes) of  $3\frac{1}{2}$  per cent and 5 per cent of the initial systolic and diastolic blood pressure. At the same time the radial pulse volume is appreciably increased.

These effects of either maintaining or subsequently raising the respiratory volume suggest that there is a relation between the maintenance of respiratory volume and the blood pressure but also that another result of administering a spinal anaesthetic is independent of respiration and much more potent in causing a fall of blood pressure and that of the total fall in blood pressure only a small percentage can be counteracted by maintaining a normal or hypernormal respiratory volume.

The result of loss of blood in effective circulation was shown by placing the patient in the partial Trendelenburg position the feet being raised not more than one foot above the level of the head. This brings about an immediate rise in systolic and diastolic blood pressure of

average in those cases whose initial blood pressure was 130 mm Hg or below decompensation is slight while in those cases in which initial blood pressure was in the neighbourhood of 180 mm Hg decompensation amounts to a 25 per cent decrease in the initial and final values of  $S'2D-20$ . The abnormally low blood pressure in these cases will however respond to some extent to ephedrine. The majority of the subjects of these observations had received premedication with  $1\frac{1}{4}$  grain of morphine and  $1\frac{1}{150}$  grain of hyoscine.

The cause of the biphasic type of fall of blood pressure is not clear. It might be suggested that this temporary check in fall of blood pressure may indicate the normal compensation to lowered blood pressure by contraction of the spleen, visceral ischaemia, etc. The observations demonstrate that CO is of immediate assistance during the administration of a spinal anaesthetic as well as for prophylaxis against post-operative pulmonary collapse. The diagrams show the average response of the twenty-three cases to the various conditions imposed upon them.

and the response of a typical case of hypertension and of a case with normal blood pressure

### Conclusions

- 1 The greater part of the fall in blood pressure is due to vasomotor paralysis
- 2 A minor cause is the diminished respiratory excursion, which is due to abdominal and intercostal paralysis rather than medullary ischaemia
- 3 The Trendelenburg position has an immediate definite effect in increasing the blood pressure but not the respiratory volume
- 4 The induction of hyperpnocia has a small delayed effect in increasing the blood pressure

## A BRIEF REVIEW OF 426 CONSECUTIVE CASES OF URINARY CALCULUS

BY

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The investigation of a large number of cases of a disease such as lithiasis, chiefly because of the wide distribution of that condition throughout the urinary tract, reveals some interesting data. First of all is the fact that the male is invariably more prone to urinary lithiasis than the female: there are approximately two cases in the former to every one in the latter. My figures are as follows: male, 278, female, 148. Letts (1936) figures from the London Hospital are in the same proportion; these cover the period 1905-34. The next important fact to note is the high proportion of cases which occur in the upper urinary tract (79 per cent) in comparison with the lower. The London Hospital figures (74 per cent) are not far removed from mine on this point. The following table shows the general distribution throughout the urinary tract in my cases:

Kidney, 220	}	337 = 79.10% upper urinary tract
Ureter, 117		
Bladder, 80	}	89 = 20.90% lower urinary tract
Urethra, 9		
426		

### Staphylococcal Foci of Infection in Renal Calculus

Several Continental writers, notably Hellstrom (1936) of Stockholm and Hryntschak (1935) of Vienna, have called attention to the importance of chronic staphylococcal foci of infection as predisposing factors in the aetiology of renal calculus. Hellstrom found the staphylococcus in the structure of the stones in a large number of his cases. At the same time he has identified chronic infective foci in the genitalia of many of his patients. In 115 cases of stone in the upper urinary tract which I have examined in the same way I observed similar foci in 72 per cent. These were noted in the prostate, seminal vesicles, urethra, epididymides, the cervix uteri, and at the bladder neck. The importance of treating such foci is obvious, particularly in the hope of removing a cause for further stone formation. One other aetiological factor I found important in this series—namely, a dilatation in the urinary tract which pre-existed the calculus. This was noted in

15 per cent of my cases, and had its maximum incidence among children, concerning whom the dilatation appeared to be the principal aetiological factor with regard to stone. Parathyroid or deficiency disease, diseases of the bone, excess of vitamin D, and hypercilemia from various causes are all known to encourage stone formation, but they have certainly played an insignificant part in the cases forming the subject of this article.

### Age Incidence

The average age incidence in 220 cases of renal calculus was 39.5 and in 117 cases of stone in the ureter 39.7. The disease is slightly more common on the left side than on the right. The percentage figures of my cases are as follows: left, 50.55, right, 36.40, bilateral, 13.05. In the kidney, calculus is of equal incidence in both sexes.

When we come to consider the ureter, however, there is a remarkable change in the sex incidence. Indeed, ureteric calculus is about twice as common in the male as in the female: eighty-two of my cases were in males and thirty-five in females. The London Hospital figures are roughly in the same proportion. Here is offered an opportunity for an interesting speculation as to anatomical differences, which might supply the explanation. When we come to vesical calculus there is a still greater disparity in the sex incidence, the male greatly predominating, actually to over 90 per cent. There is nothing new about this relationship, it being practically the same as in ancient times.

### Recurrence and Mortality of Renal Calculus

I have no figures to put forward at present as to recurrence of renal calculus following operations on the kidney for stone. The literature offers a wide range of results according, I should imagine, to the way the investigations have been conducted. Although I have not yet undertaken a systematic investigation on this matter I have come across a few of my patients who have had a recurrence. In some cases this occurred in the kidney from which stone was removed, in others the stone has subsequently appeared for the first time in the opposite organ. With regard to the latter group, I would like to emphasize the fact that, in those cases in which after full investigation I have thought it proper to do nephrectomy, I have no knowledge of any in which stone has ultimately appeared in the remaining kidney. I call attention to this matter because I am of the opinion that when a kidney which is badly damaged by stone is left behind it is likely to encourage the formation of stone on the opposite side. The percentage of recurrence is quoted by some authorities as being no more than two to three after nephrectomy. My mortality for operations for renal calculus in 135 cases is 2.9 per cent.

### Stone in the Ureter

Treatment of stone in the ureter presents an interesting problem. The outstanding fact about these cases is that the great majority of stones pass spontaneously without any assistance. This was so in 67 per cent of the cases that I was able to trace. If the stones do not pass in due course they can usually be made to do so by some minor measures carried out through the cystoscope, such as passing ureteric catheters and slitting the ureteric orifice. Sometimes several weeks elapse between the instrumentation and the passage of the stone. The longest interval in my cases was nine months. As a rule there is no appreciable damage to the renal function from the lodgment of a small stone in the pelvic portion of the

water for such a period. But regular observation must be kept by plain x-ray and intravenous urography. Out of a total of 117 cases of stone in the ureter only 23 per cent required open operation. In 26 per cent of these cases the kidney was so badly damaged that it had to be removed and in all but one of them nephro-ureterectomy rather than a simple nephrectomy was performed. In 17 per cent trans-urethral instrumentation was carried out to assist the passage of the stone. There was no mortality from any form of operation on the ureter.

### Change in Incidence of Urinary Lithiasis

When one considers the published statistics of hospital records of urinary lithiasis up to fifty years ago it at once becomes obvious that a remarkable change has since occurred in the incidence of this disease. For before this time urinary lithiasis was largely a matter of vesical calculus—it was one of the commonest of hospital diseases to-day in this form it is one of the most uncommon. Moreover vesical calculus in those earlier times had by far its highest incidence among the children of the working classes. It did not occur at all in children of the well-to-do. So that it becomes an interesting question to ask why this form of the complaint has so completely disappeared. The explanation is of course simple—namely that in bygone days this form of urinary lithiasis was one of the many manifestations of faulty feeding, which as conclusively shown by modern experimental work, is largely a matter of deficiency of vitamin A of an animal origin and to a less extent of wholemeal bread (McCarrison 1931) the latter being harmful only when it is not modified by adding other dietetic ingredients. On looking back one can see how the improved standard of living among the working classes as time has progressed has made milk and butter more accessible to them and how the improvement in the milling of wheat has eliminated the bread factor.

It is abundantly clear that urinary lithiasis which manifests itself as a deficiency disease is vesical rather than renal and bladder stone is still very common in those countries where the predisposing conditions exist. Vesical calculus in our own midst to-day is almost invariably associated with bladder neck obstruction of one kind or another and is commonest in men past middle life, the average age of my patients was 52.6 years. Thus an important question of treatment is involved. To crush a stone and leave the obstruction is to invite recurrence of the calculus. Prostatectomy is indicated in some cases and transurethral resection of the bladder neck in others.

Now we come to another remarkable contrast—namely that renal calculus was nothing like so common as it is to-day. Even the absence of means of diagnosis by x-rays fails to explain the obvious increase in this form of lithiasis. Thus while we are aware of the disappearance of vesical calculus in the young for which we have a ready explanation, we are equally aware of an increase in upper urinary tract lithiasis the maximum incidence of which has moved to the fourth decade and the reason for which is obscure. Let's London Hospital figures leave no doubt about the change that has occurred in relation to the kidneys by comparing the 1915-24 decade with the succeeding ten years, it is seen that an increase of nearly 50 per cent took place in the stone cases admitted to hospital in the latter period. The incidence was predominantly in the upper urinary tract. Reports from Germany (Grossmann 1933) show that the increase of renal calculus is also general in that part of the world—at least in Central

Europe and in some adjacent localities. A queer fact which has come to light with respect to this wave of urinary lithiasis is that it seems to have begun somewhere about 1924. In some localities the increase has been as much as 1000 per cent. No adequate explanation of this phenomenon has so far been forthcoming. It is difficult to believe that dietetic hardships suffered during the war are responsible for an increase at such a distant date.

### Vesical and Urethral Calculus

With regard to the treatment of vesical calculus whereas litholapaxy is commonly looked upon as being the proper method I consider it inexpedient to carry this out in quite a large number of cases—actually 45 per cent of seven cases—the reason being that often there was an obstructive condition at the bladder neck requiring surgical intervention. For example in several cases I performed transurethral resection of a fibrous bladder neck obstruction either at the time of or subsequent to litholapaxy. There was a mortality from suprapubic lithotomy of 50 per cent. Of the vesical calculus cases 51 per cent were treated by litholapaxy with a mortality of 4.8 per cent.

Urethral calculus which as one would expect is predominant in the male is the least common of the types of lithiasis with regard to locality. It has the special feature that a large proportion of the cases are associated with lithiasis elsewhere in the urinary tract—in my cases 62 per cent. In other words such stones generally migrate from higher levels. Of my cases 55 per cent were in the prostatic urethra, the others being almost equally distributed in the different parts of the anterior urethra. The methods of removal varied according to the cases, several were treated by external urethrotomy, one prostatic case by suprapubic lithotomy and another by pushing the stone into the bladder with a sound and then crushing it. In one female case a large stone was visible at the external urinary meatus through which it was removed with forceps. There was no mortality from the urethral cases.

### REFERENCES

- Grossmann W. (1933) *Brit J Urol* 10 46
- Hellstrom J. (1916) *Acta chir Scand Suppl* No 46
- Hrynshak T. (1933) *Z. urol Chir* 40 211
- Leit Hugh (1936) *Brit J Urol* 8 205
- McCarrison R. (1931) *British Medical Journal* 1 1009

The Swedish Hospital for Radium Treatment has lately moved into modern premises erected close to the new Carolina Hospital in Stockholm. The Radiumhemmet, as the hospital is called, was established with the aid of the funds subscribed by the Swedish people as a gift to King Gustaf on his seventieth birthday ten years ago. Every technical resource has been utilized to make this clinic up to date. It has five rooms for radium treatment and a number of wards for three or six patients. The radium is stored in special safes which are inspected every morning. To protect the staff from dangerous radium rays rigorous safety measures have been introduced. When taking out the radium tubes from the safes the nurses are protected by lead screens 4 in. thick and the tubes are conveyed between departments in heavy wagons on rubber wheels. In the basement is the department for telerradium treatment, the walls are built of iron ore concrete 4 ft. 6 in. thick to prevent the rays from penetrating them. There is also a special x-ray department. The clinic has 100 public and 13 private beds and there are 150 physicians, nurses and other officials. Everyone employed in the handling of radium or x-ray apparatus is given long holidays.



# THE BRAGG-PAUL PULSATOR IN TREATMENT OF RESPIRATORY PARALYSIS\*

## REPORT ON THIRTY-FOUR CASES

BY

C. J. McSWEENEY, M.D., F.R.C.P.I., D.P.H.

Respiratory paralysis following diphtheria is a comparatively rare condition, but it is not uncommon when diphtheria of a virulent form is prevalent. Among roughly 3,000 cases of diphtheria treated in recent years thirty-three authentic instances of respiratory paralysis have occurred in Cork Street Hospital. In all cases the involvement of the diaphragm, with or without the intercostals, was part of a widespread post-diphtheritic paralysis. A pre-existing palatal and pharyngeal paralysis was invariable, and in a majority of cases some other paralysis was present as well—for example, ciliary, external rectus, neck muscles, facial muscles, etc. Most commonly the involvement of the respiratory muscles occurred at the end of the sixth or during the seventh week. The onset of the paralysis was most often gradual, but in a few instances sudden arrest of respiration occurred, with alarming symptoms of defective pulmonary aeration. Respiratory paralysis was met with only in those cases of severe nasopharyngeal diphtheria which, in the early stages of the disease, had bull necks and severe toxæmia. There were, however, three cases of "missed diphtheria" admitted to hospital, respectively on the fourteenth, thirty-first, and forty-second day of the disease, with post-diphtheritic paralysis, and in these cases one can only assume the extent of the throat lesions, which had cleared by the time the children were admitted to hospital. One other case of respiratory paralysis is included in this series, the cause here being a spreading anterior poliomyelitis.

### The Apparatus

Since October, 1935, every case of respiratory paralysis has been treated in the Bragg-Paul pulsator—an apparatus designed by Mr. R. W. Paul at the suggestion of Sir William Bragg. The original apparatus was shown by me to the Dublin Biological Club in October, 1935, and was demonstrated by Dr. Kerridge of the Department of Physiology of the University of London at the Annual B.M.A. Meeting in Oxford in 1936. Briefly, the apparatus consists of a distensible rubber bag applied around the patient's chest in the form of a belt, this belt being rhythmically filled with, and emptied of, air from a bellows, which in turn is compressed and relaxed by a moving plate, operated electrically. There is a gauge to indicate the amount of pressure applied to the chest, and the rate of compression can be modified to suit the respiratory rate of the patient—18, 20, or 22 strokes per minute, as the case may be. The pressure in the chest belt is controlled by an escape valve fixed to the bellows, and by opening this valve to a greater or less extent the pressure can be reduced or raised. With the original apparatus pressures of 0 to 25 mm. Hg give completely satisfactory results for children of 4 or 5 years of age, but the one adult patient treated required 10 to 35 mm. Hg.

### Results of its Use

Up to date thirty-four cases have been treated in the apparatus, and of these twenty-six made uneventful recoveries. One of the eight fatalities had been treated in the apparatus for four days when the machine broke

down, and before a new part could be made the patient died. The remaining seven patients died of causes other than respiratory failure—six of them from late cardio-vascular failure, and one from gangrene a fortnight after coming out of the pulsator and sixty-one days from the onset of his diphtheria. Of the twenty-six cases treated successfully it will be sufficient perhaps to give one or two illustrative examples. All the cases conformed to this type, and to include others would be waste of time.

### Illustrative Cases

*Case No. 390/37*—A boy aged 6 with very toxic naso-pharyngeal ('gravis') diphtheria and marked hæmorrhagic extravasations into skin. Admitted on the fourth day, palatal paresis occurred on the eleventh, paralysis of the neck muscles on the twenty-fifth, pharyngeal paralysis on the thirty-first, and complete diaphragmatic paralysis on the thirty-eighth, put in pulsator. Full recovery of the diaphragm was very slow and because of sluggish shallow respirations the pulsator was kept on until the fifty-sixth day when the respiratory muscles were found to be completely recovered. All other paralysis cleared up about the same time, and subsequent recovery was uneventful.

*Case No. 770/37*—A boy aged 5 with very toxic faucal diphtheria of the 'gravis' type and considerable skin hæmorrhages. Admitted on the alleged second day. Palatal paresis occurred on the seventh day, early cardiovascular failure on the eighth with vomiting, precordial pain going on to gallop rhythm on the fifteenth, paralysis of the neck muscles on the twenty-fifth, pharyngeal paralysis on the thirty-sixth, and sudden arrest of respiratory muscles on the fortieth day, put in pulsator. There was ptosis of the left eyelid on the forty-second day and the respiratory muscles were functioning normally on the forty-fifth. The pulsator was now discontinued. Left internal strabismus was observed on the fifty-first day. The pharyngeal paralysis cleared up on the fifty-fourth, the neck muscles on the sixty-ninth, and the strabismus on the seventieth. Subsequent recovery was uneventful.

I ought to add that there was no interference with the routine management, nursing, and treatment of patients, all of whom were nicely fed for a coexistent pharyngeal paralysis while receiving artificial respiration. Most of the patients were quite young children, but none raised the slightest objection to treatment in the apparatus. They slept normally while undergoing artificial respiration, and the other occupants of the ward did not object to the operation of the pulsator. There can be no doubt that this simple but ingenious apparatus marks a great advance in the treatment of a sequel of diphtheria which has been hitherto almost invariably fatal. The patient with anterior poliomyelitis behaved in an exactly similar manner to the diphtheritic cases when put in the pulsator. On two occasions two children developed respiratory paralysis about the same time, and in this emergency the escape valve was connected to another belt by means of a length of hose-pipe and suitable fittings, and by this makeshift arrangement we were able to maintain artificial respiration successfully in the second child without disturbing the one already under treatment. All four children eventually recovered.

The apparatus has also been employed at the Richmond Hospital, Dublin, and I am informed by Mr. A. McConnell, F.R.C.S.I., that recently it saved life by restarting respiration in at least two of his patients during the course of prolonged brain operations.

### Improvements

During the last twelve months I have been in constant touch with the original designer of this apparatus, Mr. R. W. Paul, and have kept him advised as to certain minor troubles we have experienced with the pulsator. The chief

\* A communication to the Section of Medicine, Royal Academy of Medicine in Ireland, March 18, 1938.

of these was the sucking in of the bellows with consequent chafing, necessitating frequent repair of punctures and eventually replacement of the bellows. Mr Paul has entirely got over this difficulty by providing for a shorter length of stroke ( $2\frac{1}{2}$  inches instead of 3 inches) and certain other modifications have also been incorporated to ensure almost noiseless working of the apparatus. One other improvement is the inclusion of a two way connection which readily allows two children to be treated in the apparatus simultaneously—a direct development of the improvised arrangement we made in Cork Street two years ago. Another important improvement in the belt is the addition of shoulder straps which will prevent the belt from slipping down over the abdomen, an eventuality that had to be constantly watched for with the older belts. The fastening of the new belt is by means of a chain clip which is also an improvement on the older buckles.

### Conclusion

The Bragg Paul pulsator is an efficient artificial respirator which is specially adapted to the treatment of post diphtheritic respiratory paralysis or respiratory paralysis due to anterior poliomyelitis. It is also of use in restarting respiration which may be reflexly stopped during the operation of tracheotomy or during any operation where such reflex stoppage may be anticipated. It has been used too to re-expand a lung and cause healing of a chronically discharging empyema. The new model is a more compact and a neater apparatus than the original and promises to have even greater efficiency as an artificial respirator.

## TRANSFUSION WITH STORED BLOOD

BY

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Transfusion with stored blood has been practised for many years and during the great war it was used particularly in the front line hospitals of certain Dominion medical units. Thereafter the practice appears to have fallen into disuse but was revived again more recently by Russian surgeons who use blood taken from the cadaver within a few hours of death. It is also recorded that certain supplies of stored blood have proved of great value in the course of the present civil war in Spain.

This paper contains details of fourteen cases of blood transfusion exemplifying the value of having a supply of blood in cold storage ready for immediate use. The field of investigation has been purely a clinical one and observations have been limited to the general reaction of the patient to the treatment carried out. The indications for transfusion in the cases here recorded are for the most part weakness and anaemia associated with sepsis and malignant disease rather than the replacement of blood loss by haemorrhage which was present in only three instances.

### The Source of Supply

The source of supply has varied: two patients with polycythaemia were generous donors and in the other cases the blood was obtained from healthy individuals.

In all except one case the blood was Group IV in type and in each instance the citrate method was employed the concentration of sodium citrate being 0.38 per cent in the stored blood.

### Technique

The blood is withdrawn from the donor's cubital veins under strict aseptic conditions and is collected in sterilized flask containing the required amount of sodium citrate solution for the quantity of blood withdrawn. A pint of blood is thus collected in each flask which is closed with a sterile plug of gauze and wool and then sealed and labelled. This supply is stored at once in a refrigerator at a temperature of  $-10$  to  $-3$  C. In our series of cases the stored blood has been used after a period of from four to thirty eight days.

Serological tests are carried out upon all donors and before use the patient's serum is typed directly against the corpuscles of the stored blood. On examining the stored blood microscopically even as late as five weeks from the time when it was originally put on ice the erythrocytes were observed to be normal in appearance in every way except for a few which showed crenation. During storage sedimentation of course occurs and before use the flask is gently agitated to mix the cells again with the plasma. The method wherein sterile glass balls are placed in the flask to promote more thorough mixing we do not favour as this tends to break down many of the cells.

After mixing the blood thoroughly it is decanted into a sterile measure through a filter composed of layers of gauze. This filter is necessary because late clotting tends to occur in citrated blood in certain cases and clots must of course be eliminated. The blood is infused into the recipient's circulation through a vein in the arm by means of a tunnel tube and glass cannula. It is given unheated the reason being that heat would appear to cause an alteration possibly of the protein content and toxic symptoms may follow the administration of blood so treated. Our practice is to give the blood after it has stood at room temperature for a period of from half to one hour. The flask is then still cold to the touch. In the cases reported below only two were followed by a reaction and in these the blood had been heated to normal temperature. It is significant in this connexion that we have observed reactions follow immediate transfusions in cases where the flask of blood has been placed in warm water.

The second precaution to be taken in administering blood is to ensure that the rate of flow is even and slow. We endeavour to occupy a period of about fifty minutes in giving one pint of blood this representing a quantity of just over 10 ccm per minute. This rate of flow is frequently diminished by spasm of the vessel induced by the cold blood.

### Case Records

*Case 1*—A man aged 49 suffering from carcinoma of the colon with perineoplastic abscess was admitted with acute obstruction. Colostomy was performed and later resection. The first transfusion one pint of Group IV blood five days old was given on October 15 1936 and a second transfusion of one pint of Group IV blood twenty one days old was administered on December 7. There were no reactions and the patient is now alive and well.

*Case 2*—A man aged 50 with carcinoma of the urinary bladder. The ureters were transplanted into the colon and total cystectomy was performed. The first transfusion given on October 18 1936 was one pint of Group IV blood eight days old the second transfusion on November 13 was half

a pint of Group IV blood seven days old. No reactions occurred.

**Case 3**—A man aged 42, admitted with congenital polycystic disease of the kidneys and protuberant haemorrhage. The first transfusion on November 30, 1936, consisted of half a pint of Group IV blood twenty-four days old. The second transfusion on December 9 was of one pint of Group IV blood ten days old. The first transfusion was followed by a transient reaction of the "rigor" type but there was a marked reduction in the haematuria. The blood used in this transfusion had been heated to 'normal' temperature. Nephrectomy had to be performed, however, and the blood loss was made good by the second transfusion. The patient is now alive and well.

**Case 4**—A man aged 47 with perforated duodenal ulcer treated on admission by simple closure. Haematemesis occurred on the same evening. On December 11, 1936, half a pint of Group IV blood four days old was transfused. The patient had no immediate reaction but bleeding recurred and he died.

**Case 5**—A woman aged 49 suffering from chronic cholecystitis with acute cholangitis and abscesses. Cholecystectomy was performed on January 17, 1937. The first transfusion (January 16, 1937) was of three quarters of a pint of Group IV blood twenty-two days old. The second transfusion (January 17) was of half a pint of Group IV blood twenty-three days old. There was no immediate reaction and the patient's condition was much improved after the post-operative transfusion. Her myocardium failed, however, and she died on the following day.

**Case 6**—A man aged 30. This was a case of subphrenic abscess in a patient with spastic diplegia. The transfusion (February 24, 1937) was of one pint of Group IV blood ten days old. No reaction occurred, and the patient is now alive and well.

**Case 7**—A man aged 68 with renal adenocarcinoma. Nephrectomy was performed, and a large tumour was dealt with. Transfusion (January 20, 1937) consisted of half a pint of Group IV blood thirty-eight days old. No reaction occurred. There was a definite improvement in the patient's general condition, but hypostatic pneumonia developed and death took place seven days later.

**Case 8**—A man aged 60 with suppurative tenosynovitis and septicaemia. The patient was very ill. Transfusion (February 28, 1937) consisted of one pint of Group IV blood twenty-eight days old. This produced a definite general improvement, there were no reactions. The condition became progressive, however, and death occurred with pyaemia and multiple abscesses, sixteen days later.

**Case 9**—A woman aged 64 with carcinoma of the urinary bladder. The ureters were transplanted into the colon. A transfusion of one pint of Group II blood five days old was given on June 13, 1937. The patient showed marked improvement at the time but died three weeks later from bronchopneumonia.

**Case 10**—A woman aged 24. This was a case of secondary haemorrhage in acute puerperal mastitis. Half a pint of Group IV blood thirty-five days old was transfused on June 27, 1937. A slight reaction of "rigor" type followed but satisfactory progress was obtained thereafter. The patient is now alive and well. The blood in this case was heated to 'normal' temperature.

### Results

It will be seen that these ten patients had between them fourteen transfusions. Two deaths occurred in the period immediately following transfusion, one from syncope and the other from recurrence of haemorrhage. In three other cases the outcome was eventually a fatal one. None of these cases showed any reaction in the immediate post-transfusion period, and in no case could the fatal result be attributed, in any degree, to the administration of stored blood.

Five of the patients—comprising eight transfusions—are alive to-day, and among these are the two cases in which reactions occurred.

### Summary

- 1 Fourteen instances of delayed transfusion with stored blood are recorded.
- 2 The technique and method of storage are described.
- 3 The precautions to be observed are instanced.
- 4 The safety of the practice is demonstrated.

We desire to express our thanks to Mr. Henry Wade, in whose wards these cases were treated for his permission to publish these records. We are further indebted to Mr. Wade and to Sir David Wilkie for their interest and help.

## Clinical Memoranda

### Spontaneous Cerebrospinal Rhinorrhoea

Escape of cerebrospinal fluid from a nostril is a rare condition. A review of the literature revealed only sixty-six cases reported up to 1934, and of these many were secondary to definite cerebral conditions.

**Aetiology**—Excluding fractures of the base of the skull, where the cause is obvious, and long-standing cases of increased intracranial pressure, either from tumour or from hydrocephalus without tumour, the cause of spontaneous cerebrospinal rhinorrhoea has not been clearly established. This is due to the fact that necropsy was performed on a limited number of cases only. In some of these the post-mortem findings were entirely negative, while in others the picture was masked by secondary infection. A tiny opening, however, was reported to have been found in the cribriform plate, and the prevailing theory attributes the condition to a congenital defect in the base of the skull—namely, a "cranio-pharyngeal canal" which is forced open by slight trauma or violent coughing or sneezing. McDougal thinks that the cerebrospinal fluid tracks down the perineural sheaths of the olfactory nerves.

**Symptoms**—The patient complains of a continuous watery discharge from one nostril. The flow is persistent, but may be altered by the position of the head, being increased when the head is bent forward and diminished in the upright position. On lying down it is swallowed. The fluid can be seen to come down from the upper pole of the nasal cavity between the septum and the middle turbinal.

**Diagnosis**—This is established by complete examination of the fluid, which should have the same composition as cerebrospinal fluid. Constantine introduced a solution of fluorescein by lumbar puncture, which appeared one and a half hours later in the fluid from the nose. Lumbar puncture, a procedure not without danger, should be done with a fine needle, and very little fluid drawn.

**Prognosis**—Unfortunately in the majority of cases no record the outcome of this condition is not stated. Many cases proved fatal as a result of intervention. In some cases, as in that reported below, the flow ceased spontaneously with rest in bed. Recurrence of the symptoms may take place many years later.

**Treatment**—As spontaneous cessation of the flow may occur with expectant treatment absolute rest in bed should be tried in all cases that are without apparent cause. If this fails, or in cases of recurrence of the leakage, a cranial operation must be advised. This consists in

exposing the region of the olfactory groove securing the surrounding dura and placing upon it a fragment of fresh muscle which occludes the opening. Spraying or local applications are useless and dangerous.

## REPORT OF CASE

A male Hindu aged 26 consulted me for a cold in the head early in January 1937. He complained of a continuous flow of clear fluid from his right nostril of three weeks duration. He stated that his pillow became soaked during the night with fluid and when in the supine position he felt it trickle down his throat. It was slightly salt in taste. On bending his head forward there was a constant dripping of a clear fluid that filled an ordinary test tube in about twenty minutes. His past history revealed a head injury sixteen years previously with unconsciousness for half an hour followed by complete recovery. In reply to leading questions the patient admitted that a week before the onset of his symptoms he accidentally received a blow on his chin from his brother's elbow. This caused some pain in his temples. He otherwise felt quite well except for insomnia from worry and some loss of weight.

Routine physical examination and complete examination by a neurologist revealed nothing abnormal. The fluid was seen to come down from the upper pole of the nasal cavity. A blood count showed a moderate anaemia with alteration in the size and shape of the red cells and a low haemoglobin content. A ray examination of the skull and a blood Wassermann test were negative. A lumbar puncture caused temporary cessation of the flow from the nose. Both fluids were colourless and the laboratory reports on them were as follows:

	CSF	Fluid from Nose
Wassermann	Negative	Negative
Glucose	No trace	Slight excess
Protein	725 mg. per 100 ccm.	75 mg. per 100 ccm.
Serum	40 mg. per 100 ccm.	35 mg. per 100 ccm.
Cells	1 lymph. per c.c.m.	19 ep. th. as per c.c.m.
Clarity	Negative	Negative

The only appreciable difference between the fluids is that due to contamination in passage through the nose.

For over two months the patient was lost sight of and sought other advice. On reappearing he said that injections of corvix vaccines and various local applications and sprays were tried without success. He was then advised to take absolute rest in bed for six weeks. About the middle of the fourth week the flow gradually began to diminish and a week later it ceased. At the end of six weeks he got up. On two subsequent occasions—namely three weeks and three months following his recovery—he complained of moisture in the same nostril with a sensation that his trouble was returning but no actual dripping took place. An injection of a quarter of a grain of morphine cleared the moisture on both occasions. Morphine was not tried when the flow was profuse.

The patient is now following his usual occupation as a storeroom-keeper and is in perfect health.

## SUMMARY

1 Up to 1934 sixty six cases of cerebrospinal rhinorrhoea had been reported.

2 The condition may be associated with cerebral tumour or hydrocephalus which should be excluded.

3 Spontaneous cases are often spontaneously arrested. Some cases require muscle grafting—a relatively safe operation in expert hands.

4 Local applications are harmful.

My thanks are due to Mr Norman M. Dott of Edinburgh and Dr S. M. Katz of Johannesburg for their helpful advice.

S. LIVINGSTON M.R.C.S. L.R.C.P.

## BIBLIOGRAPHY

- Blair, R. (1923) *J. Amer. med. Ass.* 90 2017.  
Fecher, H. M. and Damrau, F. (1934) *Med. Rec.* 139 724.  
Leis, J. E. (1923) *Laryngoscope* 33 617.  
Muller, R. (1916) *Post Graduate Surgery* p. 176 London.

## Reviews

## CIVILIZATION AND DISEASE

*Civilization and Disease* By C. P. Donnison M.D. M.R.C.P. With an Introduction by Sir Walter Langdon Brown M.D. F.R.C.P. (Pp. 222 10s 6d) London: Baillière Tindall and Cox 1937.

Dr C. P. Donnison's views on civilization and disease are based on medical work in a native reserve of Kenya Colony and in a good class practice in England and they therefore command more attention than writings on this subject which are mere arm chair speculations. From ratios worked out from statistics of colonial medical services and from his own experience in the South Kavirondo native reserve he concludes that hyperpiesia, Graves' disease, peptic ulcer, appendicitis, diabetes and psychoneurosis are diseases that show a close relationship with civilization. Constipation is not a phenomenon of civilization—it is of frequent occurrence in primitive natives—and malignant disease is by no means rare. The variation in disease incidence is not the result of hereditary differences for hyperpiesia is common in American negroes and psychoneurosis and schizophrenia are frequent in African natives in contact with civilization. Nor does it seem to be the result of differences in diet or hygiene. It can be most simply explained by differences in the emotional life. In primitive communities life is exteriorized and the individual is in almost all things submerged in the crowd. Emotions tend to be swiftly expressed and where instinctive urges and the needs of the community conflict a barrier or taboo exists to regulate conduct. For civilized man life is a much more individual adventure and the conditions of stress to which it gives rise can rarely be expressed in physical activity. Dr Donnison suggests that the pent up emotion acts through the hypothalamus either by way of the autonomic nervous system producing high blood pressure or peptic ulcer or by way of the anterior pituitary gland producing diabetes or hyperthyroidism. This is perhaps an oversimplification of the thesis which is discussed with reference to the doctrines of modern schools of psychology. The author concludes that the nature of the evolution of the human race is confronting mankind with a psychological adaptation which he does not achieve with ease and that the difficulties can probably be most simply explained in Adlerian terms.

## SURGERY IN BRIEF

*A Short Textbook of Surgery* By C. F. W. Illingworth M.D. F.R.C.S. (Pp. 702 179 figures 8 plates 21s) London: J. and A. Churchill 1938.

The title *A Short Textbook of Surgery* is bound to make an appeal to the hard working medical student or to-day and may be said to be representative of a modern tendency since within the last eight or ten years the word 'short' has appeared on the title page of a number of students' textbooks. Mr Illingworth's name is already known to a large number of students as the co-author with Mr B. M. Dick of a very successful textbook of surgical pathology and the present work should make it still better known.

Whenever an attempt is made to cover a large subject such as the science and art of surgery by a short textbook for undergraduate students the chief problem must always be what to include and what to omit in order to

give the student a balanced idea of the relative importance of various lesions. For this reason the author of such a work invariably lays himself open to the criticism that such and such has been omitted while emphasis has unduly stressed the importance of something else. The only safe criteria can be the relative frequency of occurrence and the degree of importance to the patient of a particular condition. Generally speaking the subject-matter has been well selected in this volume, but in its preparation the author might in places have been rather more definite—for example, in carbuncle of the lip (incorrectly referred to as hip on page 691 of the index) the reader is left in some doubt as to whether the angular vein should be ligated and the carbuncle incised. Many surgeons would regard both measures as distinctly dangerous and to be avoided. Complete thyroidectomy for various cardiac conditions might be thought to be given undue prominence in a short textbook for students, since opinion is not yet settled in regard to this procedure, which would appear to be falling into disrepute at such a rate as hardly to justify almost half a page of text in an admittedly limited work. Despite any such criticism, however, it is apparent that this little work has been carefully prepared to bring it well into line with current thought and practice, and as an example of this we may point to the description of the injection treatment of hernia. There are interesting chapters on post-operative complications, on radiotherapy and physiotherapy, and on surgery and diabetes.

The book is illustrated by line drawings, photographs, and x-ray plates. It is of convenient size and printed in clear, easily readable type. It will probably supplement some of the older works which have run to many editions—some recent editions have not been sweeping enough in their revision—and should prove popular with both teachers and students.

### ENCEPHALOGRAPHY

*The Normal Encephalogram.* By Leo M. Davidoff, M.D., and Cornelius G. Dyke, M.D. (Pp. 224, 149 figures 25s net.) London: Henry Kimpton, 1937.

This book correlates radiographic detail with normal anatomical structure, and accordingly includes description of the topographical anatomy of the brain together with radiographic detail demonstrable by air injection. The technique of encephalography is discussed, and a modified but simplified method recommended by the authors. Contra-indication to employment of the method appears in few cases, and its use is advised in all cases of organic neurological disease in which an actual diagnosis fails to be made. Modifications in technique are found in the limitation of the quantity of air injected, and the use of "trial exposures" after the injection of about 20 ccm of air, from the latter an estimate of the total amount of air necessary in a given case is made. Two series of views are recommended: one with the patient placed horizontally, and a further series in an erect posture. These series of stereoscopic views demand a large number of exposures (sixteen), but the authors state that there is little risk of epilation or erythema, even after a repeat series—according to the authors a minimum of forty exposures is essential to the production of irradiation effects on the skin. Stereoscopic views are essential to the recognition of the extensive detail that becomes decipherable.

The book is representative of a vast amount of work carried out by the authors in the production of an exhaustive description of data available to the careful

observer. The collection of 4,000 encephalographies indicates the material basis from which the knowledge is derived. Throughout the text is beautifully illustrated by well chosen radiographs. The authors' experiences may well prove of benefit to other observers in the interpretation of encephalographic findings, and the book is recommended for perusal by all interested in this form of investigation.

### ORGANIC CHEMISTRY

*Precis de Chimique Organique.* By Victor Grignard. Edited by Roger Grignard and Jean Colonge. Preface by Professor G. Urbain. (Pp. 774, 150 fr., bound, 175 fr.) Paris: Masson et Cie, 1937.

This volume is compiled on much the same plan as English textbooks of organic chemistry. It differs, however, from most English textbooks in that these are often limited in their scope to the work required for a particular examination, whereas Grignard's contains a more generalized survey of the subject and is less limited by the scope of the usual curriculum. Accordingly it gives more ample details of the properties of substances and indicates their relations to technical use when that is important. It does not, however, enter into the field of technology proper, and does not enlarge on the description of organic substances of natural origin except to indicate their chemical constitution where this is well known. The treatment of theoretical matters is exceedingly good. We do not remember seeing a better statement of the reasoning which leads to the accepted formula for benzene. A discussion of alternative formulae which harmonize with many of the properties of benzene, but which fail to explain certain other properties, is much more illuminative than the more usual brief account which describes the accepted formula only, with a recital of the points of agreement between hypothesis and experience. The nomenclature of substances corresponds with that in general use elsewhere than in France, and a clear explanation is given of the plan and scheme of nomenclature which finds modern acceptance. In the discussion of organic reactions a reference is regularly made to the name of the person associated with the discovery of the reaction or with its more extended developments. This is advantageous to students of organic chemistry, for they have not infrequently to encounter in literature a reference to a type of reaction under the guise of a personal name without any indication of its nature. For English readers the text presents no unusual difficulty, it is easy to read and the book is highly informative.

### THE BUSINESS SIDE OF PRACTICE

*The Physician's Business: Practical and Economic Aspects of Medicine.* By George D. Wolf, M.D. Foreword by Harold Rypins, M.D., F.A.C.P. (Pp. 384, 57 illustrations. No price given.) Philadelphia, London, New York, Montreal: J. B. Lippincott Company, 1938.

In the preface written by Dr. Harold Rypins for Dr. G. D. Wolf's book, *The Physician's Business*, there is a paragraph which is well worth the attention of every young man or woman on the threshold of a medical career. "The somewhat snobbish blindness of the professions," he says, "to the business aspects of their own occupation is regrettable. Whether he likes it or not, every professional man is engaged in a business of selling his professional skill and satisfying, if not increasing the number of, his customers. This implies, among other things, conservation of his and their time by means of method—and a thousand other 'vulgaries' not included in the strictly professional training or outlook."

Dr Wolf's aim is to fill in these gaps in the knowledge of the young practitioner in the United States of America and he has produced a guide to the business side of medical practice in that country which differs in some degree in its scope and method of approach from that recently published by Dr Theodore Wiprud reviewed in these columns on December 4 1937. A very large part of Dr Wolf's book as indeed of its predecessor deals with conditions which have no counterpart in these islands and is therefore not of strict relevance to our problems but so far as general principles go his advice is full of worldly wisdom. His thoroughness is perhaps best exemplified by the series of nine model letters he has composed which he recommends the doctor to post at intervals of fifteen days to any patient whose account has not been settled within three months of the services in respect of which it has been rendered. These model letters show a very nice gradation of polite firmness in the early ones he politeness is more stressed than the firmness and as the series goes on the proportions are gradually altered until the firmness outweighs the politeness. Alternatively he prints with approval a series of five forms prepared for doctors by an American firm in Ohio which are headed respectively Statement Reminder of Account Delinquent Statement Legal Demand for Payment and Five Day Notice.

### THE PATHOLOGIST IN INDIA

*The Medico-Legal Post Mortem in India* By D. P. LAMBERT M.D. Ch.B. D.T.M. and H. With a Foreword by Sidney Smith M.D. F.R.C.P.E. (Pp. 113 5s.) London J. and A. Churchill 1937.

Arduous and unpleasant as is the pathologist's task in this country in India it is even more so for putrefaction takes place so quickly that the corpse nearly always presents a most repulsive aspect. Identity may be established by features quite strange to the English mind—caste marks the style of cutting and dressing the hair and perforations and ornaments. Major Lambert has written a valuable and handy pocket guide for the pathologist in India describing in very economical language the technique of post mortem dissection the appearances of injury by various weapons and mishaps including the attacks of wild animals the various guides to identity and the signs of poisoning. He deals specially with infanticide and the technique of necropsy on an infant. He has covered a great deal of ground in a small space using language of the simplest and clearest. As Professor Sidney Smith says in a foreword there is no distracting discussion in the book and the practitioner will find in it a wealth of practical information. Most of the information will doubtless apply to work in other countries with similar climatic conditions.

### THE TROUBLED MIND

*The Troubled Mind. A General Account of the Human Mind and its Disorders and their Remedies* By Harry Roberts. With Chapters on the Insanities by Margaret Wilson Jackson. (Pp. 284 6s. net.) London John Murray 1938.

There is room for further popular books on psychology and this is very definitely a good one. Our only doubt is whether some literary dictator should not declare a close season for such volumes for the next five years at least. Those of us who are already acquainted with the work of Dr Roberts expect a high standard of shrewd common sense and of literary expression and a facility for dealing with the material and we are not disappointed. The recent flood

of psychological literature is usually lapped up by neurotic people who take it far too seriously and it is refreshing to find such statements as the following. There seems no justification for regarding the child as a blank book in which parents inscribe their mistakes in indelible ink.

The first few chapters are devoted to the general principles of psychology and psychopathology which are of course familiar enough. He does not think much of the full blooded Freudian doctrines though he admits as every honest student must Freud's enormous service to psychiatry is galvanizing the dead bones of academic psychology. There is a provocative chapter entitled

What is Sanity? and an excellent treatise on the neurotic from the point of view of the general practitioner who meets with so many of these difficult people in his daily work. The chapter on psychoses has apparently been largely contributed by Dr Jackson and is an admirable brief survey of the subject though it lacks the tang of Dr Roberts's own personal experience which characterizes the rest of the book. Similarly mental defect is surveyed and there are brief summaries of the methods of treatment of mental illness and a description of the legal requirements imposed by the State for the care and protection of patients and others. Altogether a wholly admirable book attractive to read and full of good sense and useful information.

### Notes on Books

*The Proceedings of the Sixth Conference of the International Association of Preventive Paediatrics* now issued contains a full account of the meeting held last year in Rome. The two subjects chosen for discussion were concerned with the organization of preventive inoculation against typhoid and secondly the part played by home visiting in the campaign against infantile morbidity. The volume is published at the price of three Swiss francs by the Union Internationale de Secours aux Enfants 15, Rue Levrier Geneva.

Dr R. R. KUCZYNSKI has brought together in a small volume *Colonial Population* (Miltord 5s.) not only all the recorded data of population in colonies or mandated territories but information on the way the data have been compiled. The book the compilation of which must have involved much labour will be useful for reference. Many of the citations from colonial reports suggest that as Major P. G. Edge pointed out recently in a paper read before the Royal Statistical Society vital statisticians still receive little official encouragement in colonial services.

*Der Schiffsarzt in a Hafenarzt* is published at Jena by Gustav Fischer (price RM. 6.20 or RM. 8 bound). Its purpose is to help the ship surgeon and port medical officer of health and also the ship's officer. It is the joint work of four medical men. Dr HEINZ SPRANGER medical officer of health and former member of the German National Health Council discusses the international hygienic armour of the German ship and harbour doctor and deals with the international field of hygiene. Dr EDUARD WOLF harbour and quarantine officer of health at Bremerhaven is the author of two chapters on the health supervision of ships in German harbours and on the task of the port M.O.H. especially in his relations to ships doctors. The editor Dr FRIEDRICH KORTENHAUS of Bremen contributes chapters on legal regulations for the care of the sick on preventive medicine in merchant vessels and on the M.O.H. and emigrants. The chapter on fighting infectious diseases on board ship and in harbour is by Dr FRIEDRICH HODER director of the State Hygienic Institute Bremen.

## BRITISH MEDICAL JOURNAL

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COLLAPSE THERAPY OF PULMONARY  
TUBERCULOSIS

At a meeting of a medical society last year the view was expressed by one with some experience in tuberculosis that it was not yet possible to form a just appreciation of the place of collapse therapy in the treatment of pulmonary tuberculosis. The cautious and conservative attitude behind this view is widely shared by workers in tuberculosis. *Festina lente* is a useful guiding principle for the therapist, and he who blows hot in advocating a certain measure usually soon finds himself blowing cold. But conservatism must stop short of being reactionary, and that a timid approach to the treatment of pulmonary tuberculosis by collapse measures is no longer justified is amply borne out by the recently published work of John Alexander<sup>1</sup>. The wealth of detailed information in this readable and fully illustrated book makes it a valuable publication on the subject. The author is able to show that ample experience is available for the clear ascertainment of the position of collapse therapy in treating the tuberculous patient. He maintains that from 50 to 80 per cent of all patients with the adult type of pulmonary tuberculosis admitted to sanatoria (and in the United States these include patients in all stages of the disease) are suitable for this form of treatment. Moreover, it is shown that it is of much value when employed at an early stage of the disease, and that it may therefore not be justifiable to submit patients to ordinary sanatorium routine for a prolonged period. The best results of collapse therapy are, Alexander asserts, obtained in early restricted lesions. He gives trustworthy and comparable figures which indicate that the results of sanatorium treatment with extensive use of collapse therapy are much better than those obtained by sanatorium treatment supplemented by little or no collapse therapy, patients with advanced disease being included in this comparison.

Among the factors that account for these different views is perhaps the tendency to concentrate on the relative merits of individual measures

rather than upon collapse therapy as a whole. Alexander stresses the importance of the latter. When the physician is faced with a patient suffering from pulmonary tuberculosis the question to be decided is not whether he needs an artificial pneumothorax, an apicolysis, or a thoracoplasty, but whether or not collapse therapy is indicated. The least serious method applicable to the particular case will then be chosen, to be followed by others the choice of which will depend on the effect obtained by the first. No fewer than ten distinct methods are described in the book. Further support for the conservative attitude is the belief that collapse therapy is applicable only to cases of unilateral disease. This view does not recognize that such measures as artificial pneumothorax and crushing of the phrenic nerve are revocable methods with almost no risk in relatively early lesions, that when properly carried out they do not affect adversely the other lung, and that ill effects are often avoided by insisting upon strict general rest at the same time. It is indeed imperative that the fundamental principle of rest in the treatment of pulmonary tuberculosis must not be overlooked in any advocacy of collapse therapy. The need for the closest co-operation between physician and surgeon throughout treatment is repeatedly emphasized by Alexander, who points out, however, that the prolonged training required by the thoracic surgeon has led to the present supply still falling short of the demand.

At the Michigan State Sanatorium the disease was arrested or rendered quiescent in 84.4 per cent of ninety discharged minimal cases (corresponding to our TB - and TB +1 groups), in 43.3 per cent of which collapse therapy (phrenic paralysis, pneumothorax, or both) was used, and in no less than 94.3 per cent of the thirty-five patients with minimal disease who remained under sanatorium treatment for six months or longer, all of whom had collapse therapy. On the other hand, at the Trudeau Sanatorium, during a period when little collapse therapy was employed, 26.5 per cent of 898 patients admitted with minimal disease were discharged as still "active," and three patients died in the sanatorium. In regard to remote results Alexander points out that the intensive expert use of collapse therapy in a majority of sanatorium patients is too recent to serve as a basis for a report of the results obtained in the whole population of any institution five or ten years after operation, but his twenty-five years' experience with collapse therapy strongly favours the assumption that a patient who is discharged with arrested or apparently arrested disease by collapse therapy has at least as good a chance of remaining well as a patient similarly classified who was not so treated.

<sup>1</sup> *The Collapse Therapy of Pulmonary Tuberculosis*. By John Alexander, M.D., F.A.C.S. Baillière Tindall and Cox (67s 6d).



## THE TRADE IN SECRET REMEDIES

The author and publishers have done a notable service in issuing a sixpenny monograph on *Patent Medicines for the ordinary reader*.\* Those who know anything of the matter realize as Professor A. J. Clark does the reluctance of the Press to deal with it. For the first time it we except the *Secret Remedies* and *More Secret Remedies* of the British Medical Association—now long out of print and in any case coming from a source suspect in many eyes—the public has the opportunity of learning the facts about this trade. It can also learn why Parliament and the Press have been inactive in dealing with a subject which might be thought to offer both of them a fine opportunity for that service to the public which they presumably exist to give. As Professor Clark says, "Politicians who depend on popular votes simply dare not offend the Press and still less dare the Press offend the advertiser upon whom it is entirely dependent for its existence." For this statement facts and figures are given which deserve careful attention. The trenchant report of the 1914 Select Committee of the House of Commons on *Patent and Proprietary Medicines*† is effectively quoted and Professor Clark has some mordant remarks on the extraordinary 'luck' that has favoured the Press and the trade in avoiding Parliamentary action. He does full justice to the ingenuity of the manufacturers and advertisers of secret remedies and to their astuteness in changing their methods with changing times and fashions. He notes and condemns the present fashion which often takes the form of an appeal to fear as well as to ignorance. He realizes however that there is a legitimate field for some of these remedies and that the best of our newspapers now exclude the worst forms of advertisement. In spite of progress in this direction (in which the British Medical Association and its *Journal* have been active if unobtrusive factors) he was able to find in one recent Sunday paper a cure for epilepsy, a drug that had cured mitral disease of the heart, varicose veins, piles, eczema, rheumatism and neuritis and finally a drug recommended for hay fever, asthma, malaria, influenza and insomnia in addition to the relief of most forms of pain. Evidently the appeal to the invincible credulity of the public pays.

Professor Clark welcomes the growing practice of publishing a formula but it is doubtful whether this change which avoids payment of stamp duty protects anybody. To the average man a chemical

formula means nothing. There is however one change in the situation not mentioned by Professor Clark which seems likely to do something to eliminate the more glaring abuses of patent medicine advertising. The association which includes the proprietors of many of the most advertised remedies has adopted the criteria included in the mild Medical and Surgical Appliances (Advertisement) Bill of 1936 which was 'talked out' in the House of Commons. The advertisements of all members of the association must conform to these criteria. This is welcome if belated evidence of the desire of the trade to reform itself. Professor Clark is rightly severe on the law which as he states and proves shows a remarkable leniency towards the vendors of quack medicines in strong contrast with the severe penalties to which those who misrepresent the character of ordinary foods and drugs are liable. In his opinion the medical profession cannot be held blameless in this matter. He points out among other things that reputable drug firms by adopting some of the methods of the baser members of the patent medicine trade have proved that doctors can be induced to use and prescribe expensive proprietaries though exactly the same drugs can be bought for less than a quarter of the price.

The Select Committee of 1914 found what the medical profession knew only too well—that there was a large and increasing sale in this country of patent and proprietary remedies and appliances and of medicated wines. It grouped these widely differing remedies into (a) genuine scientific preparations (b) unobjectionable remedies for simple ailments and (c) many secret remedies making grossly exaggerated claims of efficacy causing injury by leading sick persons to delay in securing medical treatment containing in disguise large proportions of alcohol sold for improper purposes professing to cure diseases incurable by medication or essentially and deliberately fraudulent. The third class of nostrums said the Committee constituted a grave and widespread public evil calling for new legislation rather than amendment of the existing law. In August 1920 when the Ministry of Health was a new thing and Lord Addison was Minister a Proprietary Medicines Bill was introduced into the House of Lords to regulate the manufacture and sale of certain medicines and surgical appliances and for purposes connected therewith. The object of this Bill introduced by Lord Astor then Parliamentary Secretary to the Ministry of Health was to give effect to the recommendations of the Select Committee but it struck at powerful vested interests and came to nothing. Professor Clark's little book may be strongly

*Patent Medicines* By A. J. Clark, M.D., F.R.S. Fact 19  
Monthly Monograph No. 16 Fact 19  
London W.C.2 price 6d in paper covers 1s in cloth  
\* See *British Medical Journal* August 29 1914



recommended. We shall be interested to see whether it has any better luck in the lay press than other attempts to open the eyes of the public have had. It deals with a matter which gravely affects the health of the public—not to mention the public's belief in its own intelligence.

### "THE BEECHAM LABORATORIES"

The Royal Northern Hospital in Holloway Road, London, is a large voluntary hospital which does admirable work in serving an area of seventy square miles and a population of 1,000,000 in North London, and it has lately appealed for £350,000 to enlarge and modernize the buildings. It must have been with a feeling of dismay that the medical staff of the Royal Northern Hospital read last week a full-page advertisement in leading London newspapers. This was headed in bold lettering "The Beecham Laboratories recently presented to the Royal Northern Hospital, Holloway, London," and continued "Shareholders of Beechams Pills, Ltd., of St. Helens, will join their chairman and directors in wishing success to the new research laboratories presented to the hospital by their company. The laboratories are now an active department of one of London's great hospitals. Here the multitudinous drugs, sera, and vaccines used in daily practice are studied so that they may work safely and effectively." By a coincidence there appeared almost on the same day reports of the tenth ordinary general meeting of Beechams Pills, Limited. The chairman in the course of his speech said "The company owns and markets the following proprietary articles: Beechams Pills, Beechams Powders, Beechams Lung Syrup, Cassell's Tablets, Veno's Lightning Cough Cure, Cicfa, Dinneford's Magnesia and Tablets, Germolene Ointment and Soap, Holloway's Pills and Ointment, Iron Jelloids, Lactopeptine, Nicocin, Phensic, Phosferine, Ashton and Parsons Baby Powders, Phyllosan, Sherley's Dog and Cat Foods and Medicines, Yeast-Vite Tablets, Amami Shampoos, and other products." The action of the Royal Northern Hospital establishes a precedent which other voluntary hospitals, in their need, might be tempted to follow. There is no point in disguising the fact that the interests which Beechams Pills, Ltd., largely represent are ones which have been consistently opposed by the medical profession. It is obvious that the profession cannot have it both ways: it cannot decry the evils of patent medicines and self-medication and at the same time accept gifts from those who make profits out of such activities.

### INSULIN TREATMENT OF SCHIZOPHRENIA

The histological changes which may be produced in the brain by insulin therapy were first described in 1928 by Wohlwill<sup>1</sup>. In two diabetic patients who died in insulin coma he observed a variety of changes in the ganglion cells, glia, and axis cylinders, which he was unable to interpret. In 1933 Boddechtel<sup>2</sup> described severe changes in the nerve cells of the cortex and the striatum occurring also in a diabetic under treatment with insulin; he interpreted these as anoxic in origin. Since then similar cases have been recorded and systematic experiments have been made on dogs and rabbits. Weil and his co-workers in a careful study have summarized the literature and have provided experimental data of their own. The results obtained by experiments on animals are in substantial agreement with those obtained accidentally in man. The changes vary in distribution and to some extent in nature. The most constant findings are changes in the nerve cell—vacuolization and homogenization in the acute cases; shrinkage and degeneration in the more chronic—glial proliferation, and changes in the vessels varying from endothelial proliferation to small haemorrhages and softening. All these are to a large extent unselective in localization but occur with relatively greater frequency in the large masses of grey matter like the corpus striatum and the substantia nigra. It seems to be generally agreed that these changes are exactly similar to those produced by oxygen deficiency, and the suggestion is that they may be in part due to 'intracellular anoxaemia'. It seems possible that the presence of large concentrations of insulin incapacitate the cell for the utilization of available oxygen. These findings are of significance in connexion with the insulin treatment of schizophrenia. Weil considers that it is the total amount of insulin given that is important. Very large doses in a single day do not produce recognizable changes. More moderate doses on a number of occasions, adding up to a greater amount, may give rise to irreparable changes. The number of seizures is not important. Severe damage was produced in the brains of rabbits by doses of 200 units of insulin. Corresponding doses, in units per kilogramme, are not infrequently given in the insulin treatment of schizophrenia. One cannot argue directly from rabbit to man, and it is possible that the rabbit is more susceptible to permanent damage from insulin, as to the toxic effects of many drugs, than man is. Deaths in or after insulin coma are uncommon but have been met with in the insulin treatment of schizophrenics. So far there has been no satisfactory record of the pathological findings. We are almost as completely in the dark about the pathological as about the therapeutic *modus operandi* of insulin therapy, for, apart from the histological aspect, complex biochemical problems require elucidation. The results of animal experimentation suggest the possibility of neurological damage being found as a late sequel of the insulin treatment of schizophrenia. This danger cannot be dismissed, but an estimation of its importance will rest on clinical experience.

<sup>1</sup> *Klin. Wschr.* 1928, 7, 344.

<sup>2</sup> *Disch. Arch. klin. Med.* 1933, 175, 188.

<sup>3</sup> *Arch. Neurol. Psychiat.* Chicago, 1938, 30, 467.

## CONTACT LENSES

When Jean Méry in 1703 found that the luminosity of the cat's eye could easily be viewed when the animal was held under water he dimly foreshadowed the coming of the ophthalmoscope and the contact lens for the optical principle involved was as de la Hire showed six years later the abolition of the corneal refraction under water. These observations ultimately led to the ophthalmoscope in 1851 but it was not until 1888 that a clear recognition of the value of abolishing corneal refraction was propounded by Fick. Theoretically the abolition of the cornea as a refracting medium by surrounding its outer surface with fluid of a similar refracting capacity as the aqueous of its inner surface could be used to eliminate not only corneal astigmatism but also such distortion in vision as an irregular cornea would give; moreover extensive modifications in the total refraction of the eye could be brought about by moulding the glass which supports the outer layer of fluid to any desired optical strength. Technical difficulties prevented this theoretical conception from being realized in practice. The production of glass hard enough to withstand the corroding action of tears malleable enough to be moulded to fit the globe and sufficiently rigid to stand grinding to give both accurate fitting and a desired optical strength presented difficulties that could not be overcome. Occasionally a lens satisfying these criteria was produced by glassblowers such as by Müller of Wiesbaden but the lack of uniformity in results made such success a matter of chance. To these technical difficulties was added the fact that after all a contact lens was as its name implies a foreign body in actual contact with the eye and the eye does not readily tolerate even the most innocuous of foreign bodies. The pioneer efforts of Fick were therefore not followed up until about ten years ago when the firm of Zeiss brought out contact lenses which were satisfactory so far as the technical requirements of glass manufacture were concerned. They could produce contact lenses according to prescription and had gone far in making these lenses tolerated as foreign bodies by introducing a large range of scleral rims to fit the eye accurately. None the less theirs was essentially a technical achievement for in actual use it soon became apparent that the spherical rims of the Zeiss contact lens did not satisfy the unsuspected astigmatism of the sclera. The lens therefore did not fit accurately on to the sclera and occasionally touched the cornea especially with slight movements of the lens which resulted from inaccurate apposition to the sclera. A third stage in the evolution of the contact lens was reached with the work of Dallos, formerly of Budapest and now of London. To Dallos the problem amounted to individual fitting of the contact lens though of course he could not have launched on his work until the technical difficulties of the manufacture of the glass had been solved. Essentially his approach had been that of taking a cast of the anterior segment of the eye and grinding the glass according to the cast with final adjustment on the patient. Even so the final adjustment of the

lens rim to the sclera may be the most tedious part of the process. Broadly speaking it may now be held that the technical difficulties of the manufacturer and the individual difficulties of the surgeon and the patient are within sight of being overcome. A number of centres are being established by different authorities where these problems are now being worked out on a far larger scale than hitherto. The use of the contact lens has many advantages. The optical problems have so far received rather less attention than the mechanical difficulties but it is clear that with a powerful and pliable means to modify the total refraction of the eye it will be possible to obtain results such as ordinary correcting lenses cannot achieve. An increase in the field of vision in high myopia, a closer correspondence between unequal retinal images in anisometropia—natural or after cataract extraction—an increase in visual acuity in high astigmatism and myopia—these are some of the physiological possibilities. They are not negligible but of even greater moment are the advantages that are gained by eliminating corneal erosion on such as is seen in conical cornea. Other uses have emerged. Different forms of keratitis are said to be beneficially affected by the wearing of a contact lens and even cosmetic advantages are possible by the use of a suitably tinted contact lens to hide a grossly damaged cornea from view. None the less it must not be assumed that contact lenses are a panacea. The cost is still prohibitive and the sum total of experience gained with lenses that can be tolerated in wear is as yet relatively small.

## RANCIDITY IN EDIBLE FATS

Problems of nutrition are much to the forefront at the present moment and it has been rightly considered an opportune time by the Department of Scientific and Industrial Research to issue a special report dealing with one of the most important food constituents—namely the fats. While the main theme of rancidity is a seemingly unattractive one to those not specially engaged on food investigation the volume is comprehensive enough to cover a number of matters of interest to the general medical reader. For example it begins with an excellent section dealing with the biochemistry of the fats which as a practical exposition will be found of more absorbing interest than the same subject as treated in the ordinary physiological textbook. Moreover this impressive introduction in itself will act as a strong inducement to the reader to proceed further and examine the report in so far as it bears upon certain other points of more general interest of which three might be instanced. These are the limitations of the senses of smell and taste as ultimate standards in the recognition of deterioration the correlation between these and standards based upon chemical tests and the possible fate of the fat soluble vitamins in relation to the phenomenon under discussion.

*Arch. Ophthalmol.* Chicago 1933 19 4.  
Department of Scientific and Industrial Research. Food Investigation Special Report No. 46. Rancidity in Edible Fats. By C. H. Lea B.Sc. Ph.D. H.M. Salway, Officer. 32 pp. 6d.

## CHEMOTHERAPY AND CANCER

For several years L. C. Strong of Yale has studied the effect of oil of wintergreen given by mouth in small doses to mice with spontaneous mammary cancers. The tumours completely regressed in a few mice and in others there was a significant prolongation of life.<sup>1</sup> Redistilled synthetic methyl salicylate was without effect.<sup>2</sup> Fractional distillation of the true oil yielded a "high" fraction which like the synthetic product, was inactive and a "low" fraction somewhat more active than the original oil. Both fractions contained methyl salicylate. Administration of the low fraction increased the average period of survival after detection of a tumour to seventy-five days compared with fifty-five days in the controls. Complete regression occurred in four out of thirty-four mice and only when treatment was started while the tumours were small.<sup>3</sup> It now appears that the active component of oil of wintergreen is heptyl aldehyde. This compound caused liquefaction and complete regression of tumours in six out of twenty-five mice though neither liquefaction nor regression was observed in 120 control mice.<sup>4</sup> These figures if not spectacular, are probably reliable, which is more than can be said for most therapeutic experiments on cancer. One technical difficulty is to obtain spontaneous tumours in large enough numbers to yield results which withstand statistical analysis, knowledgeable experimenters deliberately avoid transplantable tumours. Strong uses an inbred strain of mice in which mammary cancer develops with a high and regular frequency, and so obtains a relatively homogeneous material and abundant controls. The price paid for these advantages is that the tumours are dubiously representative of cancer in general. Granted that heptyl aldehyde has an important action on a particular kind of tumour growing in a particular kind of mouse, it is not a foregone conclusion that the compound will act similarly on other tumours and in other animals. So far as can be judged at present the action is exerted upon the stroma and vascular system of the tumours rather than upon the parenchyma cells, and, if this be true, cure probably depends on peculiarities of stroma and blood vessels which render some tumours exceptionally vulnerable. In Strong's view there is an enhancement of the defensive processes which sometimes cause spontaneous regression of tumours. Hitherto, defensive reactions against spontaneous tumours have not yielded to experimental analysis, though there is a considerable weight of clinical evidence that they operate in human beings. If Strong's experiments demonstrate that a defensive mechanism can be stimulated by chemotherapy, they have a fundamental importance which is not dependent on the practical value of heptyl aldehyde as a therapeutic agent. This substance will no doubt receive prompt attention from laboratory workers, there is no question of its immediate use for human cancer. Strong makes no extravagant claims, and is content to suggest that spontaneous tumours, in mice at least, may eventually be cured by chemotherapy.

<sup>1</sup> *Amer J Cancer* 1936, 28, 550<sup>2</sup> *Amer J med Sci* 1936, 192, 546<sup>3</sup> *Amer J Cancer* 1938, 32, 227<sup>4</sup> *Science* 1938, 87, 144

## ROAD ACCIDENTS AND ILL-HEALTH

The medical profession in France has always stressed ill-health as an important cause of accidents on the road, and according to Professor Pierre Parisot and Dr G. Richard<sup>1</sup> the French roads carry about 2,155,000 four wheeled vehicles and half a million motor cycles, which cause 3,000 to 4,000 deaths and 50,000 to 70,000 injuries a year. The human factor is responsible, according to various authors for between 40 and 75 per cent of these accidents. They press for medical examination for all drivers and complain that the legislature will not pay proper attention to the matter, although fourteen European countries have adopted this safeguard for all drivers and three others for public service vehicles. France already has it for drivers of public service vehicles and of heavy transport. They point out that since a large concern managing omnibus services introduced the medical examination more than ten years ago its accidents have dropped to less than half. In 1929 it relaxed the rule on account of the straitened means of most of its applicants and the figures for that year rose appreciably. This, however, is the only statistical evidence they adduce to show that a serious number of accidents are caused by a fault in the driver's physical or mental condition. They quote a few individual cases of serious accident caused by elderly drivers succumbing at the wheel to the effects of high blood pressure. In this country the legislature has tended to take a middle course, which represents, so far as can be judged, a working compromise and of which these authors, although they have studied our traffic problems, do not seem to have heard. When the whole question was under review by Parliament in 1930, the provision adopted to ensure a reasonable standard of health in drivers was that every original applicant for a driving licence should sign a declaration that he did not suffer from epilepsy or from sudden attacks of disabling giddiness or fainting and that he was able to read the registration plate of a motor car at 25 yards; also that he should disclose the loss of a hand or foot, or any defect in movement, control, or muscular power of a limb. He must also declare that he is not suffering from any other mental or physical disease or disability that would be likely to make him a dangerous driver. For epilepsy, certified mental disorder or defect, giddiness or fainting and lack of power to read a number plate, the licensing authority is bound to refuse the licence, but for any other condition the applicant may claim a test, and if he passes it he may have his licence. The licensing authority may revoke a licence if it appears to them that the holder is suffering from a dangerous disability, and here again he may claim a test unless the disability is one of those which absolutely bar the issue of a licence. He has an appeal to magistrates from a refusal. A licence holder who asks for a renewal must declare that his condition has not deteriorated. The would-be driver of a public service vehicle must produce a medical certificate of fitness and afterwards renew it every three years. The question of road accidents and their prevention is raised frequently in both Houses of Parliament, but this is

<sup>1</sup> *Bull Acad Méd Paris*, 1938, 119, 122

not one of the points that speakers consider to be important. There are no statistics and there is practically no informal evidence to show that failure of health in a form which could be detected by medical examination causes an appreciable number of accidents. If Parliament really regarded the traffic problem as a vital one it would sternly remove from the roads every driver who did not satisfy a fairly high standard of skill and of physical and psychological fitness. We in this country consider however that on balance it is better to accept a large casualty list and to allow every citizen to drive who passes an elementary test of proficiency and does not suffer from an obviously dangerous disability. The British have always been willing to pay a high price for the liberty of the subject.

### EXAMINATIONS

Pamphlets issued some two years ago by the English International Institute Examinations Inquiry Committee entitled "An Examination of Examinations" and "The Marks of Examiners" and the controversy which arose out of them will still be in the minds of those who are interested in assessing the place and value of examinations in our educational system. There were two other publications bearing on the same subject issued under the same auspices and the committee has now issued a fifth. A Conspectus of Examinations in Great Britain and Northern Ireland, compiled by Sir Philip Hartog with the assistance of Miss Gladys Roberts, Sir Michael Sadler, the chairman of the committee and Sir Philip Hartog, the director of the inquiry, in a preface explain the general object of the book thus: "The committee regarded it as desirable to publish for the information of persons interested in education in this country and abroad, as well as for the general public, a sketch showing the width and variety of the field covered at the end of the first third of the twentieth century by the examination system in Great Britain and Northern Ireland. The publication certainly succeeds in doing this, but it is not clear who exactly are the persons among the public or among those interested in education for whom it is likely to be of particular value. The examinations established for various purposes, degrees or diplomas by the several universities, colleges and local education authorities and the examination requirements for entry upon different professions or careers are ascertainable without difficulty in the case of each, and the number of persons who require this knowledge with reference to more than one or two without at the same time needing official information as to courses of instruction as well as to mere examinations must be very small. Nevertheless, if there be any such body of persons they will be admirably served by this conspectus. It is full, well arranged and so far as can be ascertained accurate at least for the years 1933-6. Perhaps the most revealing and generally useful section is that dealing with the procedure adopted for examinations conducted under statutory authority for admission to specified professions and callings. This includes not

only those relating to solicitors, medical practitioners, veterinary surgeons, pharmacists, nurses, midwives and architects, but those for teachers, civil servants, mine managers and surveyors, masters, mates and engineers of merchant ships, shippers of fishing boats, pilots, air navigators and drivers of public service vehicles and taxicabs.

### NARCOTIC POISONING

Poisoning by barbiturates, either accidental or suicidal, has attracted much attention in recent years and Dr Roche Lynch in his presidential address to the Society of Public Analysts and Other Analytical Chemists has given an interesting review of his experience of this problem particularly with regard to its chemical aspects. His observations are based on the study of well over 100 cases of barbiturate poisoning, most of which appear to have occurred in the last ten years. It is of interest to note that this figure is considerably smaller than those recorded in similar French publications and barbiturate poisoning seems to be much rarer in this country than in France. The mortality in the series was 56 per cent, but it is satisfactory to learn that the percentage of recovery has risen during the last six or seven years owing to improved methods of treatment. The important advances mentioned were the frequent performance of lumbar puncture coupled with saline injections and the use in full doses of analeptics such as strychnine. Chemical analysis of urine showed clearly the difference as regards rate in the body of stable barbiturates such as veronal and of shorter acting compounds such as dial. Substantial amounts of the former compound were regularly recovered from the urine while only traces of dial were thus found. Dr Roche Lynch described a quick method for the detection of barbiturates in the urine which would permit an analyst to diagnose barbiturate poisoning in fifteen minutes. He also discussed thirty cases of morphine poisoning and mentioned that although it was not difficult to recover morphine from the viscera of a normal person after poisoning yet this might be very difficult in an addict. He stated indeed that if the taking of a large dose of morphine was established and the drug could not be found in the viscera this suggested the probability of morphine addiction. In connexion with morphine he made some valuable comments on the lethal doses which are copied from textbook to textbook for generations and are solemnly quoted in the courts. For instance it is regularly stated that the smallest fatal dose of tinct. opii recorded in an adult is 2 fluid drachms. This however occurred in 1840 when opium was not standardized as regards its morphine content and when pharmacists made their own tinctures with varying skill. Hence the amount of morphine contained in the 2 fluid drachms in question was completely uncertain. Dr Roche Lynch's comment was "This is an example of many unsound observations which abound in textbooks on this subject and it is to be hoped that one day a book will be written which has eliminated such misleading and unreliable statements."

The Toxicology of Certain Narcotic Drugs by G. Roche Lynch M.B. B.S. Analyst 63-64

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## FRACTURE OF THE NASAL BONES AND EPISTAXIS

BY

W. M. MOLLISON, M.Ch

Fracture of the nasal bones is always due to direct violence and is usually a simple one. The line of fracture is either at the junction of the nasal and frontal bone, or, much more often, near the free end of the nasal bone. There may be no displacement and no disfigurement beyond extensive bruising, and the fracture may only be discoverable by x-ray examination. The whole nose may be displaced towards one side or may be depressed. In this case replacement is undertaken under general anaesthesia. Walsham's forceps are useful here, though any blunt flat instrument will serve, this or one blade of the forceps is introduced into the nose to correct the deformity, alternatively, the blades of the forceps are placed in the nostrils and the nose forcibly straightened. This method has the advantage of straightening the septum, too, if it is involved. A frequent result of blows on the nose is effusion of blood between the septum, which may be fractured, and its perichondrium—the so-called haematoma of the septum. Treatment is dealt with under the heading of epistaxis. Fracture of the nasal bones may be compound, care must here be taken with skin wounds to avoid subsequent infection and possible necrosis.

Complicated fractures are becoming more common, as Professor Cairns has pointed out, on account of car and aeroplane accidents. Owing to the great violence connected with these accidents not only are the nasal bones fractured but the anterior fossa of the skull may be involved. If the dura mater is damaged cerebrospinal fluid may leak through the nose or into the subcutaneous tissues. In either event the position of the patient is one of great danger from infection.

### Epistaxis

The commonest form of epistaxis, or bleeding from the nose, is that known as 'spontaneous', it is especially frequent in children and young adults. In general it is of small account, but it is always a great inconvenience, since it occurs without warning and interferes with work or social activities. It often stops within a few minutes, but it may continue for an hour or more and in rare instances be so profuse as to endanger life.

The cause of spontaneous epistaxis is not known, it is due to the giving way of the wall of a small vessel on the anterior part of the septum nasi. It may be actually started by blowing the nose or by scratching, but often the bleeding comes on without any apparent reason. There is some evidence that it is more prone to occur at the time of the menstrual periods, indeed, the epistaxis has been considered as vicarious menstruation. The predisposing factors to epistaxis are high blood pressure, albuminuria, arteriosclerosis, mitral stenosis, and some anaemias.

### AETIOLOGY

The onset of acute infections—for example, measles, influenza, and particularly those due to haemolytic

streptococci—is frequently accompanied by epistaxis. There are many other causes, some local and others general, these are here grouped more or less in order of frequency.

1 *Traumatic*—Blows on the nose, foreign bodies in the nose, fracture of the nose—nasal cartilage or bones, post-operative—reactionary and secondary bleeding.

2 *Local Nasal and Nasopharyngeal Diseases*—Diphtheria of nose, pneumococcal rhinitis, lupus, New growths. Malignant Carcinoma, either of the nasal wall or of the paranasal sinuses ulcerating into the nose, circumscribed polyp, sarcoma of the nasal lining, melanotic sarcomatous polypus. Innocent Bleeding polypus of the septum, nasopharyngeal fibroma, both rare.

3 *Ossicles Disease*—This disease, while rare, is often familial. The lesions are small circumscribed tumours of the blood vessels, affecting the skin, mucous membrane, and internal organs. The little nodules consist of dilated capillaries without elastic tissues or muscle, often having only a single layer of endothelium. These nodules may occur in the nose, generally on the septum. If one of them is destroyed by cauterization fresh crops appear round the destroyed nodule and further bleeding occurs, removal of the whole of the septum and its mucous membrane has therefore been suggested. This stops the bleeding but leaves crusting of nose. The bleeding from these nodules is easily stopped by the diluting bag described below.

### Treatment

Treatment consists essentially in dealing with the cases of *spontaneous epistaxis*, since all the other cases demand special treatment and are beyond the scope of these notes.

Cases may be divided into two classes (a) emergency cases in which the haemorrhage is severe or profuse, (b) ordinary recurrent cases in which treatment is prophylactic, to prevent future attacks.

### "EMERGENCY EPISTAXIS"

The patient should keep the head erect so far as possible, to prevent blood running down the throat. The quickest and most efficient way to stop the bleeding is by the use of a Cowper Rose bag. This consists of a thin catheter with a rubber finger-stall attached in such a way that the eye of the catheter is inside it. Air blown into the catheter will inflate the finger-stall, and a tap on the end of the catheter will keep it inflated. Smearred with petroleum jelly, the deflated instrument is pushed into the nose, inflated, and left *in situ* for some hours if necessary. Pressure is thus exerted on all parts of the mucous membrane, stopping bleeding efficiently and painlessly. This is the most reliable method of dealing with emergency epistaxis. Patients and practitioners would be spared much anxiety if one of these bags were always available. An alternative method is to plug the nose with ribbon gauze, either plain or impregnated with adrenaline or with "stryphnon" powder, a good light is very helpful, and the gauze should be placed first along the floor and then built up on this to fill the nose. This procedure is apt to be painful and to damage the delicate nasal mucous membrane.

Very occasionally bleeding occurs from so far back that the blood runs down from the posterior nares. Should the inflated Rosen bag fail to control the bleeding a plug may be placed in the posterior nares; this procedure however should only be used as a last resource since it is so painful. A thin rubber catheter smeared with petroleum jelly is passed through the bleeding side of the nose till it can be seen in the pharynx; it is then drawn through the mouth and a strong silk thread fastened to it so that when the catheter is withdrawn from the nose this silk thread takes its place. A small piece of rubber sponge (or a small mass of gauze) is fastened to the mouth end of the silk and carefully guided under the soft palate as the silk is pulled out of the nose; the sponge thus being firmly but gently fixed in the posterior nares. This procedure can be combined with plugging of the nares. To avoid infection of the middle ear via the Eustachian tubes the post-nasal plug must not be left in for more than twelve hours. Hydrogen peroxide (2% to 5% solution) is sometimes very useful in stopping haemorrhage; a strip of narrow gauze soaked in the solution is packed into the nose and left for some time.

#### SPONTANEOUS RECURRENT EPISTAXIS

In the majority of cases bleeding arises from the anterior part of the septum the so-called Kiesselbach area. Between attacks the mucous membrane of the septum may appear almost normal; in order to discover the origin of the bleeding the mucous membrane should be gently rubbed with a wooden probe carrying some wool; this procedure often starts the bleeding. A small flat-tipped pledget of wool moistened with adrenaline chloride 1 in 1000 and cocaine 10 per cent in equal parts is then applied to the bleeding area and kept in position by pressing the ala nasi inwards for a few minutes. The bleeding spot can then be touched or scorched with a flat cautery point at dull red heat. Alternatively a drop of pure carbolic acid on wool may be used or a bead of solid silver nitrate fused on to a probe be applied.

In some cases the bleeding point is found on the floor of the nose; in others bleeding is from a vessel running upwards immediately next the mucocutaneous junction on the septum; in this case it is difficult to avoid pain through overheating the skin. To prevent this flat flakes of wool moistened with water may be arranged on the skin before cauterization. In many cases of epistaxis in persons over 50 and in those whose blood pressure is high, the bleeding though profuse and sometimes alarming is no bad thing and it is often noticed that the pulse of these patients is full and of moderate rate even after some hours of epistaxis. The same remark applies to those with albuminuria or with chronic nephritis.

#### Traumatic Epistaxis

Even slight blows on the nose may cause epistaxis. The bleeding ceases spontaneously as a rule but if it persists it must be treated on the same lines as spontaneous epistaxis described above.

As well as the immediate epistaxis a blow commonly in children the result of falls on to the face may produce an effusion of blood between the mucoperichondrium and the cartilage of the septum the so-called haematoma of the septum which causes bilateral swelling of the septum and therefore obstruction to nasal breathing.

#### TREATMENT

This consists in incising the swollen mucous membrane over the septum in adults under local cocaine anaesthesia in children under general anaesthesia—for example ethyl chloride. Since the haematoma invariably suppurates pus will be evacuated unless operation is performed shortly after the accident. If the haematoma is not evacuated there is a considerable risk of necrosis of the septal cartilage and subsequent saddle deformity of the nose.

#### Foreign Bodies

The epistaxis caused by the presence of a foreign body is mild and is accompanied by unilateral mucopurulent nasal discharge. Removal of the foreign body is the appropriate treatment. In infants this can quickly be done without an anaesthetic older children may need short anaesthesia. The child is laid flat on a couch supported on a blanket and the head is held rigid. A straight rod—a gag—serves well—is passed along the floor of the nose and when beyond the foreign body is levered upwards and slowly removed bringing the foreign body with it.

In severe accidents to the nose involving the nasal bones or frontal sinuses and ethmoidal and the anterior fossa of the skull bleeding may be accompanied or followed by discharge of cerebrospinal fluid. The only treatment for this condition consists in preventing infection from entering from the nose apart therefore from highly plugging the nostrils with wool active local treatment must be avoided.

Perhaps the most alarming epistaxis is that of acute haemolytic septococcal infection of the upper respiratory tract so severe and persistent is it that blood transfusion may be required and indeed is probably the best treatment. The bleeding is especially embarrassing if an anaesthetic is needed for an operation—for example on the mastoid—since it may recur or continue during administration of the anaesthetic.

### INTERNATIONAL SOCIETY OF SURGERY

Vienna, September, 1938

The German Surgical Society to which most of the Austrian members of the International Society of Surgery belong is at present actively engaged in full collaboration with the Viennese Committee in ensuring the success of the Society's congress which is due to take place in Vienna from September 19 to 22. The sessions will be held in the Konzerthaus where radio-telephonic service is to be installed so as to ensure that everyone in the audience may hear the various speakers in the language of choice.

Reports on the following subjects will be discussed: Surgical treatment of hypertension, bone grafts and surgical treatment of pulmonary cysts and tumours. Nearly two hundred speakers have already signified their intention to participate in the discussions.

On the occasion of this congress the Messageries Maritimes are organizing a cruise which will leave Marseilles on September 4 and will give surgeons the opportunity to participate in operative demonstrations at Naples, Athens, Istanbul, Odessa, Bucharest, and Budapest. The cruise is due to reach Budapest by September 18 and arrival in Vienna is scheduled for 7.25 p.m. on that day. The same evening the Viennese surgeons are organizing a visit to the "Kursalon Stadtpark." Travel arrangements for British visitors are in the hands of Messrs. Thomas Cook and Sons.

## Nova et Vetera

### THE DIARY OF AN EIGHTEENTH CENTURY SURGEON

John Knyveton was born at Bromley in Kent on September 16, 1729, and died at the age of 80 on November 25, 1809. His father, a doctor, died when he was young, and he served his apprenticeship with an uncle. Mr. Ernest Gray tells us that Knyveton kept a diary in the year 1751-2. A perusal of the book<sup>1</sup> shows that such a diary was written, but it is so overlaid with embroidery by the editor that it is impossible to discover how much is original. It would perhaps have been better to publish the text and the comments separately. As it stands it is disguised by an imitation of Samuel Pepys's *Diary* (which was practically unknown until 1822), and is full of mistakes owing to ignorance of the conditions of medical education in the middle of the eighteenth century. But if these blemishes are allowed to pass the book makes interesting reading. It is divided into two parts, the first dealing with the life of an apprentice 'walking the hospital', and the second his service in the Navy as mate of a sixth rate. During his year in London Knyveton went through what may be supposed to be the ordinary experiences of a youth from the country: attended hangings at Tyburn, took part in 'resurrections,' and was present at many social parties. He could not, however, have attended a lecture at St. George's Hospital, where William Hunter spoke with the voice of John, his younger brother, neither could he have himself amputated by the flap method, because it was not yet in use. The service at sea is more probable. He tells of the hardships which had to be endured: of the floggings, which were frequent, of the general callousness to pain and of the recoveries which took place in spite of foul quarters, of bad rations and of offensive water. The picture is not overdrawn and makes the hygienic work of Captain Cook—a few years later—stand out in even higher relief than usual. There are nine illustrations, which are well reproduced, though it may be noted that Scultetus's name is wrongly spelt on the legend of "An Early Blood Transfusion".

### TWO BIBLIOGRAPHIES

#### Ambroise Pare and Sir Kenelm Digby

*A Bibliography of the Works of Ambroise Pare.* By Janet Doe (Pp. 266, 29 figures, Frontispiece, 22s. 6d. net). Chicago: University of Chicago Press. London: Cambridge University Press, 1938.

*Sir Kenelm Digby: Writer, Bibliophile and Protagonist of William Harvey.* By John F. Fulton, M.D. (Pp. 75, 6 figures). New York: P. and K. Oliver, 160 East 83rd Street, 1937.

These two volumes show that bibliography may be approached from two very different angles. Miss Janet Doe, assistant librarian of the New York Academy of Medicine, writes of Ambroise Pare, stating where the different editions are to be found; Dr. Fulton issues a critical review of the life and works of Sir Kenelm Digby, and appends a short-title list of his writings. Both are excellent in their way and will be of great service to future commentators.

Miss Doe supplements, brings up to date, and corrects Malgaigne's classical edition of Pare's complete works, which was published in three volumes in 1840-1. She contributes a very readable preface, and has chosen the illustrations with care, though she might, had she been so

minded, have added in account of the various portraits, for the iconography of Pare is still in need of attention. Miss Doe gives in account of seventy-three editions of Pare's works ranging from the first pamphlet of 1543 to a Japanese abstract in 1769. She discusses two difficult points in connexion with her subject—the first as to the religion of Pare, arriving at the conclusion that he was probably a Protestant who conformed to Catholicism. Secondly, as to the English translator of the 1634 edition, Lieutenant Colonel Thomas Johnson, who died of wounds received during the siege of Basing house in Hampshire, she has not been able to fix the date of his birth, but has very little doubt that a considerable part of the translation came into his hands from George Biker, an Elizabethan surgeon of whom little is known except that he lived at a time when the London surgeons were doing much literary work of a high character.

Dr. Fulton makes Sir Kenelm Digby live again in his essay. The father was hinged for complicity in the Gunpowder Plot and throughout his life the son steered a chequered and successful career through the stormy waters of the Caroline, Cromwellian, and Restoration periods. He seems to have engaged in the Catholic plots of 1641: is a friend of Queen Henrietta Maria, once at least he was a pirate, and he was a great lover, for on his beautifully bound books he intertwined his own initials with those of Venetti, his wife, so long as she lived. He always exercised great literary influence and was friendly with Ben Jonson, Selden, Hyde, Evelyn, and Thomas Randolph. To many he is known only by his *Powder of Sympathy*, to others by his observations on Sir Thomas Browne's *Religio Medici*. Dr. Fulton points out that he was the champion of Dr. William Harvey, and thus followed in the footsteps of Descartes, whom he knew personally. The little book is well worth reading and has some excellent illustrations. It is the outcome of a paper read at the Grolier Club, and is issued from the Laboratory of Physiology at the Yale University School of Medicine.

D'A P

### SPLENECTOMY IN 1887

Fifty years ago, on April 10, 1887, Sir Thomas Spencer Wells reported before the Royal Medical and Chirurgical Society of London (*Medico-Chirurgical Transactions*, 1888, 71, 255-63) a successful splenectomy which he had performed on December 5, 1887. The patient was a girl of 24, whom he had treated for some time with ergot, believing her abdominal tumour to be a large fibroid. The discovery at operation of an enlarged spleen came as a complete surprise. The pathological specimen was examined by Sir Frederick Eve at the Royal College of Surgeons and was reported to weigh 1 lb. 14 oz., after draining out a quantity of blood variously estimated as 3 to 5 lb. The surgeon cured the patient without knowing why, for her disease—acholuric haemolytic jaundice—was only described in 1900 by Oskar Minkowski. In opening the discussion on splenectomy at the Centenary Meeting of the British Medical Association six years ago Lord Dawson related that this patient was still living and that her only son had been one of his early cases (*British Medical Journal*, 1932, 2, 699). Spencer Wells's first operation for ruptured spleen—the first in Great Britain in modern times—took place in 1865.

Matthias de Lobel, or Lobel (Lobelius), after whom the genus *Lobelia* was named in 1702, was born 400 years ago at Lille, which then belonged to Flanders. Doctor of medicine of Montpellier University, he was for a time physician to William the Silent, Prince of Orange. A distinguished botanist, he spent the greater part of his life in England, where he wrote several works on plants in Latin, and died in 1616. His system of classification based on leaf form, was superior to those of earlier botanists.

<sup>1</sup> *The Diary of a Surgeon in the Year 1751-1752.* By John Knyveton. Edited and transcribed by Ernest Gray. (Pp. 322, 9 illustrations including a frontispiece, 10s. 6d. net). New York and London: D. Appleton Century Company, Inc., 1938.



## VOLUNTARY HOSPITALS EMERGENCY BED SERVICE

On May 27 in his presidential address to the Council of King Edwards Hospital Fund for London R.R.H. the Duke of Kent announced a project for centralizing the admission of emergency and acute cases to London voluntary hospitals. The Council considering this project to be one of great importance to the hospitals as being likely to improve the service rendered to patients and doctors alike passed a resolution to provide staff and funds to establish and operate it.

This is the final step in a long process which was begun in 1936 with the suggestion made to the Voluntary Hospitals Committee, County of London by a member of the surgical staff of University College Hospital. Since then the whole problem has been carefully studied by this committee and finally a skeleton scheme was placed before the hospitals for their approval which was given unanimously. The committee was then faced with the necessity of finding financial support and before making any general appeal approached King Edwards Hospital Fund. The Fund has agreed to provide support up to £3000 per annum and it now remains only to organize the office and open it as soon as possible. The responsibility for this task lies with a joint committee of the Voluntary Hospitals Committee and the King's Fund under the chairmanship of Sir Harold Wernher. The preliminary organization is now far advanced and it is intended to open the service on June 21.

### The Purpose of the Service

The service is intended to benefit all concerned in the admission of an emergency case. First of all the patient will be saved an unnecessary period of waiting which will in itself help towards his ultimate recovery. Secondly the doctor will be saved much time since he need only make one telephone call to find out the state of beds in any hospitals he may think suitable. Thirdly the hospital will never it has no beds to offer will be saved the trouble of answering the telephone uselessly. Thus a weakness for which the voluntary system is often criticized will be repaired.

To ensure successful co-operation it has been necessary for some hospitals to do a great deal of internal reorganization in connexion with the admission of patients in order that no delays may be encountered by the service. The hospitals by supporting the service are also giving special help to doctors in that they are largely abrogating their own selective powers so far as emergency cases are concerned. The hospitals will naturally reserve the right to refuse to retain in their wards cases which are medically unsuitable under the scheme.

It must be borne in mind by doctors that this service is intended solely for the admission of acute and emergency cases. For the purpose of the service the definition of an urgent case will be one that requires immediate medical or surgical treatment. Fever cases will only be dealt with on behalf of such voluntary hospitals as specialize in fevers—for example London Fever Hospital.

### The Working of the Scheme

It is not proposed at this stage to go into the detailed working of the scheme but a rough outline can be given as a general guide. The service will obtain a report of vacant beds from all hospitals at stated times of the day and this will be recorded on an indicator board so that whenever a doctor rings up it will be possible to tell him with certainty if and where a suitable bed is available and promptly to book an available bed at such hospital as he may choose. The service will when fully in operation be open throughout the twenty-four hours but in the early stages while working experience is being gained from 8 a.m. to 10 p.m. only during which period it is

estimated that 80 per cent of all emergency calls arise in the night and in both cases be open seven days a week.

A full description of the method of working with instructions as to how to use the service will be published in the *British Medical Journal* in the issue immediately preceding the opening. These doctors who already receive the King's Fund Out-patient Time table will receive a letter advising them when the service is about to open and giving the telephone number which they will be asked not to communicate to the public. In order to avoid receiving calls from the public the number will not be published in the telephone book.

The service has the wholehearted backing of the hospitals and will undoubtedly be welcomed by the public and it as is confidently expected it receives a full measure of support from the doctors there is little doubt that it will soon become an essential service of great value to all concerned.

## PREVENTION OF ACCIDENTS

The National Safety First Association celebrated its twenty-first birthday last week by arranging in London a five day congress with a comprehensive series of lectures and discussions on traffic safety accidents in industrial occupations and the instruction of children in safety measures. The Duke of Kent presented awards for gallantry and long periods of safe driving demonstrations were given of safety training in schools and among other public bodies which participated was Scotland Yard which made its accident map room available to the congress delegates.

### Industrial Eye Injuries

One session was devoted to industrial eye injuries and was addressed by Mr JAMES MINTON of the Royal Eye Hospital. That hospital he said dealt with nearly 7000 injuries every year most of them of a simple nature but others so serious as to mean the loss of one or both eyes. The Home Office reported every year 6000 industrial eye injuries in the United Kingdom so serious as to require absence from work for three or more days. If reports could be obtained from the out-patient departments of eye hospitals all over the country the number of industrial eye injuries annually might well be found to be 60000 or 100000. About 10 per cent of the blind in this country and an even larger proportion in America owed their blindness to industrial injury. Some large industrial undertakings notably Imperial Chemical Industries the Swindon works of the Great Western Railway and the London Passenger Transport Board which had large safety organizations had shown a noteworthy diminution in eye injuries since these were established. Causes of eye injuries, said Mr Minton might be summed up as (1) neglect of safety provision by employers (2) neglect by workmen to use safety measures when installed. Many workmen engaged on grinding wheels and similar machinery appeared to have a prejudice against goggles. A safety device even better than goggles was the provision of a guard on the machine to prevent injury from flying particles but here again there was neglect or unwillingness on the part of workmen to put the guard in place. Mr Minton showed an admirable film which had been prepared for the Royal Eye Hospital to illustrate its work in dealing with industrial eye accidents and mentioned that the hospital was establishing a museum to illustrate the fact that 85 per cent of eye accidents were preventable and to encourage the use of protective appliances.

### Child Psychology and the Accident Problem

At another session of the congress, over which Sir HENRY BRACKENBURY presided Dr SUSAN ISAACS head of the Department of Child Development Institute of Education University of London gave an address on child psychology and the accident problem. She drew attention to the fact that the peak of accidents to children occurred between the ages of 4 and 7. This was followed by a period of relative immunity and again by a rising rate. Certain factors in the child's



nature contributed to this age variance. The child aged from 4 to 7 was specially liable to accident because at about that age he began to free himself from his habit of clinging to his mother. He also found running much easier than walking, he acquired adventurousness and love of experiment, and was naturally impulsive. At the same time he had no appreciation of the danger he ran and no ability to judge distances, speeds, or space relationships. The child aged from 10 to 15, on the other hand, found it natural to walk rather than to run, was more watchful and cool, and was able to judge by the size and appearance of a vehicle the rate at which it was travelling.

Dr Isaacs said that it was not unimportant also to remember that the small child lived in a world peopled by fairies and ogres whereas the older child lived in a world of reality. The small child was so much influenced by his imaginative notions that he personalized everything, including motor cars and railway engines and he allowed his feelings towards these persons, as he thought them, to govern his actions. A good deal of child behaviour was only to be understood from these complex hidden meanings of objects. The child under the age of 7 had no notion of impersonal happenings or of mechanical causality. Machines were persons to him. The fact of accident proneness in industry was well known but in childhood too the neurotic child or the child with special emotional difficulties was undoubtedly more liable to serious accidents than the normal child. There were certain children whom no amount of teaching could keep safe because their deep impulses were stronger than the effect of any intelligent direction. There would always be children who would seek danger without knowing how dangerous it was. The problem of training children to be safe, added Dr Isaacs, was often treated as if it were part of the general question of obedience. It could not be so solved. The child must somehow be shown that it was not safe to run across the road, he must not be merely forbidden to do so.

## EMERGENCY HEALTH SERVICES IN CHINA

*The following notes are extracted from a report by a visiting Red Cross worker which has been forwarded to us through the courtesy of Dr R Cecil Robertson head of No 2 Unit of the League of Nations Anti-epidemic Commission in China*

### A Grave Situation

During the present hostilities there has been an unprecedented migration of population. Everywhere in the country, in villages as well as cities, utilizing every means of communication, people are coming and going in inconceivable numbers. Soldiers are being moved in millions from one part of the country to the other. There is crowding everywhere, and, being obliged by circumstances to ignore even the first principles of hygiene and sanitation, all kinds of sickness are spreading rapidly and widely. The normal medical services in the most important parts of the country are already disorganized in the attempt to strengthen the army medical service. Many important hospitals, including foreign missionary institutions, have been bombed, or for other reasons had to be evacuated.

The normal health services of the Provincial Governments have had their staff depleted and their funds available for health work reduced. All of this has resulted in a very grave situation where the outbreak of epidemic diseases is a very present danger. The most modern methods of preventive medicine and hygiene are being, and will become ever-increasingly, severely tested to cope with this menace.

### Anti-epidemic Units

In the past the League of Nations has lent considerable aid to China by supplying experts in public health, economic reconstruction and other fields of activity such as highway construction. The sending of the League of Nations Epidemic

Commission is another indication of good will towards China. This Commission consists of a group of experts, internationally known scientists who have had great experience in fighting epidemics. Members of the staffs of the National Health Administration and Central Field Health Station have been assigned to the League Commission in the formation of anti-epidemic units for certain definite areas allocated by the Chinese Government. There are three of these Anti-epidemic Units, each being staffed by a group of health officers, bacteriologists and parasitologists, sanitary engineers, sanitary inspectors, and technicians trained abroad and in the training institute which was lately situated in Nanking.

The work of the Commission during its first three months of operation has been divided into a Northern, Central, and Southern Unit. The Northern Unit under the leadership of Professor Mooser has made a special feature of anti-epidemic action amongst the refugees and troops endangered by small pox and typhus fever. Vaccines have been manufactured and anti-vermin precautions instituted. The Northern Unit is German speaking and the overseas experts are chiefly of Swiss nationality. The Southern Unit is under the leadership of Inspecteur Général Lisnet supported by a group of French scientists. The chief activities in anti-epidemic work have been directed against small pox and malaria. The Central China Epidemic Prevention Unit is under the leadership of Dr R Cecil Robertson with an English speaking group of assistants.

### Precautions against Small-pox, Cholera, and Typhoid

The Central China Epidemic Prevention Unit has made a special feature of reinforcing the various provincial health services besides tackling several special epidemiological problems. The diseases of chief concern so far have been small pox, cholera, typhoid fever, and malaria. Each of the three units has had a Government delegate attached to it by the National Health Administration for the purpose of establishing contact with Government Departments and other executive duties concerned with the auxiliary staff. Each unit has had a number of Red Cross teams attached to it for special work in vaccination campaigns among refugees and other duties. The headquarters of the Central China Epidemic Prevention Unit, with which the League of Nations Unit No 2 co-operates, are situated in the Hunan Provincial Health Administration building in Changsha.

A fine central laboratory was first visited, which is fully equipped to handle the diagnostic and bacteriological work. We were shown a number of ingeniously constructed mobile laboratories for field use including locally made bacteriological incubators and steam sterilizers. The unit maintains a branch laboratory for cholera work at Changteh and a mobile laboratory at Yuenling at present. The cholera situation at various points on the Yuan River basin in Western Hunan was explained to us by the Commissioner. We saw plans for the improvement of the water supply at Changteh by means of a special barge from which water can be collected after purification and chlorination, also other sanitary devices applicable to a campaign against water borne diseases such as cholera.

### An Anti malaria Campaign

In the parasitological laboratory we saw work in progress connected with the examination of thousands of blood films for malarial parasites. These were collected on a recent malaria survey of certain rice growing districts in Pingkian Hsien. A serious situation due to malignant malaria has arisen in these areas during recent years. The population has been reduced by disease and the devastation of the Communist horde. Once rich rice growing districts have been rendered uncultivated wastes. The Government plan to settle refugee farmers in this area, but first steps must be taken to reduce the ever present danger of malaria taking a terrible toll of the incomers.

The League Unit has launched an intensive anti-malarial campaign, which in the first instance consists of the establishment of numerous treatment centres to cure the latent malaria.

in the present population prior to the advent of the breeding of the anopheline mosquitoes this year. In the near future the unit hopes to be able to do further anti-malarial work among the workers on the new railway which is under construction from Hengyang in Hunan to Kweilin in Kwangsi. New railroad construction in China always takes a terrible toll of life from epidemic disease among the workers.

In the sanitation division we observed great resource and ingenuity in devising economical equipment and the utilization of local materials. Delousing shower baths for refugee camps and many other appliances appeared to be of simple and practical construction. Old petrol cans and aerosol drums were being converted into various useful sanitary utensils. We also noted travelling vaccinating kits and needle boxes and numerous other pieces of field apparatus being constructed in the workshops. The unit has a fleet of cars for field work and a number of other cars.

The general impression of efficiency and meticulous attention to detail left one with the feeling that this League of Nations contribution to China is a very real one. The whole-hearted co-operation and enthusiasm which such an international organization displays in tackling the horror of serious epidemic disease are comforting and even the most casual observer feels that an important effort is being made to forestall the development of a very serious situation for China's population in this present emergency.

## STANDARDS OF HOSPITAL CONSTRUCTION

### REPORT OF DEPARTMENTAL COMMITTEE

The committee appointed by the Minister of Health in 1933 to consider questions of construction and maintenance of hospitals has issued its final report.<sup>1</sup> In an earlier report it had dealt with what it called in a not very satisfactory phrase, the acute hospital and the present report deals with what must be termed we suppose the chronic hospital. The committee which consisted of six medical members out of a total of fifteen, discusses the size and apportionment of maternity departments accommodation for sick children, residential institutions for pulmonary tuberculosis isolation hospitals, mental hospitals and mental deficiency colonies and public assistance institutions.

#### Maternity Departments

It is considered that very small maternity departments are not desirable and that maternity services should be so organized that departments of less than twenty lying-in beds are avoided. The lying-in ward unit should contain a maximum of thirty beds, eight beds is to be regarded as the maximum for a ward and the committee is favourably inclined to wards of four beds if they can be planned so as to provide good lighting and ventilation. In a ward unit of thirty beds it is considered that there should not be less than six single bed wards. These single bed wards would be used for 'potentially septic' patients and for emergency admissions as far as numbers would allow. The committee recommends for every sixty lying-in beds the provision of ten beds for ante-natal purposes.

In its previous recommendations for the acute general hospital the committee laid down a standard of thirty beds for a ward unit—that is a group of wards in charge of one sister. In hospitals for chronic cases as treatment is simpler and changes of patients much less frequent, a ward unit may properly contain up to sixty beds. There is much less objection to large wards also in dealing with chronic cases but it is nevertheless necessary to provide to some degree of classification of patients and unless the numbers in each class are large enough to occupy

large wards there should be a sufficient number of smaller wards to admit of proper classification. For separation purposes there should be six single bed wards in a ward unit of sixty beds.

Turning to residential institutions for pulmonary tuberculosis the committee points out that here large wards are undesirable. The proportion of single bed wards varies according to circumstances but generally from about 15 to 20 per cent will be found to be required. Other wards should contain a maximum of six or even four beds. But in such institutions as also in isolation hospitals standards are applicable only to a rather limited extent. It is considered that by joint action or co-operation on the part of local authorities the erection of very small isolation hospitals should be avoided but it is not considered possible to recommend any standard minimum size. The size of the ward unit cannot be standardized by reference to the number of patients who may be supervised by a sister. It must in many cases be determined by the size of the hospital and the greater elasticity conferred by small units. About twelve beds in a ward should be the maximum number but there is much to be said in favour of quite small wards (say of four beds), especially in the case of scarlet fever.

#### The Mental Hospital

Difficult as it is to apply standards to the ordinary general or special hospital, the difficulty is largely increased in the case of the mental hospital. Here the proportion of in-patient patients is very high. Space has to be provided for sitting and dining rooms for fully 90 per cent of the patients resident. In addition to adequate accommodation to care and treatment there must be a reasonable standard of comfort. The majority of the patients may not leave the hospital when they wish to do so and detention may be enforced for long periods. No patient should have cause for a sense of injustice arising from the inadequacy of the accommodation provided. On the question whether there should be separate hospitals for men and women opinion has been found almost universally in favour of a combined hospital for the two sexes. Separate ward units should be made for the following groups of patients: recent and recovering sick, able-bodied trustworthy and working on parole, disturbed and excited, senile and infirm, epileptic, indefinite types. Recommendations are made as to the size of the various rooms. On the size of the hospital as a whole 1,000 beds has been adopted as convenient. At a recent discussion in the Royal Medico-Psychological Association the opinion was expressed that this was too large. The point of view however was that of medical staff considerations. A larger number of smaller hospitals would create more posts of medical superintendent and thus offer more chances of promotion for assistant medical officers.

With regard to mental deficiency colonies a colony of not less than 800 beds represents the practical maximum size which permits of adequate classification of all grades of defectives. It is considered that when necessary authorities should combine to establish colonies of not less than that size. The present standard of day space of 10 superficial feet per patient is a good one but in the sick hospital it is only necessary to provide day space for one-third of the patients under treatment. Recommendations are made as to the numbers of nursing and domestic staff for whom residential accommodation may have to be provided, the area of land required for the colony and the methods of construction and materials.

Some remarks are added about public assistance institutions. There appears to be general agreement among those responsible for providing such accommodation if it groups of small cottage homes are suitable for the industrial areas while larger groups of similar cottage homes or a single large home may be thought more appropriate for old people who have been accustomed to living under urban conditions.

<sup>1</sup> Departmental Committee on the Cost of Hospitals and Other Public Buildings. Final Report. H.M. Stationery Office. 2s.  
<sup>2</sup> British Medical Journal March 13 1937 p 570

## ANTI-VENEREAL MEASURES IN SCANDINAVIA

BY

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A Commission on Venereal Diseases approved by Sir Kingsley Wood the then Minister of Health left London on July 12, 1937, to visit Scandinavia. The object was to investigate conditions following notification and treatment of venereal diseases in those countries, is the fall in the number of cases in Scandinavia of recent years had seemed to be striking compared with the number of cases returned to the Ministry of Health in this country as under treatment for venereal diseases.

In the three Scandinavian countries visited—Sweden, Norway, and Denmark—a system of partial or of complete notification of these diseases in common with notification of the other ordinary infectious diseases is in force. It was thought that interest and value would be added to the Commission's report\* by a visit to a country where there was no system of notification. Holland was accordingly chosen for this purpose. The fall in the number of cases under treatment, or at least of acute cases admitted to hospital, in Scandinavia seems to be very marked during the summer months. June, July, and August are the holiday months for the great mass of the people, and a migration to the country during most of this period is an outstanding feature of Scandinavian life. Not only do the rich leave the towns during these months but professional and business people's wives and children to a great extent do so, too, living simply in cottages and tiny bungalows, almost entirely in the open air by day. The working-class population, where possible do the same. Many encampments of tents are seen, where working-class women and children live, and where the menfolk return from work on bicycles in the evening, or, if the encampment is too far distant for that, at the week-ends. This is in accord with what seems to be the disposition of the people generally. Their winters are long and dark and they desire, therefore, to gain the utmost from the sunshine and fresh air during the months of good weather. This is not only for enjoyment, but because they are all "health-conscious" without being in the least neurotic. This attitude towards health matters seems general and applies to venereal diseases as well as to any other illness.

### Attitude of the People

The impression formed is that there is not the same sense of shame and necessity for secrecy as regards venereal disease in Scandinavia as still exists in England. The desire to be cured and to attend for treatment as long as is necessary is quite general. The whole attitude towards sex matters in Scandinavia is "modern" and matter-of-fact. One public health official of a large city has been heard to state that he was strongly in favour of condoms being supplied in automatic machines. "It is late at night when the young people return from the country that they require these things, and the chemists' shops are closed then."

The Scandinavian people as a whole are well educated in all health matters and appear to have the utmost respect for, and confidence in, their medical advisers. This is undoubtedly not only due to the equitable disposition of the patients themselves but is fostered by the prolonged and thorough medical training necessary before qualification. A period of at least eight years as a medical student is the usual time for training, and in addition 'specialists' have to study their subject for some years and to pass examina-

tions in that subject before being accredited in the specialty. This undoubtedly accounts in some measure for the very great confidence shown by patients, though no doubt the knowledge that they are bound to attend till treatment is finished must play some part.

### Clinics for Venereal Disease

In various centres in the cities the polyclinics are arranged not only as departments of hospitals but also in the city itself. In some cases the polyclinics for venereal disease may be situated in large municipal buildings, where child welfare, gymnastics, sunlight therapy, baths, etc. are also in use so that no patient entering the building would be obviously attending the venereal department. In some places also smaller polyclinics are situated in flats in ordinary blocks of business flats, and again, save to other patients in the waiting-rooms, it would not be obvious on entering the building that the patient was attending for the treatment of venereal disease.

Almost without exception these clinics are modern in equipment and furnishing, and spotless with white paint (even benches being white enamelled). Flowering plants give a gay air and add a domestic touch. The medical, nursing, and clerical staffs are quick, efficient, and friendly. The waiting patients in turn are ready to spring up and go in immediately a light or a bell indicates that the doctor or nurse is ready for the next patient. This, so far as women at least are concerned, is a welcome change compared with conditions in England, where so often valuable time is wasted by patients not being ready when called upon.

### Treatment

The treatment of gonorrhoea does not compare favourably with that in the teaching hospitals here, but the tests of cure in Sweden and Denmark are prolonged and are undertaken at long intervals after "cure" is believed to have been achieved, and so good results are obtained. In this, of course, the element of compulsion no doubt plays a part in the patients' ready acquiescence when called upon to attend. The treatment of syphilis seems on the whole to be more protracted than in this country, but less arsphenamine is used. Almost continuous bismuth therapy for the whole of the second year of treatment is the usual rule in cases of early syphilis with persistently negative serological tests after two synchronous courses of bismuth and arsenobenzol. Again, patients accept the necessity for investigation of the cerebrospinal fluid, and appear to attend on call when required years later for a lumbar puncture if a pathological cerebrospinal fluid had been found earlier, even though the patient now called upon felt well and free from symptoms. In conclusion, the success of Scandinavian methods seems to depend, as elsewhere on three factors: a well-educated and willing patient, an efficient and kindly doctor, and facilities for treatment readily obtained in pleasant and accessible surroundings.

\*\* The Commission on Venereal Diseases appointed by the Minister of Health in 1937 consisted of Colonel L. W. Harrison and Mr. Dudley C. L. Ward of the Ministry of Health, Dr. T. Ferguson, Deputy Chief Medical Officer of the Department of Health for Scotland, and Dr. Margaret Rorke. Its report, which was published on June 3 by His Majesty's Stationery Office, will receive more detailed notice in a future issue of the *Journal*.

The jury consisting of Dr. Ch. Achard, Professor Urbain Professor M. Lisbonne, and Dr. Devraigne assembled in Paris on May 18, decided that the Prize for Local Immunity shall not be awarded this year. In consequence its amount will be added to that already in hand which will thus attain the sum of 30 000 francs. MSS must reach *La Biographie* 5, rue Paul Barruel, Paris, by February 15, 1939, at the latest.

\* *Anti-venereal Measures in Certain Scandinavian Countries and Holland. Reports on Public Health and Medical Subjects No. 83.* H.M. Stationery Office 2s. 6d.

## Reports of Societies

### INCIDENCE OF TONSILLECTOMY IN SCHOOL CHILDREN

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on May 27, Sir ARTHUR MACNALLY, presiding, a paper was read by Dr J. ALISON GLOVER on the incidence of tonsillectomy in school children.

Dr Glover said that the rise in the incidence of tonsillectomy was one of the major phenomena of modern surgery. It had been estimated that 200,000 of these operations were performed annually in this country and that tonsillectomies formed one-third of all operations performed under general anaesthesia in the United States. He presented a table showing the number of tonsillectomies on public elementary school children officially recorded annually for London and for England and Wales respectively. A few of the years each typical of his immediate period might be selected.

	London	England and Wales
1919	11,517	42,674
1924	8,051	29,474
1929	17,186	97,518
1934	9,715	73,252
1937	10,125	74,317

A considerable fall in the operation rate took place in 1932 and continued until 1935 in England and until 1936 in London, the rate was now rising once more.

#### Geographical and Age Distribution

Many attempts to assess the after-effects of tonsillectomy, Dr Glover went on, lost much of their value because they gave no precise information as to the age of the children at operation. The period of highest incidence was between 5 and 7 years, a time of great change alike in the oral cavity and in the general development of the child. Was it not possible that many of the operations performed at this age of rapid development removed tonsils which were enlarged physiologically or in response to their protective function? Might not some of the improvement ascribed in such cases to tonsillectomy be really due to physiological changes which normally took place at this stage in the child's life?

Turning to geographical distribution Dr Glover showed how the operation rates differed in various parts of the country. For all England and Wales the average operation rate was 17 per cent, but in six areas (the Stoke of Peterborough, the county of Rutland, the boroughs of Blyth, Wrexham and Bexhill and the urban district of Abertillery) it was more than three times the average rate. Many areas showed more than twice the average rate. On the other hand, four counties, four county boroughs, eleven boroughs and one urban district had rates less than one-third of the average. A child living in Rutland was nineteen times more likely to undergo tonsillectomy than one living in Cambridgeshire. An Enfield child was twenty times more likely to have the operation than one in Hornsey. A child living in Bexhill would seem to enjoy climatic and cultural advantages at least equal to those of a Birkenhead child, yet he was twenty-seven times more likely to be submitted to operation.

#### Social Incidence and Mortality

The social incidence of tonsillectomy was the most puzzling feature of its aetiology. He quoted the recently published report of the Schools Epidemics Committee of the Medical Research Council, which gave the following

information relating to sixteen large public boarding schools for boys and nine for girls. When the inquiry began in 1930 32 per cent of boys and 43 per cent of girls had had their tonsils removed. In every subsequent census these proportions of tonsillectomized pupils increased, and at the end of the inquiry the boys' school with the highest proportion of tonsillectomized pupils showed 70 per cent of all boys in the school tonsillectomized, the school with the lowest proportion had 37 per cent. In the girls' schools the highest proportion was 63 per cent and the lowest 42 per cent.

Finally Dr Glover discussed the mortality from tonsillectomy in children under 15 years. The Registrar-General's statistical review for 1935 included a reference to this mortality for the years 1931 to 1935. Enlarged tonsils and adenoids were given as the cause of sixty deaths over the five years and tonsillectomy without specification of the disease for which the operation was performed was given as the cause of 313 deaths, 269 of these being deaths of children under 15. From the Registrar-General's review and from information supplied by Dr Percy Stocks it appeared that during the five-year period 1931 to 1935 the annual average of deaths from tonsillectomy in children under 15 was eighty-five and this was probably a conservative estimate.

#### General Discussion

Sir ARTHUR MACNALLY said that he had been convinced for a very long time that too many tonsillectomies were done among school children. One clinic had remarked that when they entered their surgeons' found that the supply of juvenile tonsils was diminishing, the standard of the adult. That, however, was unjustified criticism. Many practitioners who perhaps did not realize the benefit of reading the Board of Education reports felt that they were doing the best for their patients in recommending removal of the tonsil and this feeling had spread to parents. He was sorry that Dr Glover had made no reference to the pressure of parental opinion in the more expensive and exclusive schools.

Dr W. H. W. ATTLEE said that at a school in which he was interested something like 50 per cent of the new boys had had their tonsils enucleated. Thirty years ago the proportion was something like 20 or 30 per cent. Undoubtedly the general school health was better now than formerly, but he thought this could be accounted for by improved hygienic measures rather than by the greater incidence of tonsillectomy.

Mr T. B. LAYTON said that as early as 1911 he came to the conclusion that the number of tonsil operations was excessive. On resuming his civil practice after the war he became more and more conservative in this respect. It seemed to him that there was an overwhelming evidence that the subepithelial lymphatic glands of the upper respiratory tract formed one of the child's first lines of protection during the time it was developing acquired resistance. Of these glands the tonsil was the largest and was slightly different in structure from the others and he believed it to be the most important of the protective mechanisms. If a person had had three attacks of tonsillitis which seemed to be due to organisms residing in the tonsils—not acquired from without by droplet infection—he would not admit that tonsillectomy was a gamble. One was more likely to get a good result from that operation than from any other in surgery. But without such an indication he did not think one could ever be certain that the advice to have the tonsils removed was really productive of good result. At least as much time should be given to making the decision as to operation as was given to the operation itself and he refused to do tonsil operations in children quickly, twenty minutes being his minimum. He thought it likely that not very much harm was done in removing tonsils from children on the well-to-do living under conditions of good hygiene but irreparable harm could be done by removing the lymphoid tissue of children living under a bad regime. For years he had followed the rule that the tonsil of a child under 5 should never be removed unless the evidence in favour of removal was over-

whelming and subconsciously his age limit was going up and up. In tonsillectomy as practised in the eighties of the last century the children operated on were usually aged from 11 to 14. The nomenclature had been retained, but the age at which operations were customarily done had been altered. Among other contraindications he refused tonsil operations during the winter. He also would not operate on a child because of recurring colds, to do so was to invite a bad result. In chorea he dreaded taking out tonsils for fear of making the condition worse. One often heard of tonsillectomy being performed to cure otitis media and he was willing to admit that in a certain number of cases it was a proper operation but he was absolutely opposed to routine tonsillectomy in this condition.

Mr E D D DAVIS said that tonsillitis might be primary or secondary. A primary tonsillitis was derived by one patient from another and from extraneous causes but there were a certain number of cases which followed the extraction of teeth or a septic operation on the nose. He believed the ear, nose and throat surgeon selected his cases very carefully, but a certain amount of pressure was brought to bear on him by the family practitioner.

Dr L G GLOVER recalled that many years ago he was medical officer to a convent school attended by children of the poorer class. He was accustomed to examine the children every quarter. He divided the tonsil cases into three classes: those which must be operated on, those which might be operated on, and those which need not be operated on. He told the nuns that the children in the first class should be operated on but nuns were not keen on operations and the bulk of the children were not subjected to operation. After a year or eighteen months he found that these children could be placed in the class that needed no operation.

Dr PERCY STOKES said that Dr Glover had estimated that about 20 per cent of elementary school children by the time they were 14 had been tonsillectomized. He supposed that taking the whole child population up to that age, the proportion might be 25 per cent. In an April issue of the *Public Health Reports* of the U.S.A. Collins gave some statistics of the frequency of these operations in the United States. They related to a sample of about 40,000 individuals in eighteen different States coming from town and country and representing all types of social classes. Over four years the families were visited in their homes and detailed records were kept of the operations. It appeared from the tables of operation rates at each age that if the rates of tonsillectomy had been maintained in a group of children growing up from birth to the age of 14, 54 per cent would have been tonsillectomized by the time they reached their fourteenth birthday. That figure might be taken as roughly comparable with the 25 per cent in this country. The American figures also showed the rate to be greatest in the cities and in families with the largest incomes. Dr R P GARROW suggested that maternal anxiety was an important factor in the demand for tonsillectomy.

The Chengtu Eye, Ear, Nose, and Throat Society, the first society in China representing jointly those practising in ophthalmology and otolaryngology, was organized at the Eye, Ear, Nose, and Throat Hospital in Chengtu, West China, on December 14, 1937. The following officers were elected: President, Dr Eugene Chan, Vice-President, Dr Robert A. Peterson, Secretary, Dr C C Teng, M.D., and Treasurer, Dr C R Peng. The members of the society are derived from the departments of ophthalmology and otolaryngology of the West China Union University of Chengtu, West China, of the National Medical College of Nanking, and of Cheeloo University of Tsinan, Shantung, and from practitioners specializing in these fields in Chengtu and other centres in West China. The transfer of medical schools with their faculties and students from the war zone in East China to Chengtu in West China has created there a unique centre of medical teaching and clinical activity.

## OCCUPATIONAL DERMATOSES

The summer meeting of the Association of Industrial Medical Officers was held this year in Nottingham on May 12, when a discussion on the occupational dermatoses was opened by Dr H S WALLACE of the Nottingham General Hospital, who was present by invitation, with the chairman of the association, Dr L P LOCKHART in the chair.

Dr Wallace described briefly the structure and functions of the skin, stressing its protective and detoxicating properties. He mentioned the difficulties experienced in distinguishing between skin reactions due to internal and external irritation and discussed the value of the patch test. Dermatoses, he said, were caused by mechanical, thermal, ictinic, chemical, and microbic agents. In relation to the industrial side of the problem he considered that the true occupational dermatoses came under three headings—namely those due to strong irritants, those due to idiosyncrasy and those caused by the repeated action of a mild irritant. The industrial skin lesion began as a rule on the part where exposure was greatest, and might thereafter spread to other parts. It cleared up quickly on giving up work, but might return if a long convalescence was not allowed. The prevention of industrial dermatitis could be brought about by (1) selection of workers, (2) adequate protective methods, and (3) cleanliness. In discussing treatment Dr Wallace referred to the value of low carbohydrate and fat diets, to the exhibition of alkalis and calcium, and to the application of lotions, creams, and pastes. No greasy ointments, he maintained, should be used except in chronic old-standing cases. He mentioned also methods of desensitization by protein injections and by autohaemotherapy.

On May 13 members of the association visited the factories of Messrs Boots Pure Drug Company Limited at Nottingham and Beeston, at the invitation of the company, and were entertained to luncheon by the chairman, Lord Trent.

## EXPERIMENTAL ALLERGY

At a meeting held at the Sims Woodhead Memorial Laboratory, Papworth Village Settlement, on May 19, Dr WALTER PAGEL gave a demonstration on the allergic tissue reaction and the allergic diseases.

Dr Pagel showed that the reaction of the allergic tissue differed from that of normal tissue not only in the intensity of the inflammatory process and the time of its appearance but also in certain qualitative features. Characteristic of the allergic tissue reaction were, for instance, hyaline nodules with peripheral mononuclear cell proliferation reminiscent of rheumatic nodules and intensive infiltration with eosinophilic cells. The allergic theory of rheumatism was then discussed. Experimental muscular rheumatism produced by the intramuscular injection in rabbits of 1 c.c. of a muscular antiserum (serum from guinea-pigs treated with suspensions of muscular tissue from rabbits) was shown. The intravenous injection of pig serum and caffeine (5 to 10 c.c. of a 10 per cent solution) in rabbits sensitized against pig serum led to a localization of the allergic reaction to the cardiovascular system. In the myocardium, mononuclear cell nodules developed resembling those seen in certain human conditions, such as chronic septicaemia or polyarthritis, and in the aorta extensive atherosclerosis was observed. The work done in conjunction with Dr Paul Kallos (Stockholm) supported the theory that allergy was a factor in the pathogenesis of conditions related to rheumatism.

## Local News

### ENGLAND AND WALES

#### Empire Rheumatism Council

Lord Horder chairman of the Empire Rheumatism Council gave an informal luncheon on May 26 for the purpose of wishing success to the first three Research Fellows appointed by the Council—namely Dr C B Dyson Dr H J Taylor, and Dr W S Tegner. In introducing the guests Lord Horder said that the gathering was intended to bring together three groups of persons interested in the problem of rheumatism research and treatment first of all the three Research Fellows who represented the immediate spearhead of the movement then a number of benefactors whose munificence had made the appointments possible, and finally the officers and members of the Council itself. The first of the Research Fellows Dr Dyson had been for the past seventeen years engaged in research work in the pathological department of St Mary's Hospital. He would carry on his work for the Council at the Alexander Maclean Laboratory Hospital of St John and St Elizabeth London at the British Red Cross Clinic for Rheumatism London and at St Mary's. Dr Taylor who since 1928 had been engaged in research work at the St John Clinic Plymouth would also work at the Alexander Maclean Laboratory, and at the St John Clinic and at St Stephen's Hospital. Dr Tegner who had been chief assistant at the British Red Cross Clinic since 1936 would carry out work in a different category from the other two he was leaving London as holder of the Sir Alexander Walker Travelling Scholarship to study and report on the methods of treatment followed in the chief rheumatism clinics of Europe and North America. The whole purpose of the movement was intensive research in the laboratory and by the bedside into the causative factors of rheumatic disease. Each of the Research Fellows then briefly addressed the company saying with what expectations they started upon the enterprise. Sir William Willcox one of the trustees of the Council proposed the health of the benefactors mentioning in particular Mr J Spedan Lewis Mr H Gordon Scliffidge Sir Benjamin Cohen Sir Alexander Walker Colonel Gretton M.P., Mr Alexander Maclean and Sir Joseph Burn. Mr Maclean and Sir Joseph Burn responded the latter, who is general manager of the Prudential Assurance Company remarking upon the loss of industry represented not only by the actual sufferers from rheumatic disease but by those in their family—daughters particularly—who were expected to give up their own work to attend a crippled parent.

#### The Modern Hospital on Exhibition

An exhibition of photographs and other illustrations of modern hospitals in the United Kingdom and abroad has been arranged by the Royal Institute of British Architects at the Building Centre New Bond Street, London. The large architectural plans need an expert eye to read them, but the scale models and the excellent photographs are instantly to be appreciated. They certainly bring out the striking contrast between hospitals old and new. The old hospitals were very often built with few ideas as to planning and none at all as to beauty and with the extensions that have been necessary from time to time they have become amorphous and exasperating constructions in which one loses one's way and is revolted by ugliness at every turn. The modern hospital on the other hand has a beauty in its mere plan without any adornments of which the architect is properly sparing. The hospitals of which plans are shown include the new Westminster the buildings of St Bartholomew's, South West Middle-

sex Fever Hospital the new isolation block of London Fever Hospital St Helier's Hospital Surrey the Kent and Canterbury Hospital a model of the Tuberculosis Hospital Sully Cardiff and the design for the reconstruction of Great Ormond Street Hospital for Sick Children. A new Hospital and Medical Section has been added to the Building Centre to provide medical men architects and hospital authorities with means for obtaining specialized information on all matters connected with the building and equipment of such institutions. One feature of the section is an up-to-date library of hospital plans contributed by architects from all parts of the world. These plans are available for consultation by those professionally engaged in any form of hospital work.

#### Tuberculosis Conference in London

The following are the subjects for the twenty-fourth annual conference of the National Association for the Prevention of Tuberculosis to be held in the Great Hall British Medical Association House Tavistock Square London W.C.1 on June 30 and July 1 and 2. (1) The development and organization of anti tuberculosis activities in rural areas. (2) The family and tuberculosis—the discovery and protection of contacts in a tuberculous household. (3) The control of tuberculosis in tropical and sub-tropical regions. (4) The mental aspects of tuberculosis. (5) How tuberculosis affects the mental life of the normal person. (6) How the mentally disturbed patient is affected by tuberculosis. Practitioners interested in any of the above subjects and wishing to attend any part of the conference may obtain an invitation on application to the Secretar General N.A.P.T. Tavistock House North Tavistock Sq are London W.C.1.

#### Portsmouth Health Congress

The Royal Sanitary Institute in the preliminary programme of the Health Congress which is to be held at Portsmouth from July 11 to 16 announces that among the subjects to be discussed at this year's congress are the following the future of the general hospital the defects found in school entrants and the steps that might be taken to effect their remedy before the beginning of school life behaviour and nervous disorders in children clinics for the pre-school child the food manufacturers contribution to public health the Food and Drugs Bill 1937 meat and food inspection the Tuberculosis (Attested Herds) Scheme air raid precautions propaganda and the hygiene of indigenous races in the Tropics the health of the worker and the duration of incapacitating sickness. The congress will have as president the Earl of Bessborough and already 860 official delegates have been appointed by Government Departments foreign and Dominion Governments and municipalities local authorities etc in Great Britain. At the Health Exhibition arranged in connexion with the congress the exhibits will include foods sanitary appliances and appliances illustrating municipal activities and hygiene in the home.

#### British Orthopaedic Association

On the first day of the spring meeting of the British Orthopaedic Association a dinner was held at the Langham Hotel with the president Mr Naughton Dunn in the chair. In proposing the health of the British Orthopaedic Association Mr H S Souttar said that he shared with them all a great regard and affection for the founder of the association the late Sir Robert Jones whom he well remembered meeting in 1910 at Netley. It was to him that they owed the creation of the B.O.A. and the position that orthopaedic surgery held to day. He was glad to notice that there were present that night representatives of the orthopaedic art from all the northern countries of Europe, and he congratulated the British Orthopaedic Association on securing their attendance. Mr Souttar then paid a graceful tribute to Mr Naughton Dunn and

ended his speech by sustaining his now well-known reputation as a raconteur. In reply, the President recalled the first meeting of the British Orthopaedic Association at Roehampton Hospital and the late Mr Muirhead Little, who was their first president. He had, he said, received letters of good will from Professor Osgood and from Dr Goldthwaite of Boston. In proposing The Guests Mr Harry Platt classified them neatly and according to the usual device of the surgeon into three groups: (1) the personal guests of individual members; (2) the co-workers in the cause of orthopaedic surgery; and (3) guests from over-seas. In according a special welcome to colleagues from Denmark, Norway and Sweden, Mr Platt said they all had very pleasant memories of the meetings held last year at Copenhagen and Stockholm and they had had it in mind to organize the present meeting in honour of their guests on that occasion. The Scandinavians he remarked, had been here before—as pirates who in history books were euphemistically described as Vikings. He coupled the toast with the name of Professor Wildenstrom, who in reply said that the Vikings were here again and this time as friends. He then invited the Scandinavians present to stand up and drink to the welfare of the British Orthopaedic Association, which they did, punctuated with lusty shouts of welcome. After that Professor Maffei of Brussels said a few words in both French and English.

#### The London Hospital's Needs

In 1940 the London Hospital will celebrate its bicentenary. The chairman, Sir William Goschen, announces that a survey of the hospital's vital requirements has lately been made by the medical and surgical staff, who have recommended as major needs the building and equipping of a modern x-ray department, 'remodelling of the operating theatres, the establishment of a fracture clinic, extension of the laboratories, ear, nose, and throat wards, adequate accommodation for septic cases, improvements to the children's wards, a new dental department, and an extension of the nurses' home. The cost of carrying out this programme is estimated at £270,000, and to this must be added £60,000 for general funds. At a festival dinner, held at the Mansion House on May 25, a gift by Lord Nuffield of £10,000 was announced, making £46,000 already received for the extensions and improvement scheme. The Duke of Kent said from the chair that Queen Mary had asked him to give a cheque for 200 guineas as a mark of her interest in the appeal as President of the London Hospital. The Archbishop of Canterbury, supporting the toast of 'The London Hospital', said that he did so with real personal enthusiasm, having been associated with the hospital during eight hard and happy years as Bishop in the East End.

#### Newcastle Conference on Child Nutrition

On May 14 the Children's Minimum Council held in Newcastle-upon-Tyne the second of its provincial conferences on child nutrition. Over six hundred people, including delegates from 214 organizations of all kinds in Northumberland and Durham, enthusiastically supported resolutions calling on the Government to ensure better food standards for mothers and children. All the political parties were represented, and delegates came from twenty-three local authorities, from trade unions, religious, social, and educational bodies, women's guilds and institutes, teachers and medical people. The Lord Mayor of Newcastle opened the conference and presided over the first session. The principal speakers were Professor V. H. Mottram, on 'Food as the Foundation of Fitness,' and Miss Eleanor Rathbone, M.P., on 'The Beginnings of a Nutrition Policy.' Professor Mottram paid a tribute to the research work done by Newcastle scientists: 'It is the mothers and children who suffer most. By the time the children come under the care of the education authorities they are already damaged goods. If we could only feed the children and the expectant mothers we should do

much to produce a decent nation.' Miss Rathbone, chairman of the Children's Minimum Council, explained that the Council was a non-party, co-ordinating body working to improve standards of child nutrition. She urged free milk for all school children, cheap milk for mothers and young children, and school meals to be regarded as a part of the school routine. She pointed out that the number of children receiving dinners had remained practically the same as in 1911. She reminded the delegates of the promise of the Parliamentary Secretary to the Ministry of Agriculture, made during his election campaign in 1935: 'I hope soon to be able to announce a policy under which the cheap milk scheme for school children will be extended to expectant mothers and children under 5. It is our policy to divert surplus food into the stomachs of those who live in our back streets and who are sorely in need.' She urged the formation of a local committee to continue the pressure on the Government through all Northumberland and Durham organizations. Many delegates joined in the discussions in each session, several pointing out that increased incomes were the key to better nutrition and another mentioning the difficulties of 'scholarship children, and suggesting that they should all be provided with food and clothes. Dr David Burns, professor of physiology at King's College, Durham University, presided over the evening session.

## SCOTLAND

#### Lord High Commissioner's Visit to Hospitals

The usual round of visits to Edinburgh hospitals was paid last week by the Lord High Commissioner, Sir John Gilmour, representing the King at the General Assembly of the Church of Scotland. At the Royal Infirmary on May 25 Sir John and Lady Gilmour presented prizes to the nurses. In a short address Sir John said that the problem of accommodation was one which caused great anxiety to the governors of hospitals, both on account of difficulty in providing for an increasing number of persons who sought admission, and in finding accommodation for the greater number of nurses who were now required. Conditions of service of nursing staffs were being much improved, and those who knew the self-sacrificing nature of a nurses' work agreed that this improvement was welcome. The following day a visit was paid to the Deaconess Hospital, where the Rev. Dr Fiddes, vice-chairman of the Hospital Board, said that at its opening in 1894 this institution had had twenty-two beds, to-day it was a modern hospital with eighty-eight beds. It was the only hospital in this country founded and entirely supported by the Protestant Church, but it was not in any way a sectarian or even a local hospital. On May 27 Sir John Gilmour addressed the annual meeting of the Edinburgh Foot Clinic, at which Lord Elphinstone, who presided, said that the annual number of treatments at the clinic was now some 22,000.

#### Scottish Health Visitors

The annual conference of the Scottish National Health Visitors Association was held at Aberdeen on May 21, delegates from thirty-two local authorities attending. Dr J. M. Mackintosh, Chief Medical Officer of the Department of Health for Scotland, pointed out that the decline in the infant mortality rate from 130 at the beginning of this century to 80 at the present time related chiefly to infants after the first month of life, about half of the infantile deaths every year occurred during the first month of life. The time for taking a child to the welfare centre depended upon many factors, but as a rule this should be about the end of the first month of life when home routine had been re-established. Dr James A. Stephen, medical officer for mother and child welfare work in



At fifteen drew attention to the changes in the rates of death among infants. The death rate from diseases of the digestive system had fallen from 47 to 17 while that from prematurity had increased from 29 to 31 and that from bronchitis and pneumonia had fallen from 24 to 20. The significant fall in deaths from digestive diseases was due largely to the better education of mothers by health visitors in the homes and at child welfare centres. Lady Leslie Mackenzie Edinburgh said that in some places caravans took health visitors to the scattered homes of mothers in country districts; she believed in this was a movement which ought to be encouraged by medical officers of health.

### Scottish Housing Conference

At the annual conference of the Scottish National House and Town Planning Council held in Stirling last week Mr H J Scrimgeour Wedderburn Under-Secretary of State for Scotland addressing some 200 delegates from local authorities said that Royal Commission about twenty years ago estimated that Scotland required 200,000 houses to solve her housing problem. Since then over 280,000 working class houses had been built in this country at an annual cost to the Exchequer of over £2,000,000. These new houses represented in the aggregate a city of about the size of Glasgow but they had enabled only about one quarter of the whole population to be rehoused in modern well equipped dwellings. Present requirements were still estimated at 200,000 new houses but he believed that when these were built they would be found not to be sufficient. He described the use of timber which made good permanent houses that were likely from the experience of Canada and Sweden, to last considerably longer than a house of the same kind built of brick. The Department of Health he said was prepared to approve a subsidy at the usual rates for such timber houses and some twenty four housing authorities in Scotland were considering the use of wood. The city architect of Edinburgh discussing alternative methods stated that Canadian red cedar had until recently been too costly for ordinary use but as Americans were now using their own timber Canadian lumber had fallen to a price which afforded a great opportunity for its employment in this country.

## FRANCE

[FROM OUR CORRESPONDENT IN PARIS]

### A Windfall for the Academy of Medicine

Thanks to the generosity of Madame Jansen the Academy of Medicine is the richer by some five million francs. With the franc at eight to a shilling this gift may not seem very imposing in terms of sterling but it is most welcome just because of the depreciation of the franc for the Academy has in its gift many prizes and scholarships whose cash value has become derisory as the franc stands at present. It is therefore probable that this latest windfall will be devoted not only to new prizes but also to infusing new monetary life into old ones.

### Hereditary Factor in High Blood Pressures

On April 12 Dr G Richard of Royat les Bains presented to the Academy of Medicine a study of the influence of heredity on hyperpiesis. After concluding from the literature of this subject that there is a history of hyperpiesis in the ancestry of some 70 per cent of hyperpiesics he proceeded to record his latest observations of 1,836 cases. He found evidence of hyperpiesis in the ancestry of 79 per cent and he was able to confirm, up to a certain point the observation of von Budy who noted this peculiarity about hyperpiesis—

namely that the condition is often transmitted to the sons rather than to the daughters if the father is a hyperpiesic and vice versa for the distaff side. It would also seem that the site of a hyperpiesic lesion is apt to be identical for the various members of the same family. Dr Richard has come to the really alarming conclusion that the offspring of parents both of whom are hyperpiesics have only sixteen out of a hundred chances to escape hyperpiesis themselves. This chance is forty-three in a hundred when only one parent is a hyperpiesic. It may therefore be advisable to discourage the marriage of those whose families have a bad record of hyperpiesis on both sides.

### Tuberculosis Campaign Since 1918

The following table will show at a glance how much has been done between 1918 and 1936 to provide the tuberculosis victim with sanatoria and hospital nurses etc.

	1918	1936
Depression	70	43
Healed cases	113 beds	— 4 beds
At present	—	374
Sanatoria	195 beds	1346
Private	—	130
Health centres	—	40
Recreation	—	57
1. Private	—	70
2. Public	660	800
Sanatoria	—	20
Sanatoria	70	2000 for tuberculosis

In the period under review the number of sanatoria for pulmonary tuberculosis has risen from nine to 138 the number of hospital sanatoria from none to twenty one surgical sanatoria from five to fifty five and preventoria from none to 225. One of the most remarkable achievements is the foundation of as many as twenty six schools of visiting nurses there was nothing of the sort in 1918. The Grancher system of taking children from tuberculous homes and putting them in healthy homes with foster parents has it will be seen grown greatly in favour since 1918.

### Medical Examination of Motor Drivers

In an earlier letter (*Journal* April 16 p. 869) reference was made to a resolution recently adopted by the Academy of Medicine in favour of medical examination of all motor drivers in the hope that it would do something towards reducing the number of motor accidents. This resolution has not enjoyed a very good press. Though the Latin temperament is said to be as hostile to compromise as the Anglo-Saxon temperament is addicted to it there is a chance of the suggestion being adopted that the medical examination should be reserved for the drivers involved in road accidents which involve the arm of the law. If all such drivers had to undergo a medical examination which included mental tests conducted by a psychiatrist might not the very prospect of this ordeal induce some caution even into the most rash? To emerge from it branded as a high grade mental defective or with some even more opprobrious term recently invented by the psychiatrists would be to suffer an indignity far greater than any deserved sentence or even term of imprisonment. Apart from this prophylactic action of the psychiatric examination there would presumably be a good prospect of the recklessly inconsiderate driver having his licence cancelled on the strength of the psychiatrist's report.



## Correspondence

### Treatment of Anterior Poliomyelitis

SIR—My attention has been drawn to a letter from Dr E A Buckley on the above subject in the *Journal* of May 21 (p 1130) in which he makes specific reference to the opinions of "orthopaedic surgeons and others" who apparently have been closely identified with the treatment of cases at the LCC Queen Mary's Hospital Carshalton. The treatment of these cases of poliomyelitis at Carshalton by Sister Kenny's methods is under the constant supervision of an advisory committee of some of the best-known orthopaedic surgeons and neurologists in London. It is hoped that some time in the autumn a report will be submitted to the London County Council from the advisory committee as well as from the Council's own permanent medical and surgical staff. In the meantime it is only fair to Sister Kenny, as well as the members of the advisory committee and the LCC's own staff, to make it quite clear to your readers that they are not in any way responsible for the statements made by Dr Buckley. In fact, I am informed that none of them has ever seen or heard of Dr Buckley before his letter appeared in the *Journal*—I am, etc.,

FREDERICK MENZIES,  
County Hall London SE 1 Medical Officer of Health, LCC  
May 27

### Nutrition of Denmark During the War

SIR—Dr Johanne Christiansen wrote to the *Journal* of May 28 (p 1174) a letter to correct misunderstandings which may have arisen from a reference by Dr Alfred Jordan to the rationing of foodstuffs in Denmark in 1918.

Those who are interested in this remarkable experiment in a whole national diet will find a description of it in the *Deutsche Medizinische Wochenschrift* of March, 1920. This article published in a medical paper of the highest repute and from the pen of Dr Hindhede, himself at the time of the experiment food adviser to the Danish Government, gives a different story from that of Dr Christiansen. The diet was a lacto-vegetarian one with a modicum of meat and alcohol. It was in fact a diet not unlike that of the exceptionally healthy Hunza people, to whom Dr Jordan refers in his letter.

Dr Christiansen is not himself free from creating "misunderstandings." I will take but one example for correction. He writes of the "vegetarian faddism of Hindhede." Dr Hindhede himself wrote in the above article "I am not in principle a vegetarian, but I believe I have shown that a diet containing a large amount of meat and eggs is dangerous to health. That, taken generally, may be untrue. In my opinion it ignores the striking health of such Danish subjects as the Polar Eskimos and the Faroe Islanders, but it is not vegetarian faddism—I am, etc."

Caversham May 30

G T WRENCH M D

### Incidence of Permanent Disability after Industrial Injury

SIR—Near the end of last year (*Supplement* December 18, p 367) you published a memorandum on rehabilitation centres for injured workmen. It was there stated that it should be possible to restore 95 per cent of the victims of industrial accident to their former working capacity. Permanent disability was thought to be inevitable in no

more than about 5 per cent of cases. In the course of subsequent correspondence this figure was challenged, and the incidence of permanent incapacity was put as high as 30 per cent.

With the object of producing definite evidence I carried out a statistical inquiry into the end-results of accident cases treated in the six-month period ending December 31, 1937, at the fracture clinics at Walton Hospital, Liverpool. The accompanying tables show the results of this inquiry. The total number of cases investigated (439) represents only such persons as were in employment at the time of the injury. Children, housewives, unemployed, and pensioners were excluded. The point with which I was chiefly concerned was to find the proportion of injured persons who eventually returned to the same occupation. Every case has been investigated, either by letter or interview, and the patient's statement as to the actual date of return to work has been accepted in estimating average disability periods.

TABLE I—In patients

Average	No of Cases	Average No of Days in Hospital	Average No of Subsequent Out-patient Attendances	Average Time off Work	Patients Returned to Work by April 1 1938	Died	Still Attending April 1 1938
Accidents at work	66	14.81	3.29	54.3	57	2	7
Road traffic accidents	50	13.28	4.61	56.7	35	7	8
Other accidents	45	12.58	3.73	53.2	36	4	5
Total	161				128	13	20

TABLE II—Out patients

	No of Cases	Average No of Out-patient Attendances	Average Time off Work (days)	Returned to Work by April 1 1938	Still Attending April 1 1938
Accidents at work	130	3.7	19.02	126	4
Road traffic accidents	31	4.64	30.8	31	0
Other accident	117	5.0	27.5	113	4
Total	278			270	8

TABLE III

Total number of employed patients treated during six months ending December 31 1937	439
Returned to work by April 1 1938	398
Dead	13
Patients still in hospital or attending as out patients by April 1 1938	28

Briefly the figures show that by April 1, 1938, of 439 employed persons treated during the six-month period from July 1, 1937 to December 31, 1937, 398 had returned to work, while forty-one (9.7 per cent) were either dead or still attending. Of the twenty-eight remaining in hospital or attending as out-patients I consider that thirteen will return to their former employment. If these expectations materialize the ultimate result will be that the proportion of persons suffering incapacity sufficient to prevent return to former employment is 6.4 per cent, this figure including 3 per cent dead.

I have no idea how my figures will compare with those of other surgeons. In view of the rather depressing estimates given by some of your correspondents, I am fairly pleased with the high proportion of patients who returned to their previous occupation. In regard to their disability periods there is no doubt that these could be improved.

considerable. Had I used figures expressing the date of or my own opinion as to fitness for full work the disability periods would have made a better showing, but entirely apart from this consideration, my investigation of the case records has led me to feel more strongly than ever that the establishment of rehabilitation centres would be a paying proposition to those upon whom falls the expense of caring for injured persons.

Every surgeon who comes into contact with persons injured during the course of their employment cannot fail to be impressed by the number whose return to work is delayed by the absence of facilities providing graduated activities leading to full manual labour. Organization in fracture clinics ensures that the patient shall be cured of his injury as quickly as possible. This is achieved by the provision of a record and appointment system which arranges that the injured person shall be brought before a trained surgeon at frequent intervals and with infallible certainty. A patient who fails to attend at the clinic on the due date receives within forty-eight hours a postcard inquiring the reason. I believe that this simple device plays a great part in securing the full co-operation of the patient up to the time of his cure.

But when the injury is cured there comes the period which must elapse before he is ready for work. Neither organization in fracture clinics nor massage departments can do anything to shorten this period. The rehabilitation centre envisaged in the report of the committee appears to provide exactly what is required to help those surgeons who are continually striving to reduce periods of disability to the minimum. It will improve results by shortening the period between "cure of injury and fitness for work," and it will bring closer the two dates which now are commonly far apart—that on which the surgeon believes and that on which the patient also believes he is fit for work—I am, etc.,

Liverpool May 23

W S DIGGLE,  
MChOrth FRCS

### Pancreatic Extract in Graves's Disease

SIR,—It is now eight months since there appeared in the *Journal* my article on the treatment of Graves's disease with pancreatic extract (October 2 1937, p 660). The recent paper by Mr Peter McEwan (May 14 p 1037) and Mr Cecil A Joll's letter (May 21, p 1123) have prompted me to make another appeal to the medical profession—this time included—at least to try the effect of pancreatic extract and small amounts of iodine in all cases that have the "thyrotoxic mask." Medical treatment is always bound to be slow in cases of endocrine imbalance and we cannot hope to produce the spectacular effects of thyroidectomy but as Mr McEwan writes—all are agreed that operative treatment of a gland so valuable as the thyroid is to be regretted and hope that medical research may find a better way. I am convinced as a result of the treatment of toxic goitre since 1931 with pancreatic extract that a remedy is at hand more especially in the goitrous condition is recognized early.

In a series of thirty-five cases of toxic goitre treated by me the results would bear favourable comparison with the operative results mentioned in Mr McEwan's paper. One certain fact admitted by several of my colleagues—that the diarrhoea of Graves's disease is distinctly helped by the oral administration of pancreatic extract. In several instances parenteral injections of a pancreatic hormone have entirely stopped the excessive stools and even the goitrous symptoms have gradually improved.

Mr Joll in his letter states that he is often in grave doubt as to whether a diagnosis of thyrotoxicosis is or is not substan-

tiable. This of course my greatest difficulty and I am certain that not unjustifiable criticism could be levelled at some of the cases that I have looked upon as cases of incipient goitre and treated as I thought successfully with pancreatin and alphidine. At all events whether or not some of my cases have only been neurotic the tachycardia tremors pulsation in the neck nervousness and loss of weight have all disappeared with my treatment within a few weeks and almost certainly within months.

With regard to immediate operation in all cases of toxic goitre we are asked to become goitre minded as we are appendicitis minded. Surely this seems too much to ask the general practitioner for in the one case a definitely useless appendage is being removed while in the other the structure in question is essential to the endocrine balance. Again the operation near or thyroidectomy has an effect on the subconscious mind of the patient and the operation is being performed on a person in a highly nervous state. Undoubtedly thyroidectomy has a very important part to play in the treatment of advanced toxic goitre or in the adenomatous forms which often in time become toxic. The surgeon has a very difficult task and it is little wonder that Mr McEwan states that only 67 per cent of his cases were fit for a full day's work.

Practically all forms of toxic goitre must be insidious in their origin and pass through an incipient stage. In none of my incipient cases of the past even years treated early with pancreatin has there been retrogression nor has the syndrome of symptoms manifested itself sufficiently to warrant surgical intervention. In some instances the enlargement of the thyroid has disappeared as also have the marked exophthalmos tremors and tachycardia in fact whatever the degree of the disease was the patient always admits that an improvement set in after the oral administration of pancreatic extract.

One thing is essential—namely, to find some surer method or early diagnosis whether instrumental or biochemical. I feel convinced that the cure of Graves's disease lies in the hands of the general practitioner who learns to make an early diagnosis and begins treatment with pancreatic extract and alphidine or Lugol's iodine in small doses. All cases showing an increased pulse pressure tachycardia nervousness tremors, and pulsation in the neck without necessarily having an enlargement of the thyroid should be looked upon as potential cases of Graves's disease—I am, etc.,

Liverpool May 25

C BAIRD MACDONALD

### Irradiation or Surgery for Cancer?

SIR,—The treatment of cancer by irradiation is receiving an ever increasing amount of notice in the medical press. Constant references to the subject are also occurring in the lay press and the cry is always for radium and yet more radium. The general public is given the impression that all that is necessary to combat the ravages of malignant diseases is a sufficient supply of radium. Brilliant results which have been obtained by other methods are apt to be forgotten and surgery has been driven into the background. Is this fair to the surgeon or what is much more important to the patient? Irradiation is often referred to as the modern method of treating cancer. Modernity is not always a recommendation, as can be witnessed in the case of music, painting architecture and certain forms of government.

The annual reports of the National Radium Trust and Radium Commission for 1936-7 which reveal statistics of the treatment of carcinoma of the mouth cheek, palate alveolus, tonsils, will be seen when compared with those of radical surgery, so far as immunity from recurrence is concerned, to show retrogression rather than advance. It will be noticed in that report

(c) That histological confirmation of the clinical diagnosis of carcinoma was obtained in less than half the cases—

namely 46.6 per cent. Thus conclusions in more than half the patients reported on are therefore based on clinical evidence only.

(b) A period of three years survival rate was adopted whereas in the surgical statistics, which I shall quote, the period was five years. Although the report concerns radium treatment it seems that surgery was extensively employed, as, for instance two hundred block dissections of the neck were carried out with an operative mortality of 7.2 per cent. Allowing that all the cases treated would have been confirmed by biopsy to be carcinoma, we find, on comparing the results of irradiated cases with those published by Mr. Norman Pitterson in the *Lancet* of September 22 and 29, 1936, where surgery was employed and all cases confirmed by biopsy, that the survival rate of the latter is markedly better.

A short reference to the statistics shows

(i) For carcinoma of the hard palate treated by irradiation there is a survival rate of 28.6 per cent for three years, as against 29 per cent for five years treated by surgery.

(ii) Carcinoma of the alveolus treated by radiation has a survival rate after three years of 30 per cent, as against 33 per cent for five years treated by surgery.

(iii) Fauces tonsil and soft palate. Mr. Pitterson quotes forty cases proved by biopsy with a 22 per cent survival rate of five years, as against 20.8 per cent by radiation for three years.

(iv) In a previous report the Radium Commission quoted 25.7 per cent survival rate by irradiation for carcinoma of the tongue, presumably for three years, whereas surgery has given 25 per cent alive after five years.

(v) Irradiation of the cheek gave 37.4 per cent survival rate for three years, as against 70 per cent for five years in ten cases. Three have lived for over eleven years, one for eight and a half years. (Vide *British Journal of Surgery* October, 1937.)

(vi) As regards glandular involvement, there appear to be no statistics of the survival rate when irradiation alone was employed. Apparently 16.5 per cent were treated by block dissection and 56.5 per cent by radiation, but no recurrence-free rate for each group after three years is mentioned. Of twenty-three cases of proved glandular involvement in Mr. Pitterson's cases treated by block dissection alone, three patients were alive after 10 years 9 months, 8 years 10 months, and 7 years 11 months respectively. It often happens that glands diagnosed as malignant prove on section to be, so far as investigation is possible free from cancer cells. There is no proof, therefore, unless a section has been previously made, that a mass in the neck which was irradiated and which subsequently resolved was malignant, it may have been inflammatory.

(vii) Table 24. The net survival of all cases of carcinoma of the mouth treated by radiation is 16.6 per cent after five years showing a marked drop in proportion to the three years survival rate.

Quite a large percentage of post-operative deaths in Mr. Pitterson's series were due to bronchopneumonia. In more recent years, however, anaesthetics have improved so enormously as to render this complication much less common. The survival rate should therefore improve still further. Another factor standing out in the Radium Commission report is the fact that accurate classification and localization are extraordinarily difficult. As a rule, the surface extent of tumours, where surgery is not employed, is all that is known, the extent of penetration into the tissues and the relation of the mass to neighbouring structures are a matter for surmise. Where surgical removal is undertaken a much more accurate estimate is obtained of the magnitude of the tumour and its orientation.

It would appear that the best results in some cases will be obtained by a combination of surgery and irradiation. Surgery, however, in all but inoperable cases should be

considered the main weapon of attack. The pendulum has indeed swung too far in the direction of irradiation. One has only to read the original letters and obituary notice of the late Mr. Percy Furnivall (*British Medical Journal* May 14) to realize that actual irradiation is not the end of the story, and one is reminded again that severe pain is present in very many cases that survive radiation. It may be said of surgery that no new disease is introduced. Radium, however, may cause oedema, burns, necrosis of soft or bony structures, even osteomyelitis. These complications may necessitate the employment of surgical measures, sometimes of a serious nature, and too often unsuccessful—I am, etc.,

London, W 1, May 23 E. R. GARNETT PASSE, FRCS

### After-effects of Modern Treatment of Carcinoma

SIR—Mr. Percy Furnivall's distressing experience (*Journal* February 26, p. 450) was of great interest to those of us who practise radium therapy in India. In this district oral cancer is exceedingly common, upwards of 120 cases pass through this hospital annually. No doubt the responsibility rests with the native habits of betel chewing and tobacco smoking—the ladies here are partial to a cheap cigar smoked with the lighted end inside the mouth! So far as the limited supply allows, these cases are treated with radium, either embedded in the growth or in a mould, in the minority who consent to operation a block dissection of the neck is done later. Only a fraction of these cases are seen again. 'Follow up' in the sense that it is understood in Western clinics is unknown, the patients return to their villages for better or worse, and cannot be induced to report personally or to answer questionnaires. From the few cases which I have been able to follow I am beginning to doubt whether, despite the immediately favourable outcome, the end-results are equally satisfactory.

An Anglo Indian aged 44 was treated for an early epithelioma of the right side of the tongue, three quarters of an inch in diameter and of three months duration by a block (Crile) dissection of the neck on November 22, 1937 followed by the implantation of 11 milligrammes of radium on December 8 (1,900 milligramme hours in all). Owing to the radium not being immediately available, the usual procedure of 'tongue first' was reversed. The immediate result was striking: the ulcer melted away leaving a small slightly depressed scar. The patient returned to work early this year and all was well until early in March. Pain began again and though at first localized to the scar in the tongue and to the overlying skin was soon referred to the whole trigeminal distribution. His condition now is one of acute misery, work and sleep are impossible, as there is constant agonizing pain in the right side of the face and head, with periodic exacerbations resembling in their severity a true trigeminal neuralgia. There is no recurrence either locally or in the neck, but the pain has resisted anodyne drugs and injections of local anaesthetics for nearly three months.

Possibly, like Mr. Furnivall, he has had an overdose, or perhaps the "glands first" procedure may be blamed. How is one to estimate the dosage? Other very similar cases are seen in which, with the same dosage, we fail to destroy the growth, and regret that we had not given more. Without a 'follow-up' system we have not even our own experience to regulate dosage and having to rely on the published advice of others, our dosage is empirical. As Mr. Musgrave Woodman observes (*April 16, p. 870*) there is urgent need for team work between surgeon, pathologist, and expert physicist or radium officer, but in the absence of a statistical 'follow up' all are important. Our cases here are practically all

very advanced and this coupled with an almost child like faith in the efficacy of radium places a heavy responsibility on the surgeon. The problem of pain occurring after radium treatment is one which receives scant mention in standard works and in published series of cases I think a debt of gratitude is owing to the late Mr Furnivall for starting a discussion on a subject with which every surgeon must be unhappily acquainted—I am etc.

F M COLLINS

Major I.M.S.

King George Hospital, Vellore, Madras, May 21

### The Active Principle of Cannabis Indica

SIR—It is a little surprising to read in the *Journal* of May 14 (p 1088) regarding *Cannabis indica* that the active principle has not been isolated. It was isolated, but perhaps not in its purest form over forty years ago in the Agricultural Chemistry Laboratory at Cambridge by Wood, Spivey, and Easterfield (*J. chem. Soc.* 1896 69 399). Many of its constants and much of its chemical constitution were determined. It is unstable being readily oxidized in air and can only be prepared by distillation *in vacuo* and kept in an atmosphere free from oxygen. Later these investigators obtained a higher homologue which was pharmacologically inactive, and to which they unfortunately transferred the name cannabinol. This mistake—for as such I regard it—has given rise to some confusion. The research was discontinued owing to Spivey being killed by an explosion during the continuance of the investigation. Sigmund Frankel (*Arch. exp. Path. Pharmacol.* 1903, 49 266) also isolated the active principle, cannabinol, and curiously enough he is credited in some textbooks with its discovery, but his investigations did not add materially to the facts determined at Cambridge. An account of the products chemistry and pharmacology with bibliography up to the time the article was written (1899) will be found in the *Textbook of Pharmacology and Therapeutics* edited by Dr (now Sir) William Hale White (Y. J. Pentland, Edinburgh and London 1901) pages 313-28—I am, etc.,

T. Cambridge Wells, May 20

C R MARSHALL

\*\* Since the pioneer discoveries of Wood Spivey and Easterfield much chemical work has been done on cannabis. The chemical structure of cannabinol was worked out by R S Cahn (*J. chem. Soc.* 1933, p 1400). The characteristic effects of cannabis are probably not due to cannabinol which is toxic but to some other substance. This view was supported by Cahn and has recently been confirmed by Bergel Todd and Work (*Chemistry and Industry* 1938 57 86). The really important active principle has not yet been isolated in the pure state.—Ed B.M.J.

### Placental Extract in Prevention of Measles

SIR—The following notes may be of interest, after Dr W E Crosbie's article on the prevention of measles in a children's hospital (*Journal* May 7, p 1003).

A measles epidemic occurred at St Hilda's Home for children of school age during October and November 1937. At the end of November a case occurred at The Elms, which is the home for children of 1 to 5 years. It was decided to immunize contacts in this toddlers home with placental extract. Twelve children were accordingly given an attenuated dose of 3 ccm. on the fourth day after the rash appeared in the original case. All the contacts except one subsequently developed measles, but in no case was the attack severe and complications did not occur. Five out of the eleven cases were appreciably developing a mild rash only on the trunk

and abdomen. There were no reactions following the injection of placental extract.

The interesting point compared with Dr Crosbie's findings is that although a smaller dose than his minimum was employed (3 ccm instead of 4 ccm) apparently better results were obtained. This might be due to the fact that the Alder Hey children were sick children whereas our group were healthy children and the former received their injection immediately measles was diagnosed in the ward whereas the latter were injected four days after the rash appeared in the original case. I am indebted to Dr P R McNaught (Medical Officer of Health) for permission to publish these results—I am etc.,

C B CRANE

Assistant Medical Officer of Health  
for York

York, May 21

### Tuberculin in Diagnosis

SIR—Dr R J Forbes (*Journal* May 21 p 1131) does not appreciate the fact that tuberculin tests are either generic or selective. All the skin tests are generic. A positive reaction means that the subject at some time or another has been infected by the tubercle bacillus and that his tissues have been damaged by the bacillus although the damage may be so slight as to escape detection on subsequent macroscopic or microscopical examination. With a positive generic test the infection may be either obsolete, latent and living harmlessly in the tissues as in a varying percentage of clinically non-tuberculous adults and children or active and causing tuberculous disease. A positive generic test by itself does not distinguish between these three possible relations of host and parasite. A selective test is one that distinguishes between obsolete and latent infection on the one hand and active disease on the other. By means of the subcutaneous test this may be done with a considerable degree of accuracy.

Tuberculin is the most exact and finest reagent for proving the existence of a tuberculous deposit in the living organism. The subcutaneous tuberculin test is the most practically serviceable and most fertile in results of the diagnostic methods. So wrote Bandelier and Roepke. In cases where the intracutaneous test has not been made or, if made, was positive to a dose of 0.00001 ccm of OT or T.A.F. I give the following subcutaneous injections (as explained in my *Tuberculin Handbook*) of T.A.F. with an interval of two days between each injection. Thus if the first injection was given on the first of the month the second would be given on the fourth.

A 1st injection of 0.000025 ccm (0.25 ccm D <sub>1</sub> ) and if there be no reaction a			
2nd	0.00005 ccm (0.5 ccm D <sub>1</sub> )		
3rd	0.0001 ccm (0.1 ccm D <sub>1</sub> )		
4th	0.0002 ccm (0.2 ccm D <sub>1</sub> )		
5th	0.0005 ccm (0.5 ccm D <sub>1</sub> )		
6th	0.001 ccm (0.1 ccm D <sub>1</sub> )		
7th	0.002 ccm (0.2 ccm D <sub>1</sub> )		
8th	0.005 ccm (0.5 ccm D <sub>1</sub> )		
9th	0.01 ccm (0.1 ccm D <sub>1</sub> )		

A febrile reaction to any dose of tuberculin up to 0.002 ccm (0.2 ccm D<sub>1</sub>) is proof of active disease. A negative reaction to 0.005 ccm or to 0.01 ccm excludes active tuberculosis. The smaller the provocative dose and the stronger the reaction the greater is the evidence of active disease. Conversely the larger the dose and the less the reaction the greater is the evidence against active disease. A positive reaction to 0.01 ccm may occur in clinically non-tuberculous subjects. I may illustrate this from personal experience. At the age of 26 on going to the Royal Victoria Hospital for Consumption my cutaneous reaction was negative. After six months I gave

a strong positive. In the interval I had been infected. Although infected I have never developed the disease. A year ago I again tested myself with the cutaneous test and was positive. I then tried the subcutaneous test, and gave no reaction until the test of 0.01 ccm was reached, when the temperature rose to 100° F. Yet the subcutaneous test is not a mechanical method of diagnosis, because with positive reactions to 0.005 ccm we are in no-man's land, where every other factor in the case must be given equal consideration. In the case of cattle, Kolmer analysed the results of 15,000 injections. A post-mortem examination of the animals showed that the error in the subcutaneous test was less than 3 per cent—I am, etc.,

London W 8 May 27

HALLIDAY SUTHERLAND

SIR—Dr J R Forbes (May 21, p 1131) asks for evidence of the value of the tuberculin reaction in the positive diagnosis and treatment of active tuberculosis. My reply is simple. Moreover, the evidence I supply is evidence of the value of tuberculin in diagnosis when all other evidence either fails or leads us astray—notably x-ray evidence and clinical examinations.

The special methods I advocate are the original methods of Robert Koch himself, implemented by those we owe to Ehrlich (1882), Arneth (1905), and later Schilling—by means of Koch's *subcutaneous* doses of tuberculin, first of all, followed in thirty-six or forty-eight hours by haematological analyses of the blood according to the methods of Arneth, or more easily and simply by Schilling's analysis of blood cells before and then forty-eight hours after the doses of tuberculin are given. If Dr Forbes is a well-trained haematologist and follows Arneth's method he will be able, with a microscope and an immersion lens, to observe under the conditions stated very definite changes in the granules and number of nuclei, and especially in the number of the neutrophil swag-like (*Stabkernigen*) cells in the neutrophil leucocytes of the blood, and also in the number of lymphocytes (I call these cells swag-like because in form and shape they remind me of the swag carried across his shoulders by the Australian "sundowner"). Two days after a proper dose of tuberculin the essential changes in the blood are an increase by 6 per cent of the (neutrophil *Stabkernigen*) cells and a diminution by 10 per cent of the lymphocytes. If the observations are continued for some months and longer with increasing doses of tuberculin the blood regains its normal character.

Facing page 420 in my work *Tuberculin in the Diagnosis and Treatment of Tuberculosis* Dr Forbes will find a fairly complete investigation of results obtained by Dr Guy Griffiths of Sydney and myself by means of Arneth's system of classification in 1905-8. These were my first investigations with Dr Griffiths's great help. I had sent for Arneth's book as soon as it was published, and the careful haematological examination of the blood for several years proved both to Dr Griffiths and myself the profound truth that treatment with tuberculin demonstrated beyond any doubt the specific effect of tuberculin after many months or years of treatment in restoring the blood to a practically normal condition. In fact I may say now that Case 40 (p 288) in my *Parkes Weber Prize Essay* was none other than Dr Guy Griffiths himself—a fairly striking illustration of the permanent value of tuberculin in treatment, as Dr Griffiths is alive to-day and carries on a crusade against tuberculosis in Sydney with wonderful faith in specific methods—I am, etc.,

W CAMAC WILKINSON M.D., F.R.C.P.

London W 1 May 23

SIR—Dr J R Forbes in his letter (*Journal* May 21, p 1131), tells us that he has read the recent correspondence on the above subject with some interest, and adds 'It would be instructive to learn what evidence Dr Camac Wilkinson and those who have written supporting him have of the value of the tuberculin reaction in the positive diagnosis of active tuberculosis.' In my letter (May 7, p 1026) I offered to send to anyone sufficiently interested to write for it a reprint of a paper in which some such evidence is offered. I have a list of those who have availed themselves of this offer, but I do not find Dr Forbes's name on the list—perhaps because he did not know my postal address.

Dr Forbes then puts forward a hypothesis of his own imagination 'if active tuberculosis be diagnosed on the sole finding of a positive tuberculin test.' This is never done by me. The patients to whom I apply the *subcutaneous tuberculin test* are those who have symptoms and/or signs strongly suggestive of tuberculosis, but not absolutely conclusive—for example, patients with pleurisy with or without effusion, but with no sputum or with no tubercle bacilli in the sputum. Some, to be on the safe side, would treat all these cases as tuberculous, but the subcutaneous tuberculin test has enabled me to eliminate about 40 per cent of doubtful cases as non-tuberculous, thus achieving the opposite to what Dr Forbes has supposed. In the case of those who react to the subcutaneous test my figures show that it is desirable for them to have treatment for tuberculosis at this stage instead of waiting till unmistakable signs and symptoms develop, when it may be too late—I am, etc.,

28 Knockdene Park South,  
Belfast May 23

JOHN R GILLESPIE

SIR—Assuming that a diagnostic tuberculin test is positive (see my letters in the *Journal* of January 15 at p 145, and in *The Medical Officer* of February 12, at p 72), it does not necessarily follow, as Dr J R Forbes suggests (*Journal*, May 21, p 1131), that "many healthy people may be subjected to unnecessary mental distress by being stigmatized as tuberculous." Such cases would not be notified and would not leave their work unless, after a few months' treatment with tuberculin, the disease was not controlled (as shown by the temperature chart and weight) and the condition indicated the need for a period of rest. It is impossible for those who believe that the earliest diagnosis of pulmonary disease can be made with tuberculin to bring forward convincing evidence that such diagnosis is reliable. These cases are negative to x-ray, clinical, and sputum examinations, and most workers demand that one or more of these investigations are positive before accepting a diagnosis of active disease. Tuberculin injections should be supported by a history taken with meticulous care, a four hourly chart of the temperature and pulse rate, and a differential blood count. It is, however, an unfortunate fact that if a diagnosis in pulmonary cases is based on the above methods, and is followed by successful treatment with tuberculin, after recovery the patient is apt to believe he was never infected. Friends are usually very assiduous in encouraging such a belief because the patient will never have appeared ill to them, especially so if he has not relinquished his work. This explains why careful discrimination is necessary in selecting the patients to whom the diagnosis may be made known.

Whether the claims for tuberculin can be established or not, no one can deny that in phthisis there must be a stage of the disease when the changes are cellular only and unrecognizable by ordinary methods of examination,

this is the stage at which tuberculin is supposed to react with the damaged tissue cells. I have many charts showing typical temperature reactions after injections with tuberculin given to non-pulmonary cases of tuberculous infection—I am etc.,

West Wickham, Kent May 23 H S BURNELL JONES

### Matrimonial Causes Act

SIR,—The letter by Sir Robert Armstrong Jones published in your columns last week is interesting, in that it shows the doubts that must necessarily be exercising the minds of those who may be called upon to give opinions for the purposes of the Matrimonial Causes Act. I feel therefore, that it may be of interest and possibly also of assistance to your readers to know of the advice which the Council of this Society has decided after mature deliberation to give to its members.

The Council realizes that the Law has certain faults and fallacies indeed, what Law has not but at the same time it takes the view which Sir Travers Humphreys so ably expressed—namely, that the courts and not the medical practitioners will decide these cases. In the circumstances, if the practitioner feels that he can say that a patient is incurably of unsound mind or likely to remain of unsound mind, he should when requested, give such information to the responsible relative. The Council considers that the ordinary relationship of doctor and patient does not exist in these cases for the patient does not voluntarily consult the doctor in whose charge he is, seldom has any voice in choosing that doctor and can, without his consent be removed from one institution to another. The question of breach of the patient's privilege of professional secrecy does not therefore arise, and the only question with which the doctor is concerned is that of prognosis.

As regards the possibility of an action by a former patient against the practitioner who has given his opinion in such a case it must be remembered as has been pointed out above, that these cases will be decided by the court and not by the doctors. The court will of course be influenced by the doctor's evidence but will not be bound by it any more than it is bound by experts in other cases. In these circumstances it would seem extremely improbable that any action can be brought against a doctor, for it would first seem necessary to upset the court's decision.

The patient's interests will be looked after in every case by the official solicitor, if not by a solicitor privately instructed and it is therefore perfectly safe to say that the patient's interests will be fully represented when the divorce proceedings are heard—I am, etc.

RICHARD W DURAND

Secretary London & Counties Medical  
Protection Society Ltd

May 20

\*An article on this subject appears in our Medical-Legal column this week—Ed B.M.J.

### Mechanical Diagnosis

SIR,—I was much interested in the summary of Professor F S Langmead's address on Retrospect and Prospect in Medicine (*Journal* May 21 p 1122). This experienced medical teacher expresses views of a kind to which I myself drew attention a short while ago—namely that the reliance largely upon instruments of precision as a means towards diagnosis is to a considerable extent discouraging the faculty of learning through the use of the eyes, the fingers and the ears. In my presidential address to the Metropolitan Counties Branch in June, 1946 on Observation, I used the following words

The tendency of late years to make use of many complicated instruments as aids to diagnosis has I think had in some instances an unfortunate result. So called instruments of precision are not always infallible any more than we or our lives are but the growing tendency of the day—to rely largely upon mechanical means of diagnosis—is to my mind rather overdone. It has often appeared to me that some of the younger generation are almost afraid of their own opinion and always seem to require other help. Is it that they know too much or has the training of their five senses been retarded and overshadowed by undue reliance upon instrumental aid?

I am glad to see that so experienced an authority upon the teaching of medicine as Professor Langmead is also doubtful of the wisdom of allowing the cultivation of our five senses to fall into desuetude in any way. Their proper uses under correct training, are of far more service than some of the mechanical adventitious aids which nowadays clutter up the modern consulting room, and their cultivation encourages that valuable asset—self reliance—I am etc.,

London W1 May 24

PERCY B SPURGIN

### The Psychology of the Medical Profession

SIR—Is it not time that some investigation was being made into the psychology of our profession? I am prompted to make this suggestion for several reasons but particularly from observing the constantly augmented flow of circulars about proprietary medicines—stimulants, sedatives, anti-spasmodics, vitamins, hormones, and all the rest of them—which are now arriving by every post. I can hardly imagine that this is some stunt of the Post Office to increase its revenues. It is apparently the firms themselves who do this and for the simple reason that it pays. They seem to be animated by an underlying conviction that the average member of our profession either has not the time or is no longer capable of thinking for himself, but is on the other hand eminently susceptible of suggestion and therefore makes an ideal unpaid agent for popularizing the said drugs among the general public. These enterprising firms must be doing well. Their folders show that they do not hesitate to take the whole field of medicine for their province and they are always only too ready to pour out the wealth of their learning for the benefit of the young, the inexperienced, and the too often baffled disciple of Hippocrates.

I am serious Mr Editor. It nothing is to be done about this, why not scrap the medical curriculum and let members of the coming National Health Service be educated as they go along by correspondence classes arranged under the auspices of the Drug Manufacturers' Union? Just think of the saving in time and expense! The universities and medical schools might not like the innovation but what would that matter when as we know, human lives are at stake?—I am etc.

North Queensferry Fife May 29

A. J BROCK

### "Cyclopropane Erythema"

SIR—I should like to report two cases of a peculiar erythematous rash occurring soon after the induction of anaesthesia with cyclopropane. Both cases were in young women aged 21 and 24 respectively. The rash appeared first on the neck then on the chest and abdomen and lasted for about fifteen minutes. It was similar to the more familiar ether erythema. No history of a previous skin disorder could be obtained in either case, and the rash was not present before induction with

cyclopropane For premedication each patient was given omnopon grain 1/3 and scopolamine grain 1/150 three quarters of an hour before operation I should be interested to hear of further cases of this condition—I am, etc,

VICTOR J KLATING,

London W 12 May 25 Resident Anaesthetist British Postgraduate Medical School

### Divinyl Ether Anaesthesia

SIR—I have read with great interest Dr C F Hildfield's letter on the subject of divinyl ether (*Journal*, May 28, p 1175), and although I have never used it in a Clover's inhaler I have on many occasions administered it in a closed circuit, using Waters's canister and a Boyle's apparatus The resulting anaesthesia has been satisfactory in every way but I have recently had two cases which developed convulsions indistinguishable from those occurring under ethyl ether anaesthesia The head of the operating table was raised as far as possible and 2 ccm of evipan given intravenously The convulsions ceased immediately and recovery was uneventful The rectal temperature was taken, but was not raised above 100° F in either case

In view of the possible occurrence of these convulsions I consider that divinyl ether should be used with caution in those cases where full surgical relaxation is required—I am, etc,

London, NW 3 May 27

C J M DAWKINS

### Unusual Reactions to Procaine

SIR—I feel that the following experience should be placed on record as likely to be of interest to physicians accustomed to using procaine as a local anaesthetic

I was recently engaged in giving a series of artificial pneumothorax refills to cases of pulmonary tuberculosis My technique was, as usual, to give a preliminary local anaesthetic by infiltrating the skin and pleura—with about 1 ccm of 2 per cent procaine prepared by a leading firm of chemists I performed the operation on patients A and B without apparent untoward effect, and proceeded with patient C During the course of this refill the patient complained of a feeling of drowsiness, but his appearance was normal and so I proceeded to complete the operation A few moments later the nurse called me, and I found the patient lying unconscious His breathing was heavy, but his colour was good and his pulse steady his pupils were moderately contracted His whole appearance was that of a person under deep narcosis, although at the time I was at a loss to explain his condition While attending to this patient I was interrupted by a call to patients A and B Both were complaining of dizziness drowsiness and inability to keep the limbs still although fully conscious Patient C, meantime was slowly recovering He complained of his head going round and round and of difficulty in keeping his limbs still All three patients were completely recovered in about an hour and were able to return home For three further refills that afternoon I used separate ampoules of procaine without ill effect

It appeared to me as probable that the patients were suffering from procaine poisoning Against this was the fact that the solution used was from the last ounce of a four ounce bottle which I had been using regularly for several weeks On further inquiry I ascertained that on the two preceding weeks at least four patients (including patient B) had felt extremely drowsy, and one had slept soundly for an hour None of the patients, however had thought it necessary to trouble me with any complaint It seemed that the solution had undergone some progressive deterioration probably patient C was more susceptible than the others and his extreme symptoms brought the matter forcibly to my notice The remains of the solution were returned to the makers who

report is follows 'Our research laboratory have examined the procaine solution returned and report a concentration of 1.54 per cent procaine hydrochloride This low result is difficult to understand and suggests unexpected deterioration The matter in view of the reactions, is very important and it is unfortunate that more of the solution was not available for further investigation

It would be interesting to hear of any similar experiences and of any suggested explanations The solution in question had been in stock for about three months, and in obvious conclusion would seem that it is inadvisable to keep stock for so long a period I must add, however that I have used procaine solution constantly for fourteen years and have never previously had any unpleasant reactions, although I feel sure that the solutions used have sometimes been more than three months old—I am, etc,

T W PRESTON, M D, M R C P

London W 1, May 28

### Aperients and Sulphanilamide

SIR—My colleague, Dr J L W Ball, was recently called in to a case of puerperal pyrexia, and was prevented from administering sulphanilamide by reason of the midwife's having given the patient an aperient of Epsom salts This and the sulphur containing compound liquorice powder are favourite aperients among midwives, and he is of opinion that a general warning ought to be issued to them to avoid the use of these substances altogether While most puerperiums go on naturally it is impossible to say beforehand that any given case will not require sulphanilamide, and there is no reason why the 'pitch should be quered' by the previous administration of sulphur or its compounds when so many other good aperients are available I agree with him that the point is important enough to be taken seriously by medical officers of health and others who have to do with the control or education of midwives As a side issue it would be interesting to know, if quinine is given, whether the small amount of sulphur contained in the sulphate is sufficient to cause trouble with sulphanilamide If so, it should be the routine practice to order the hydrochloride or the hydrobromide—I am, etc,

Lough May 24

JOSEPH JONES, M D

### Atrophic Rhinitis

SIR—In his excellent article on nasal conditions in the *Journal* of May 28 (p 1167) Mr E D D Davis refers to atrophic rhinitis This disease is almost always the result of an undiagnosed sinusitis in children, which is now, but only now, beginning to receive proper attention The late J S Fraser came to share this view with me, and the truth of it I have proved by the results of treatment The essential treatment is that of the sinusitis Intranasal surgery usually suffices The ethmoid in practically all cases is involved and is the key to the problem, but the sphenoids and intra also often need attention Once the sinusitis is cured, crusting and foetor promptly lessen and often cease The atrophy, of course, remains, but the mucosa improves, especially if the nostrils can be narrowed by implants The disease has therefore no essential connexion with tuberculosis, though it may predispose to it and to bronchiectasis

Another point of practical importance is that most of these atrophic cases harbour diphtheroids, and if swabbed, unless the virulence test be done, will be reported as cases of diphtheria and uselessly isolated at great and unnecessary cost to the community, as Dr John Reid has pointed



out In two cases where this happened the bacillus was a missed foreign body which had set up sinusitis and atrophy both cleared up on removal of the foreign body—I am etc

Glasgow May 28

JAMES ADAM

### Treatment of Placenta Praevia

SIR—In *A Handbook of Midwifery* which I used as a student about thirty seven years ago W R Dakin advised that the placenta should be separated over its large area as possible by introducing the finger as far as the second joint and sweeping it round under the placenta in a circle. Since then I have assisted at or performed the necessary manipulations on the abnormal cases occurring among about 5,000 confinements including over 500 hospital district cases. I may have been exceptionally fortunate but I have never seen this simple procedure fail to stop the haemorrhage. I give this as a personal experience but as I have done little midwifery in the last twenty years I will leave discussion as to what should be done after the haemorrhage has ceased to the writers of the interesting letters recently published—I am etc

Altrincham May 24

ARTHUR T BLEASE

### Sterilization of Syringes

SIR—In all the correspondence on the sterilization of syringes I have looked in vain for the enunciation of what is to my mind the most essential point of all—namely the thorough cleansing of the needle and syringe immediately after use. If this is done the efficient sterilization of the instruments is a comparatively simple matter. The needle and syringe should be thoroughly washed through with ordinary tap water to remove all visible foreign matter and then completely immersed in the selected sterilizing medium, care being taken to see that the lumen of the needle and of the syringe is filled with the sterilizing fluid and that there are no bubbles. Personally I have used industrial spirit as a sterilizing medium for many years with satisfactory results.

The needle and syringe are placed on one side to be washed and sterilized at some later and more convenient opportunity blood adheres firmly to the inside forming a protecting layer round any germs that may be caught in the clot. The efficient cleansing and sterilization of such a needle and syringe can never be guaranteed. Should the needle be used in any case where infection is suspected it must not be used again on another case. It is of course, essential that needles and syringes should be free of all grease or other foreign matter that might protect germs.

Cleanliness is indeed next to godliness. A dirty syringe cannot be made sterile—I am etc,

London May 30

ST GEORGE B DELISLE GRAY

### "Spontaneous Combustion"

SIR—Your note in the *Journal* of May 21 (p 1106) on spontaneous human combustion is very interesting. It is surprising how common was the belief in its occurrence some hundred years ago. Plouquet in his *Literatura Medica* related twenty eight cases and Dr Trotter in an essay on drunkenness quotes many others. A paper entitled *Essai sur les combustions humaines produites par l'abus des liq spirit.*, written in Paris in 1808 by Pierre Lair was devoted entirely to this subject.

Dr Paris to whom you refer in your note lays it down in his *Medical Jurisprudence* published in 1823 that the recorded cases have these things in common (1) the victims are chronic alcoholics (2) usually elderly females (3) the body has not burned spontaneously but some lighted substance has come into contact with it (4) the hands and feet usually escape (5) the fire has caused very little damage to combustible things in contact with the body (6) the combustion of the body has left a residue of greasy and fetid ashes very offensive in odour. In this work there is a full account of the case of the priest Bertholi—I am etc

Hove May 2

L A PARRY FRCS

## Medico-Legal

### DIVORCE FOR INSANITY

The courts are now beginning to grapple with some of the problems set them by the provision in Herbert's Act—the Matrimonial Causes Act 1937—which makes confinement for five years because of incurable insanity a ground for divorce. One of the chief of the new difficulties is to prove that the condition is incurable. As all psychiatrists know some patients recover after five years and a few after twenty five so there is no absolute rule by which incurability or irrecoverability, can be predicted. The courts however will probably continue to follow the common sense lines which they have always pursued in dealing with matters of fact: they hear the best evidence and give their decision on what they consider to be a reasonable probability.

The evidence must be the best and the President commented in one case heard on May 24, on the calling of a medical superintendent who had only been in the hospital for a few weeks when the petitioner might have called a medical officer who had been there for twenty years. He said that he wished it to be clearly understood that the court would expect the best possible evidence with regard to a respondent's mental condition from the place where the respondent was detained. Possibly a large number of respondents will be found to be suffering from secondary dementia of which the chance of cure is practically nil. As Sir Travers Humphreys remarked the other day from the chair at a meeting of the Medico-Legal Society, before which Mr William Lacey read an instructive paper on this subject the court will ask whether the respondent is curable from the point of view of marriage. It is not likely that the possibility of a mere remission of the symptoms of dementia leaving the respondent in a rational but feeble and relatively incapable condition of mind would count as curability.

None of the cases that have been heard hitherto has elucidated any of the substantial legal difficulties many of which were enumerated by Sir Robert Armstrong Jones in the *British Medical Journal* of May 28 (p 1177). The question of whether a doctor who gives evidence about a patient's condition for the purposes of a petition against the patient is liable to unpleasant legal consequences has not so far been approached. The Act provides no penalty for a medical officer who refuses information and thereby in Sir Robert's phrase stultifies the law and he would not be liable to one unless he were to refuse a direction in the subpoena to attend court and give evidence and perhaps to bring the case records with him. A doctor may well raise every objection to giving information about the state of a private patient, but most of these inquiries are likely to be made of mental hospital superintendents. As the patients to whom the inquiries relate will almost certainly be certified it can hardly be said that the confidential relation between doctor and



patient exists in such a form as to prevent an officer, charged by law with the detention and care of the patient, from giving information for the purposes of assisting the administration of justice. The best way of bringing the information before the court would probably be through some impartial channel rather than through the petitioner's solicitors. Mr Latey made in his paper and in his handbook on the Act,<sup>1</sup> the valuable suggestion that the court itself should appoint medical inspectors, who would inquire into a respondent's mental state just as at present a panel of inspectors inquires into the condition of parties to a nullity suit. The Royal Medico-Psychological Association considers that superintendents should offer to supply information to the patient's guardian *ad litem*. In *Timms v Timms*, heard before the President on May 24 the Official Solicitor made an independent inquiry into the medical history of the case and the prospects of recovery. The result of that inquiry was that the evidence in support of the petition remained unchallenged and was conclusive. In this case the Official Solicitor was the guardian *ad litem* appointed by the court; this appointment is often made when the court considers it desirable. This particular question will solve itself, on the basis that it is the duty of a doctor to assist in the administration of justice. As Dr R D Gillespie pointed out in discussing Mr Latey's paper doctors already, in certifying patients often have to see the patient without letting him know the object of their visits and they must divulge the facts which they learn directly and from others. This duty is not very different from their function as witnesses in a divorce action. Some writers, Sir Robert among them, have suggested that a doctor who gives evidence that a patient is incurable may be liable to have an action for negligence brought against him if the patient should afterwards recover. This fear is quite groundless for the reason that no action of law can lie in respect of evidence given in judicial proceedings. It is absolutely privileged, so that witnesses may be encouraged to tell the truth without fear of consequences. As any opinion given by a doctor would be given for the purpose of judicial proceedings and in good faith, he would be protected.

### PAYING PATIENTS AT BART'S

Voluntary hospitals, in their efforts to pay their way, are now all obliged to take paying patients. Even in this activity they are forced to compete with the municipal hospitals which are springing up under the Local Government Act, 1929, and which are not handicapped by the terms of trust deeds. The Voluntary Hospitals (Paying Patients) Act, 1936, allows the Charity Commissioners to make an order permitting a voluntary hospital to provide accommodation for paying patients, but the commissioners cannot authorize any breach of trust. A voluntary hospital can, therefore only provide for paying patients if it is making proper provision for the sick poor as required by its trust deed. In 1935 St Bartholomew's Hospital asked Parliament for power to provide a paying patients department at the expense of a fund specially raised for the purpose. Unfortunately, instead of getting the required £124,000 the hospital was only able to raise £10,000. It was therefore obliged to promote a Bill to secure power to use the general funds of the hospital for the provision of a paying patients' department. The Bill was introduced in the House of Lords, and, although no petitions were lodged against it, the Chairman of Committees decided that, in view of its importance, it should be treated as an opposed Bill and sent to a Select Committee.

On May 24 the committee rejected the Bill. Sir Claud Schuster K.C., permanent secretary to the Lord

Chancellor, said in a preliminary statement that the Lord Chancellor, although he did not oppose the Bill, drew the attention of the committee to the great inroad on the law of trusts which the Bill proposed. The funds of the hospital were vested in a charitable trust for the benefit of the sick poor and the Bill proposed to apply them to some other—no doubt deserving—purpose. Sir Lynden Micassey, K.C., who appeared for the hospital, said that the Bill was essential to preserve its efficiency. Every teaching hospital in London except St Bartholomew's and Charing Cross had paying patients departments which enabled the medical and surgical staff to supplement their honoraria by fees from paying patients. At Bart's the staff received only 50 guineas a year and the real fear of the Governors was that young and promising surgeons and physicians would be deterred from taking appointments there. Mr George Aylwyn, treasurer of the hospital, said that in his view the term 'sick poor' should be enlarged to include people with £500 to £1,000 a year but the chairman of the committee, Lord Redesdale, replied he could not think that 'sick poor' ever possibly meant people with £500 or £1,000 a year. Mr Andrews Uthwatt, on behalf of the Attorney-General, the constitutional guardian of charitable trusts, said that the only chance of the funds coming back and being applied to their original purpose would depend on the success of a commercial venture. The committee therefore rejected the Bill, and the last state of Bart's is worse than the first, for private Bills are expensive things. The incident points clearly to the need for some constructive scheme that will put the whole voluntary hospital system on a practical basis.

## Obituary

### DAVID PETER GAUSSEN, M.D.

The death of Dr D P Gausson of Stewartstown, Co Tyrone,<sup>1</sup> has removed one of the older practitioners who did so much to establish themselves in the affections of the people. Dr Gausson was a student of the old Queen's College of Belfast and graduated M.D. of the Royal University of Ireland in 1883. He had studied also at St Thomas's, obtaining the M.R.C.S. in the same year. He was a widely read gentleman, an experienced practitioner, and beloved by all who were fortunate in his acquaintance. For very many years he practised in Dunmurry, a few miles out of Belfast. He was well known and much respected by his colleagues in the city, and always interested in affairs pertaining to the welfare of the profession. He was elected a member of the British Medical Association in 1884, and was chairman of the Belfast Division in 1906 and president of the Ulster Branch in 1925-6. He had also been president of the Ulster Medical Society. He filled these positions with dignity and distinction. Some years ago he retired from active practice and lived in County Tyrone, where he enjoyed several years of respite. Withal his interest in medical affairs was maintained. He frequently attended meetings in Belfast. He was interested in the 1937 Annual Meeting of the British Medical Association, having attended the previous two meetings there, extending over a period of fifty-four years in all. With his widow and daughter there is widespread sympathy in their loss.

Dr S R Hunter writes: As one who worked in friendly rivalry with the late David Peter Gausson for over twenty years I should like to express my appreciation of his worth as a medical practitioner and to bear witness to

<sup>1</sup> 1937 Sweet and Maxwell

<sup>2</sup> *Times* May 25, 1938

the great esteem and respect in which he was held not only by his patients and friends but also by his medical colleagues in the North of Ireland. A descendant of the Huguenots who settled in the district in the seventeenth century he qualified in time to attend the Annual Meeting of the Association held in Belfast for the first time in 1884, and thus had the unique experience of attending all three Annual Meetings of the Association in Belfast. He was elected president of the Ulster Medical Society in 1906 and had a rather disturbing experience at the opening meeting. Arriving at the Whitla Medical Institute to deliver his presidential address he discovered he had mislaid his copy of the manuscript. Such was the quality and character of the man, however, that he delivered an excellent discourse from a few rough notes from which his address had been prepared. He was a careful and skilful obstetrician and contributed several papers to the journals on this subject. Although over the age limit he served in the R.A.M.C. in the hospital ship *Britannic* acting as adjutant to the medical officer in charge—an old Dunmurry patient and friend. He had many interests outside his professional work: he was always a good sportsman and a keen supporter of athletics. He had during the course of his long life been president of football and cricket clubs, a past captain and honorary member of the Dunmurry Golf Club and in his earlier years had acted as conductor of the local musical society. He was also a firm supporter of the Masonic order in which he reached high office and distinction. Owing to the state of his health he retired from active practice in 1927 leaving Dunmurry to reside in Stewartstown. His friends and patients took this opportunity of presenting him with an address and substantial cheque as a token of their respect, admiration and affection.

#### LAWRENCE ALFRED JOHNSON M.R.C.S.,

Honorary Secretary YORK DIVISION B.M.A.

The York Division of the British Medical Association has sustained a sad loss in the unexpected death on May 21 after a slight operation of their energetic and genial secretary Dr L. A. Johnson, at the age of 68. He leaves a gap which it will be difficult to fill.

Receiving his medical education at Leeds Dr Johnson qualified M.R.C.S., L.R.C.P. in 1892, and began his medical career at Normanton where he was medical officer of health for many years before going in 1921 to Telford where he practised for thirteen years. Retiring from active practice in 1934 he went to live at Copmanthorpe near York. He took an active part in local affairs: he was chairman of the Parish Council and represented the township on the Appleton Roebuck and Copmanthorpe District Drainage Board and was always ready to place his services at the disposal of local practitioners needing help in emergency—services which were much in demand and very highly appreciated for he was a country practitioner of the best type with wide experience and yet up to date in his medical knowledge. But his principal activities since his retirement were in connexion with the York Division. For several years the Division had been in considerable difficulties in regard to the secretaryship, a post which the younger men did not seem able or willing to fill. Dr Johnson always an active and useful member on his retirement although past middle age (he was then 65) stepped into the breach and putting into it all the vigour of his energetic nature rapidly united the Division together again. He was untiring in his zeal for the profession and nothing was too much

trouble for him. He was responsible for the success of the annual meeting of the Yorkshire Branch in York in 1931 and for well attended anti gas lectures held last year. A man of most genial and likeable temperament he was *persona grata* with all the members who will personally mourn his death while the Division as a whole will deplore his unexpected loss at a time when it appeared likely that Division affairs would remain in the same good hands for years to come.

J. C. LYTH

News has been received in this country of the death in Northern Shansi of Dr HENRY GEORGE WYATT of the Baptist Mission Hospital Taiyuan North China, to which he was attached as medical officer. According to the *Times* Peking correspondent, Dr Wyatt with two ladies and an Englishman and a Chinese chauffeur left Taiyuan in a motor car and after travelling eighty miles were fired upon in error by a mobile Chinese unit. Dr Wyatt behaved with the utmost bravery in endeavours to save his companions and died in a roadside ditch to which he had carried the unconscious chauffeur on his shoulder in a fusillade. He had studied medicine at the London Hospital taking the English Conjoint diplomas in 1924, the M.B. B.S. Lond. in the same year and the F.R.C.S. Ed. in 1931. He contributed several papers to the *Chinese Medical Journal* and had been a member of the Hong Kong Branch of the British Medical Association for the past ten years.

An obituary notice of the late Lieutenant Colonel EDWARD WILKINSON appeared in the *Journal* of May 14 (p. 1077). Lieutenant-Colonel Henry Smith C.I.E., I.M.S. (ret.) sends the following tribute. I have known intimately Colonel Wilkinson from almost the beginning of his service in the I.M.S. till his end, as a personal friend whose death I lament. He was a man capable of constant and reliable friendship which no passing event would cause to waver. He was a man of fearless honesty and indomitable moral courage and as such was not by nature adapted to the career of a courtier but to that of a man who depended on his personal worth alone. Like all those who knew him I lament the loss of such a friend.

Dr THOMAS CHETWOOD chief school medical officer for the City of Sheffield died suddenly on May 11 at his home in Grange Crescent aged 63. From Epsom College he entered the London Hospital and took the English Conjoint qualification in 1900 the M.B. Lond. in 1903 and the Oxford D.P.H. in 1910. He had been house physician senior clinical assistant casualty officer and resident anaesthetist at the London Hospital and district surgeon at the City of London Living in Hospital. Dr Chetwood went to Sheffield in 1914 and joined the Sheffield Health Department there: he wrote the annual reports of the Sheffield School Medical Service from 1914 to 1934 and for some years was lecturer on hygiene in the University. He became a member of the Sheffield Division of the B.M.A. in 1921.

The death is announced in Sweden at the age of 76 of Professor J. E. JOHANSSON the physiologist. His duties as professor of physiology at the Karolinska Institute in Stockholm and as a member of the Nobel Committee between 1904 and 1926 did not prevent him from taking an active part in social problems with a medical aspect. One of his most important publications dealt with the frequency of pulmonary tuberculosis in different parts of Stockholm in relation to density of population and economic status. He played a prominent part in the abolition or regulation of prostitution in Sweden whose new legislation with regard to the venereal diseases was considerably influenced by him.

Dr THOMAS LONGMORE ASHFORTH died on May 27 at his home in Woodlands near Doncaster. After qualifying in medicine at the University of Glasgow he took the Scottish triple qualification in 1902. He was the first medical practitioner at the Woodlands colliery village, which was built for the workmen at Brodsworth Main Colliery some thirty years ago. He took the DPH of Sheffield University in 1922 and had been assistant M.O.H. for Hamilton and visiting physician to the Hamilton Fever Hospital. During the war he served as captain R.A.M.C. with the 66th and 33rd Divisions and was adjutant to No. 40 Stationary Hospital at Havic. For many years Dr Ashforth was lecturer for the West Riding under the Central Midwives Board, and corps surgeon for the colliery ambulance brigade.

Dr ARTHUR TANNER COOPER died of pneumonia on May 24 at his home in Leicester where he had practised for the last twenty years. Born at Heston Middlesex, on May 23, 1869 he was educated privately and at University College, London, qualifying M.R.C.S. L.R.C.P. in 1892. He then served as house-physician to the National Hospital for Diseases of the Heart, house surgeon to the Hospital for Women in Soho Square and to the Royal National Orthopaedic Hospital, and during the war he held a temporary commission as captain R.A.M.C. Dr Cooper joined the British Medical Association in 1909, and since the war had been a member of the Leicester and Rutland Division.

The following well-known foreign medical men have recently died. Dr GEORGE MARINESCO professor of clinical neurology in the Bucarest faculty of medicine, member of the Bucarest Academy of Medicine corresponding foreign member of the Academie de Medecine, and honorary foreign fellow of the Royal Society of Medicine, Lieutenant-Colonel JULIEN RABAUT director of the services of hygiene in the French concession at Shanghai. Dr LORENZO BARO formerly physician to King Alphonso XIII of Spain, Dr ALFRED HERMSTEIN extraordinary professor of gynaecology at Breslau, aged 46. Dr PAUL PETZOLDT a Dresden hygienist, aged 79, Dr JOHANNES JOHANNSSON formerly professor of physiology at Stockholm University, president of the permanent committee of international physiology congresses, and for many years president of the medical section of the Nobel Prize awards, Professor GUSTAV BAYER head of the institute of experimental pathology at Innsbruck. Dr BROR GADELIUS professor of psychiatry at the Carolinska Institute of Stockholm, aged 43, Dr ALFRED ZUBER a prominent Paris paediatrist, aged 73, and Dr ALFONSO DI VESTEA emeritus professor of hygiene at Pisa, aged 83.

## The Services

### INDIAN MEDICAL SERVICE DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant London on Tuesday June 14, at 7.15 p.m. when Major General E. W. C. Bradfield C.I.E., O.B.E. the Director General, I.M.S., will preside. Tickets may be obtained from the honorary secretary, Major Sir Thomas Carey Evans, Hammersmith Hospital, Ducane Road, W.12. The Secretary of State for India, the Marquess of Zetland G.C.S.I. G.C.I.E. will be present as a guest.

### HONORARY PHYSICIAN TO THE KING

Surgeon Rear Admiral L. Warren O.B.E. R.N. has been appointed Honorary Physician to the King.

### DEATHS IN THE SERVICES

Colonel VIVIAN BOASE BENNETT Bombay Medical Service (ret.) died at Castletown Isle of Man on May 21 aged 71. He was born on April 20, 1867, the son of the late Rev

Matthias John Boase Bennett of Leeds and was educated at Liverpool and St. Bartholomew's Hospital. He graduated M.B. Lond. in 1891 and B.S. in 1893 and became an F.R.C.S. in 1906. He entered the Indian Medical Service as surgeon lieutenant on July 28, 1894, attained the rank of colonel on October 20, 1921, and retired on April 20, 1924. His first ten years' service were spent in military employ during which he served on the North West Frontier of India in the Tirah campaign of 1897-8 receiving the medal with two clasps. In April 1905 he was appointed a civil surgeon in the Bombay Presidency, in February 1909 he was posted as civil surgeon and superintendent of the medical school and lunatic asylum at Huddersfield, Sind, and in 1910-11 he served as senior surgeon of the Jamsetji Tijiabhai Hospital Bombay, and professor of surgery in the Grant Medical College Bombay. During the war he was recalled to military duty from 1916 to 1919. In May 1919 he was appointed civil surgeon of Poona and on promotion to administrative rank in October 1921, became A.D.M.S. at Poona and held that post until he retired. He had been a member of the British Medical Association since 1898.

Lieutenant Colonel VIVIAN HEATHCOTE ROBERTS I.M.S. (ret.) died in St. Mary's Hospital on May 22 aged 63. He was born on July 20, 1874 and was educated at the Grant Medical College Bombay where he obtained the diploma of L.M.S. in 1896. After filling the posts of Mayo demonstrator and tutor in physiology and histology at the Grant Medical College he went to Europe and took the Scottish triple qualification in 1898 and subsequently obtained the F.R.C.S. Ed. in 1909. He entered the Indian Medical Service as lieutenant on January 28, 1899, became lieutenant colonel on July 28, 1918 and retired on July 20, 1929. He served in the China War of 1900 (medal) in the war of 1914-18 when he was in Iraq from September 1914 to December 1916 and in Afghanistan in 1919. He had been a member of the British Medical Association since 1905.

Lieutenant Colonel CHARLES DUER Bengal Medical Service (ret.) died on November 20, 1937 aged 73. He was born on December 10, 1864 the son of Mr S. Duer a civil engineer of London and was educated at University College, London. He took the M.R.C.S. L.R.C.P. in 1888 the M.B. Lond. in 1889 and the F.R.C.S. in 1891. He entered the Indian Medical Service as surgeon on July 28, 1891, became lieutenant colonel after twenty years' service and retired on November 29, 1913. After four years' military service he was posted to civil employ in Burma in February, 1896, at first as resident medical officer of the Rangoon General Hospital then as junior civil surgeon, Rangoon in March 1899 and as senior civil surgeon Rangoon, in November, 1907. In August 1910 he was transferred to the Punjab as civil surgeon of Simla. After retirement he rejoined for service in the war of 1914-18, on October 19, 1914, and served to May 13, 1919, at first in the York Place Hospital for Indian Troops at Brighton till the end of 1915 and subsequently at Malta. He had been a member of the British Medical Association for thirty three years and in 1905-6 was a member of the Central Council of the Association.

Lieutenant Colonel HERBERT JAMES WALTON Bengal Medical Service (ret.) died at Godalming on May 4, aged 69. He was born on January 19, 1869 the son of J. S. Walton and was educated at St. Bartholomew's Hospital taking the M.R.C.S. L.R.C.P. in 1893. Subsequently he took the F.R.C.S. in 1895 the M.B. Lond. (with honours) in 1895, the D.T.M. and H. (with distinction) of Cambridge in 1910 and proceeded M.D. (Gold medal) in the same year. After filling the posts of house surgeon at St. Bartholomew's Hospital and of assistant house surgeon at the Royal Salop Infirmary, Shrewsbury he entered the Indian Medical Service as surgeon lieutenant on July 29, 1896, passing in first. At Netley he gained the Montefiore Prize in Military Surgery and the Martin Memorial Medal in Military Medicine. He became lieutenant colonel on January 29, 1916 and retired on September 1, 1921. He served on the North West Frontier of India in the Tirah campaign of 1897-8 (medal with clasp), the China War of 1900 (relief of Peking actions of Peitsang and Yanglung (medal with clasp)), and in Tibet in 1903-4 (operations round Gyantse, march to Lhasa (medal with clasp)). In May 1905, he was posted to civil employ in the United Provinces and was professor of pathology at King George's Medical College Lucknow, from September 1913 to October 1914 when he reverted to military duty and remained serving in the Army till March 1919. He had been a member of the British Medical Association for twenty eight years.

Lieutenant Colonel JOHN ANDERSON, C.I.E., Bengal Medical Service (ret.) died on May 22 in London aged 52. He was born at Inch Co Donegal on August 4 1882 and was educated at Edinburgh University where he graduated M.B. CM in 1878. He entered the Indian Medical Service as Surgeon on September 30 1878. He became Lieutenant Colonel after twenty years' service and retired with an extra compensation pension on April 1 1910. He served in the Afghan War of 1878-80 was present in the action at Jaddik and received the medal. Most of his service was spent in civil employ in the North West Province, now the United Provinces of Agra and Oudh, where for many years he had the reputation of being the leading civil surgeon in the Province owing to his successful operative work in surgery and held the important civil surgeoncies of Agra and Lucknow successively. He also served for two years as civil surgeon of Simla. After his retirement he served as a member of the Medical Board of the India Office from February 28 1915 to August 4 1920 and received the C.I.E. on June 4 1917. He was twice married first to Mary daughter of the late Mr J. B. N. Hennessy, C.I.E., F.R.S., she died in 1924 and secondly in 1931 to Triphena Esther, widow of the late Surgeon General J. Cl. Horn, C.S.I. and a daughter of the late Major General de S. Barrow who survives him. He had been a member of the British Medical Association for thirty three years.

Lieutenant FRANCIS JOHN SHILKSMITH BAKER, R.A.M.C., died in the military hospital at Jhansi on May 4 from injuries received when a cycle which he was riding came into collision with a tonga. He took the M.R.C.S. LRCP in 1936 and joined the Royal Army Medical Corps as Lieutenant on probation on April 23 1937 so had only a year's service.

## Universities and Colleges

### UNIVERSITY OF OXFORD

Dr A. G. Gibbon has been appointed Litchfield Lecturer in Medicine until June 30 1935.

The Electors of the May Readership have reappointed Dr Alexander Macdougall Cooke as May Fellow and Reader in Medicine to hold office for a further period of three years from October 1.

### UNIVERSITY OF CAMBRIDGE

Acting on a resolution by the Faculty Board of Medicine the General Board recommends that a Readership in Medicine be established for one tenure only and that authority be given to appoint Dr R. A. McCance from August 1 1938. This post would be established in place of the Assistant Directorship of Research recently vacated by Dr J. F. Brock on taking over the chair of medicine at the University of Cape Town. Dr McCance is at present a visiting physician in charge of the Biochemical Department, King's College Hospital, London. The General Board recommends that the regulations be amended to provide that the Reader in Medicine shall not be tutor, assistant tutor, bursar or assistant bursar of a college; he shall not give instruction on behalf of a college for more than six hours a week and he shall not engage in private medical practice. Part of his duties will be to give such lectures as the Faculty Board of Medicine directs.

### UNIVERSITY OF LONDON

Professor C. H. Best, F.R.S. of the University of Toronto, will give a lecture on Heparin and Thrombosis at University College Gower Street, W.C. on Tuesday, June 14 at 5 p.m., when Professor C. Lovatt Evans, F.R.S. will be in the chair. The lecture is open without fee or ticket to students of the University and others interested in the subject.

### UNIVERSITY OF EDINBURGH

Professor C. Heymans of the University of Ghent will deliver a lecture on Some Aspects of Blood Pressure Regulation and Experimental Arterial Hypertension in the anatomy lecture theatre, University New Buildings, Teviot Place, Edinburgh on Friday, June 10 at 5 p.m.

The Cameron Lecture on Results of Recent Studies on Anterior Pituitary Hormones will be delivered by Professor

J. B. Collip, F.R.S. of McGill University, Montreal, in the anatomy lecture theatre, University New Buildings, Teviot Place, Edinburgh on Thursday, June 16 at 5 p.m.

All students and graduates are invited to attend the above lectures.

### SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated:

SURGERY—A. Blackman, F. E. Buckler, R. M. Corker, P. H. Hay, Heddle, T. E. Oor, C. L. Summerfield.  
MEDICINE—W. H. Bayley, P. C. Conran, O. H. Galloway, J. C. B. Nesfield, T. E. Oor, C. Webb.  
FISHERY MEDICINE—P. C. Conran, O. H. Galloway, J. C. B. Nesfield, T. E. Oor, C. Webb.  
PHARMACY—C. V. Arthur, R. M. Corker, J. C. Gregory, C. R. Moton, C. L. Summerfield, W. E. Swanston.

The Diploma of the Society has been granted to W. H. Bayley, A. Blackman, F. E. Buckler, P. C. Conran, O. H. Galloway, P. H. Hay, Heddle, J. C. B. Nesfield, T. E. Oor, C. L. Summerfield.

## Medical Notes in Parliament

The Parliamentary adjournment for Whitsuntide is till June 14.

The business of the House of Lords in the present week included the Coal Bill, the Housing (Rural Workers) Amendment Bill and the Prevention and Treatment of Blindness (Scotland) Bill. The House of Commons considered the Vote for Air Raid Precautions and Bills including the Mental Deficiency Bill. Sir Thomas Inskip made a statement regarding national service in the event of war. He said that in such an event an authority would allocate according to the age and capacity of each individual a suitable position for that person to occupy.

### Progress of Bills

In the House of Lords on May 30 the Coal Bill passed through Committee. The following day the Street Playgrounds Bill passed through Committee and the Housing (Rural Workers) Amendment Bill was read a second time.

On May 31 a Standing Committee of the House of Commons considered the Nursing Homes Registration (Scotland) Bill. A clause moved by Sir Douglas Thomson to exempt from registration nursing homes conducted in accordance with Christian Science principles was withdrawn after discussion on the understanding that it would be reconsidered before the report stage. The Bill passed through Committee and was ordered to be reported with minor amendments to the House of Commons.

### The Scottish Divorce Bill Continued

Consideration of the Divorce and Nullity of Marriage (Scotland) Bill by the Standing Committee of the House of Commons on Scottish Bills was concluded on May 24. On Clause 4 (Grounds for Decree of Nullity) Mr CHAPMAN had an amendment to omit from the grounds of nullity the plea that at the date of the marriage one party was subject to recurrent fits of epilepsy. He said that he would not move these amendments. The whole clause then was deleted from the Bill by 13 votes to 8. Mr ERSKINE-HILL said it was based on the recommendation of the Royal Commission but required more consideration than was possible on the present Bill.

On Clause 6 (Interpretation) Miss HORSBURGH had an amendment to delete the provisions which stated that a defendant in any divorce action should not be held to be incurably insane unless it was proved that he was and had been for a period of five years immediately preceding the raising of

the action under care and treatment as an insane person. The CHAIRMAN suggested that the amendment was out of order in view of the fact that Miss Horsbrugh's earlier amendment to Clause 1 to omit incurably insane had been negatived. After argument Miss Horsbrugh was permitted to move her amendment to omit the relevant Subsection 2 of Clause 6. She said a new clause on the subject of incurably insane was to be moved at a later stage, but she could not see that this new clause fully met the point although it would greatly improve the Bill. Subsection 2 which they were discussing suggested that the definition of incurable insanity was that a person who had been confined under care and treatment in an institution for five years, and where that care and treatment were proved should be presumed to be incurably insane unless the contrary was shown to the satisfaction of the court. She objected to incurable insanity being presumed. Not only were they going further in the Bill than the English Act did by putting the onus of the defence on to an insane person, but they were taking away the safeguards in the English Act. There was a provision in the English Act as to wilful misconduct or neglect by the petitioner which might have conduced to the insanity.

Mr MACQUISTEN said the clause in the Scottish Bill had arisen out of the practical working of the English Act. It had been found that the English medical profession was not prepared to say that any person was incurably insane. It seemed to be wrong that in the Bill Parliament should try to short circuit that difficulty by saying that all that had to be proved was the fact that for five years a person had been under medical care for insanity. The best thing to do was to adopt the English method. Proof should be left to the person who was seeking the remedy. Mr KIRKWOOD and Mr GALLACHER concurred in condemning the provision. Mr ERSKINE-HILL said the clause was essential for the working of the Bill. Mr JOHNSTON said more than the safeguard of medical testimony was wanted. Could the Secretary for Scotland make himself satisfied before an action for divorce on these grounds, not only that the Board of Control had given its imprimatur but that all the circumstances of the case were such that no hardship could possibly occur?

The LORD ADVOCATE Mr T. M. COOPER, said that in actions for divorce on the ground of insanity a curator *ad litem* would be appointed and would be entitled out of the expenses of the husband to have the best medical resources that money could buy to rebut the presumption of incurable insanity if it could be rebutted. In cases where the parties had no money at all the Bill made a provision to bring in the General Board of Control. The words in the clause which said the defender should be presumed to be incurably insane

unless the contrary was shown to the satisfaction of the court meant the presumption would hold if the medical evidence amounted to no more than that the probabilities of recovery were no greater and no less than in any other case of five years continuing insanity. If on the other hand the medical evidence could adduce any assignable reason for

that recovery within a definite period was more probable than in the general run of cases the contrary would be proved. No court of law could attempt omniscience and in this case all the legislature was doing was to set up a certain standard attainment of which would justify certain conclusions unless special circumstances led to the opposite conclusion being sufficiently strongly established. The number of married persons who had been confined in institutions in Scotland for five years at the beginning of the year 1936-7 was about 2,450. In that year twenty-seven married persons discharged cured after being in an asylum for five years included twenty-two who still had spouses alive. Of those who still had spouses alive thirteen were between 50 and 82 years of age and one would not expect them to take a divorce action. The Committee would see that in an average year the number of possible cases to be protected was nine or ten and that the possible husbands or wives who were tied to insane spouses was about 2,450. The rejection of the section under discussion would make the Bill a dead letter.

Mr GIBSON said the figures given by the Lord Advocate materially altered the case.

Sir R. W. SMITH said there were few cases where a person was regarded as insane for the whole time. There were almost certain to be periods when a person in an institution was perfectly sane, and medical officers in charge would never admit that such a person was insane the whole of the time. Persons might be kept in an institution when really for months during the year they might be discharged, and because of that fact they were presumed to be permanently incurable. The person should be examined daily, and if it could be proved that for any period the person was perfectly sane and could be allowed out of the mental institution that should break the five-year period.

Mr CASSELLS pointed out that under the Bill personal service of a divorce petition must be effected on the defender. If service were made in a mental institution the reaction to that would be a most unfavourable one so far as that patient was concerned.

By 20 votes to 5 the Committee rejected the proposal to delete Subsection 2 of Clause 6.

Mr MACQUISTEN moved to substitute seven years for five as the period after which incurable insanity could be presumed. By 16 votes to 9 the Committee reaffirmed the period of five years. The word continuously was added after the word years. On the motion of Mr ERSKINE HILL the Committee accepted an amendment the effect of which was to take out the period where a patient was receiving voluntary treatment for mental illness. He said it covered the case where there was a Scottish husband with a wife in an English asylum.

Clause 6, which also included a definition of the circumstances in which a person should be deemed to be under treatment as an insane person, was then added to the Bill. A new clause was added which provided that it should be the duty of the General Board of Control for Scotland on the request of the court to furnish a report on the probability in the case of a defender to any action under these provisions.

Consideration of the Bill by the Scottish Standing Committee then concluded and the Bill as amended was reported to the House by 16 votes to 3.

### Salvarsan Production in the United Kingdom

Mr DAVID ADAMS asked the quantities and values of the following chemical compounds produced and consumed in the United Kingdom and also in other areas within the British Empire in the most recent year for which figures were available: salvarsan, Bayer 205 trypanamide, atebrian, phismoquin, trypan blue, and trypanflavin.

Mr RONALD CROSS replying for the Board of Trade on May 20 said that during 1935, the latest year for which the information was available the output in the United Kingdom of salvarsan and neosalvarsan and other organo-arsenic compounds of like medicinal application amounted to 7,900 lb of a selling value of £107,000. No other official information was available regarding the output or consumption of the substances specified by Mr Adams in the United Kingdom or in other parts of the British Empire. Imports of the commodities mentioned in the question were not separately recorded in the published trade returns of the United Kingdom. Salvarsan and neosalvarsan and other organo-arsenic compounds of like medicinal application were separately recorded up to the year 1933 in which year imports into the United Kingdom amounted to 69 lb, valued at £3,296.

### Germany's Chemical Monopolies

On May 24 Mr D. ADAMS asked the Chancellor of the Duchy of Lancaster, representing the Lord President of the Council, whether his attention had been drawn to the fact that in case of war the British Empire would be without access to important chemical compounds of which Germany had a virtual monopoly, whether he was aware that German firms producing these chemical agents did not as a rule grant licences for manufacture in this country, and whether any Government action was contemplated in view not only of possible war time

contingencies but of the continuous and urgent need of the British tropical Empire.

EARL WINTERTON said the discovery of new chemical compounds of certain kinds, particularly those which could be used in the treatment of some tropical and other diseases, at present depended largely on research work undertaken by industrial concerns in Germany, with the consequence that large supplies of these new substances could for a longer or a shorter period be obtained only from abroad. It was for this reason that the Government had approved the proposal of the Medical Research Council for expenditure at the rate of £10,000 per annum on research in chemotherapy, to enable this country to play a greater part in future in making new discoveries in this field.

MR ADAMS asked if Lord Winterton was satisfied that this small sum was sufficient for the needs of the situation. EARL WINTERTON replied that since questions were previously asked on this subject he had gone into the matter with the Lord President's Department and the Medical Research Council. There were other grants in connexion with this particular research in addition to this new sum of money which in the first two years would be largely expended in making new premises. The result would be greatly to enlarge the field of research. The matter might be reviewed at some later date.

### Blood Tests for Paternity

In an answer to Mr Sorensen on May 25 MR LLOYD said there had never been any doubt that if each of the parties to a blood test proceedings was willing to submit to a blood test and if the results were admissible. The publicity given to a recent case would make the possibilities of the test more well known to magistrates and others concerned. Legislation would however be required to make blood tests compulsory in cases of disputes as to paternity and the Home Secretary could hold out no prospect of introducing legislation on this subject.

### Civilian Doctors Employed at Recruiting Depots

SIR KINGSLEY WOOD told Sir Reginald Blair on May 25 that civilian medical practitioners employed at Royal Air Force recruiting depots receive an inclusive salary of £500 a year. Two officers in receipt of retired pay are paid at special rates. Appointments are on a non-pensionable basis and are subject to one month's notice on either side. He was considering a memorandum which he had received on this matter.

### Incidence of Silicosis

MR ELLIS SMITH asked on May 26 if the Home Secretary was satisfied with the recently published statistics on silicosis. MR LLOYD in reply said the number of cases was a matter of serious concern and emphasized the necessity for taking all possible preventive measures. Much had been and was being done in this direction. In several industries where ancient precautions had been adopted over a long period of years there was now a marked reduction in the number of cases. It was also to be borne in mind that the disease had developed very slowly and that many of the cases now occurring were the result of conditions existing before the necessary precautions were introduced. The medical board now appeared to be working satisfactorily and no material change was in contemplation. Information was being considered with a view to possible extension of the scheme to some additional processes.

### Typhoid Outbreak at Hawick

Replying on May 26 to Captain ELLISTON who asked what steps were taken to control the outbreak of typhoid at Hawick, MR COLVILLE, Secretary for Scotland, said that from the beginning of the outbreak the local public health authorities in co-operation with the Department of Health for Scotland and the local practitioners used every

means of dealing with the outbreak or preventing its spread and of ascertaining its cause. Ample hospital accommodation for typhoid patients had been secured by bringing into use two buildings not normally utilized for cases of infectious diseases. The necessary bacteriological work involved in such an outbreak had been carried out first in the bacteriological department of Edinburgh University and later in a special laboratory established in Hawick. As a measure of precaution the local water supply was being chlorinated though it had been established that the water supply was not the vehicle of infection. Inhabitants of Hawick had also been advised to boil all milk and water. All contacts had been forbidden to handle food-stuff. The lending library and the public swimming pool had been closed and for a short time the public baths were also closed. In the examination into the cause of the infection exhaustive tests of the milk supply and of the source and distribution of all foods in common use were made and all employees engaged in production and distribution were where necessary subjected to special tests. As a result the cause of the outbreak had been narrowed down to certain foodstuffs and it was believed that most if not all of the sources of infection had been cut off.

*Conditions of Offices*—MR BERNAYS replying on May 17 to Sir Nicholas Grattan Doyle said that the Minister of Health had no reason to doubt that the local authorities were exercising their powers under the Public Health Act 1936 in respect of the conditions of offices in their areas. He proposed to call for reports from them at the end of the year.

*An Impure Milk Supply*—On May 24 MR WESTWOOD asked the Secretary of State for Scotland if his attention had been drawn to the report of the public health authority on the filthy condition of milk which was being supplied to the Milk Marketing Board from the county of Angus and if so what action he proposed to take to safeguard the health of the people from an impure milk supply. MR WEDDERBURN replied that the milk referred to was supplied by a single producer and was not now being accepted by the Board.

*Medical Superintendent of Whiston Institute, Lancashire*—MR PILKINGTON asked on May 26 in what circumstances DR P. G. SAWMY, who was for ten years assistant medical superintendent of the Whiston Institute, Lancashire, had been dismissed. DR ELLIOT replied that the action taken by the county council had been brought to his notice but the matter was one within their sole discretion and not one in which he had any power to intervene or on which he could usefully offer any expression of opinion.

### Notes in Brief

There are 122 European and sixteen African doctors employed by the Government in Nigeria. On the Gold Coast seventy-four European and ten African doctors are employed by the Government. Information regarding non-Government doctors is not available.

In the last twelve months the Glasgow Corporation built 2,118 houses. This figure compares with 2,182 in 1937, 2,903 in 1936, 4,546 in 1935 and 3,360 in 1934.

On May 24 MR Wedderburn replying to Mr Henderson Stewart said he had received no complaints regarding malnutrition among the children of farm workers in Fife.

Four cases of small pox were notified in England and Wales in 1937. No deaths from this disease were registered during that year.

Insulin treatment is being applied in some twelve public mental hospitals in this country.

All school children will be provided in emergency by the Government with respirators which they will carry with them to and from school. Containers will be provided.

A book of the report of the Select Committee on Patent Medicines published in 1914 and reprinted in 1936 remains available through the Stationery Office.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended May 21, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease are for (a) The 126 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever Deaths	35	4	12	2	2	23	2	10	4	1		
		1	1				1	5				
Diphtheria Deaths	1,110	164	159	43	25	850	122	196	32	19	899	165
	26	1	7	2	1	20	5	2	4	—		
Dysentery Deaths	36	10	120	—	—	14	1	5	—	—		
Encephalitis lethargica, acute Deaths	2	—	—	—	1	5	—	—	—	—		
		1					1					
Enteric (typhoid and paratyphoid) fever Deaths	15	2	34	4	1	26	3	6	—	—	30	—
	—	—	—	—	—	1	1	—	1	—		
Erysipelas Deaths			76	6	2			65	6	4		
		3					1					
Infective enteritis or diarrhoea under 2 years Deaths	29	8	12	4	5	47	9	7	9	1		
Measles Deaths	26	10	382	—	6*	16	1	168	—	1		
			10		2			3		—		
Ophthalmia neonatorum Deaths	110	15	37		2	116	22	47		1		
Pneumonia influenzae Deaths (from Influenza)	1,336	131	8	9	7	787	74	6		4	919	76
	66	10	7	—	—	34	1	1	2	—		
Pneumonia, primary Deaths		26	252	12	13		18	192	5	14		
				16					16			
Polio-encephalitis, acute Deaths	—	—	—	—	—	2	—	—	—	—		
Poliomyelitis acute Deaths	3	—	1	—	—	3	—	—	—	—		
Puerperal fever Deaths	4†	4	22	2	—	32	7	21	2	—		
		1†										
Puerperal pyrexia Deaths	199	26	23		7	114	22	27		2		
Relapsing fever Deaths	—	—	—	—	—	—	—	—	—	—		
Scarlet fever Deaths	2,006	201	485	112	91	1,525	159	325	92	32	1,927	227
	1	1	—	2	—	1	—	3	—	—		
Small pox Deaths	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping-cough Deaths	17	1	59	1	7	14	4	291	—	8		
			2		2			12		1		
Deaths (0-1 year) Infant mortality rate (per 1 000 live births)	319	52	68	28	24	368	69	75	28	16		
	53	43				61	57					
Deaths (excluding stillbirths) Annual death rate (per 1 000 persons living)	4 677	911	659	185	154	4 437	856	599	185	135		
	11 5	11 6	13 4	12 5	13 7	11 0	10 7	12 2	12 6	12 9		
Live births Annual rate per 1 000 persons living	6,889	1 299	1 008	368	273	6,635	1,326	1,010	317	264		
	16 9	16 5	20 5	24 9	24 2	16 5	16 5	20 6	21 6	25 3		
Stillbirths Rate per 1 000 total births (including stillborn)	305	41				275	43					
	42	31				40	31					

\* 6 cases in Belfast alone

† After October 1 1937 puerperal fever was made notifiable only in the Administrative County of London

‡ Death from puerperal sepsis

§ Includes primary form in figures for England and Wales London (administrative county) and Northern Ireland



## EPIDEMIOLOGICAL NOTES\*

## Enteric Fever

Fifteen cases of enteric fever were notified during the week in England and Wales compared with 14 in the previous week while the numbers for London were 2 and 1 respectively. There were 1 each in Chelsea and Westminster, and isolated cases occurred in Croydon, Portsmouth, Brighton, Reigate. In Scotland 34 cases were notified compared with 30 in the previous week, of these 24 cases of typhoid fever occurred in Roxburgh County and 1 (typhoid fever) in Selkirk, all presumably belonging to the Hawick outbreak. Four cases of typhoid fever were reported in Glasgow and 1 in Airdrie. Three cases of paratyphoid fever were notified in Glasgow the same number as last week and 1 in the County of Aberdeen. The diagnosis in the 4 members of the crew of the Orient liner *Orima* referred to last week as having been admitted to the Port of London Sanitary Hospital for observation has since been confirmed.

## Diphtheria and Scarlet Fever

Notifications of diphtheria in England and Wales showed an increase of 112 over the previous week and in London an increase of 20. There was a decided fall in the number of deaths especially in London. Of the 36 deaths recorded in England and Wales 5 were in Liverpool, 3 in Kingston upon Hull and 2 each in Bolton, Bradford and Bristol. There were fewer notifications of diphtheria in Scotland, Eire and Northern Ireland and each country reported fewer deaths except Northern Ireland where there was 1 death compared with nil in the previous week. Of the Scottish deaths 4 occurred in Glasgow, 2 in Paisley and 1 in Edinburgh. There were 2 deaths from diphtheria in Dublin and 1 in Belfast. Notifications of scarlet fever in England and Wales were 147 nearly 120 and in London there was an increase of 10 over the previous week. Small increases of notifications were noted in Scotland, Eire and Northern Ireland. The notifications in England and Wales remained above the median value for the last nine years while in London they were slightly below it.

## Primary and Influenzal Pneumonia

There was a considerable rise in the notifications of pneumonia (primary and influenzal) in England and Wales and London shared in the rise. Deaths in England and Wales rose from 54 to 66 while in London they dropped from 11 to 10. In the West Riding (Yorks) 171 cases were notified of which 64 were in Sheffield and 7 in Leeds. In Warwickshire there were 78 cases of which 51 were in Birmingham. Of the 210 cases in Lancashire 62 were in Manchester and 49 in Liverpool. Of the 66 deaths from influenza 4 were in Birmingham, 3 in Blackburn and 2 each in Kingston upon Hull, Manchester, Bolton, South Shields, Coventry, Derby, Walsall, West Bromwich, Rhondda, Croydon. In Scotland 252 cases of primary pneumonia were notified compared with 266 in the previous week, there were 8 cases of influenzal pneumonia—3 less than the previous week—and 7 deaths of which 4 were in Glasgow and 1 each in Edinburgh, Kirkcaldy and Coatbridge. There were 16 deaths from pneumonia in Eire of which 9 occurred in Dublin and 13 deaths from pneumonia in Northern Ireland (12 in Belfast).

## Measles and Whooping-cough

In the 126 Great Towns there were 26 deaths from measles compared with 28 in the previous week, of these 10 (11) occurred in London and 2 each in Kingston upon Hull, Manchester, Newcastle upon Tyne and West Hartlepool. During the week 942 cases were reported from

\* Except where otherwise mentioned figures in parentheses refer to the week preceding the one under review.

the 100 elementary schools compared with 843 in the previous week. The average daily admissions to the 100 fever hospitals were 30 compared with 49 in the previous week while the number of cases of measles under treatment in these hospitals on Friday, May 20 was 1364 compared with 1620 on May 13. On the same day there were under treatment in the LCC fever hospital 1070 (1047) cases of diphtheria, 843 (777) cases of scarlet fever, 275 (287) cases of whooping cough. Notifications for the week ended May 21 in the eleven metropolitan boroughs in which measles is notifiable were 348 (461) distributed as follows: Battersea 25 (36), Bermondsey 19 (1), Enbury 19 (19), Fulham 28 (42), Greenwich 95 (120), Hampstead 13 (20), Lambeth 52 (56), St. Pancras 41 (71), Shoreditch 15 (59), Southwark 13 (21), Stepney 28 (27). In Scotland 382 cases of measles were notified compared with 426 in the previous week, the figures for Glasgow were 129 (164), Dundee 63 (77), Aberdeen 36 (60), Falkirk 76 (57), Edinburgh 24 (36). During the week there were 10 (21) deaths from measles in the 16 principal towns of Scotland, of these 3 each occurred in Glasgow (9) and Dundee (7), 2 (0) in Aberdeen and 1 each in Clydebank (1) and Ayr (0). In Northern Ireland there were 2 deaths from measles—1 in Belfast and 1 in Newry. There were no deaths from measles in Eire during the week under review.

In England and Wales whooping cough was responsible for 17 (20) deaths of which 1 (6) occurred in London. There were 5 deaths from whooping cough in Birmingham and 2 in Liverpool. In Scotland 59 cases of whooping cough were notified compared with 97 in the previous week while the deaths remained at 2—1 each in Glasgow and Aberdeen. In Northern Ireland 7 (25) cases of whooping cough were notified with 2 (1) deaths both in Lurgan.

## Cholera

The figures for the incidence of cholera in India (including Burma) for the first quarter of 1938 have come to hand, 53143 cases were notified compared with 42684 for the corresponding period last year. In India itself 33123 cases were notified of which 67 per cent were in Bengal and about 17 per cent in the Presidency of Madras. In the two following months (April and May) epidemics were notified in the Punjab, the United Provinces and the Central Provinces following the Kumbhamela festival at Hardwar (United Provinces) which is held every twelve years. In the United Provinces there have been 7000 cases in six weeks more than half of which proved fatal.

## Plague

In India (including Burma) the provisional number of plague cases notified during the first quarter of 1938—12045—was markedly lower than that for the corresponding period of 1937 when 16465 were notified. The reduction was most marked in the United Provinces and Central Provinces which remain the principal foci of plague in India. Of the 9670 cases in India itself during this quarter 48 per cent occurred in the United Provinces and Bihar and 29 per cent in the Central Provinces.

## Small pox

During the week ended May 21, 21 (26) cases of smallpox were reported in Hong Kong with 20 (25) deaths during the same week there were in the Presidency of Bombay 443 (391) cases with 84 (87) deaths. In Bombay itself there were 27 (38) cases and 22 (23) deaths. In Sind during the same week there were 154 (192) cases of smallpox and 11 (27) deaths. In Tonkin (French Indo China) 93 (122) cases were reported during the same week.

## Typhus

During the first quarter of 1938 3738 cases of typhus were reported in Eastern Europe compared with 5109 in the corresponding quarter last year. The reduction



affected all the countries in Europe where typhus is endemic with the exception of Lithuania and Poland, where increases were recorded. The largest numbers reported were Poland 1,592, Rumania 1,513, Yugoslavia 328. In Morocco during the week ended May 14 175 cases of typhus were reported, with 18 deaths, the principal localities affected were Casablanca 77 cases, 10 deaths, Marrakesh 27 cases, 3 deaths, Rabat 17 cases, 2 deaths, Oued-Zem 17 cases, 3 deaths. In Egypt in the week ended May 6 there were 173 cases of typhus and 13 deaths distributed chiefly as follows: Beheira 50 cases, 2 deaths, Minufiya 33 cases, Gharbiya 14 cases, Cairo 6 cases, 2 deaths. In Tunisia during the week ended May 15 there were 38 cases of typhus distributed chiefly as follows: Tozeur 14 cases, Susa 7 cases, Southern Military Territories 5 cases. The last week for which figures are available from Algeria is the week ended April 30, during which 49 cases of typhus were reported distributed mainly as follows: Oran 16, Bellevue 20, and Constantine 16.

### COMMITTEE ON MENTAL HEALTH

The Council of the British Medical Association at its meeting on June 1 appointed a special committee to study the problems of mental health, including the amount of industrial disability due to mental illness and the need for the extension and improvement of institutional facilities. The proposal that a special committee of the Association should investigate this subject had its origin in a letter published in the *British Medical Journal* of December 18, 1937, in which Dr J. R. Rees, medical director of the Tavistock Clinic, emphasized the importance of improving the existing provision for prevention and treatment of the psychoneurotic and allied disorders.

The committee will make a thorough study of all available statistics, and will seek to compare the importance of mental illness with other conditions already recognized by the State as requiring action. It will consider the part which the general practitioner, hospitals, clinics set up under the Mental Treatment Act, and child guidance and other clinics can play in the prevention of such illness. Careful study will also be made of the degree of success which can be attained with present methods of treatment, and of the type of staff required for the most efficient treatment of in-patients and out-patients respectively. The part allotted to psychological medicine in medical training will occupy an important share of the committee's attention.

The members of the committee are

Sir Robert Johnstone (President), Sir Kaye Le Fleming (Chairman of Council), Dr H. Guy Dain (Chairman of Representative Body), Mr N. Bishop Harman (Treasurer), Sir Henry Brackenbury, Dr J. A. Brown, Professor Millais Culpin, Dr R. G. Gordon, Sir Walter Langdon Brown, Dr Marv C. Luff, Professor E. Mapother, Dr Doris M. Odum, Dr A. A. W. Petrie, Dr J. R. Rees, Dr Benjamin Reid, Dr D. Stewart, and Dr R. M. Stewart.

The annual report of the British Red Cross Society shows continued expansion in respect of both membership and activities. The number of Detachments, men's and women's, has substantially increased and the Society's trained personnel numbers over 30,000 exclusive of Air Raid Reserves. Much progress has been made in special training for co-operation with the Home Office schemes for defence against aerial warfare and also in the training of instructors, whose services are available as lecturers to the general public. County branch reports show the very wide range of services rendered to the public by first aid including first-aid stations on the roads and at seaside resorts, by home nursing and invalid transport by assistance to hospitals and clinics, and through widespread general instruction on matters of health. The report for 1937 includes a summary of the activities of Red Cross Societies and Branches throughout the Empire. It is published from 14 Grosvenor Crescent, London, S.W.1.

## Medical News

Professor E. J. Salisbury, D.Sc. F.R.S., will deliver a Chadwick Public Lecture on Plants in Relation to the Human Environment at the Chelsea Physic Garden, Swan Walk S.W., on Thursday, June 9, at 5 p.m.

Founders' Day will be celebrated at Epsom College on Saturday, June 18. Play on the second day of the cricket match against the Old Boys will start at 11 a.m. At noon there will be a service in Chapel for College and parents at 2.15 in assault arms and at 3.30 Sir Cosmo Parkinson will give away the prizes in Big School followed by tea on the cricket ground.

In our advertisement columns this week the University of Bristol invites applications for the posts of Professor of Pathology and Lecturer in Pathology at salaries of £1,000 per annum and £400-£500 per annum respectively, also the University of Capetown invites applications for the Chair of Physiology at a salary of £1,000-£1,100 per annum.

Dame Florence Barrie Lambert D.B.E. M.B. will present the prizes and certificates to successful students of the London (Royal Free Hospital) School of Medicine for Women on Wednesday, June 15, at 3 p.m.

The twelfth annual meeting of the Swiss Society of Dermatology will be held at Geneva on June 25 and 26, and the annual meeting of the Swiss Paediatric Society at Berne on June 11 and 12.

The Stoke-on-Trent City Council on May 24 approved a scheme for extending the London Road Public Assistance Hospital at a cost of nearly £100,000. The Medical Officer of Health, Dr A. Wotherspoon, told the council that in place of second rate buildings for 755 patients they would have a first class hospital with 890 beds, including 130 for maternity cases. The nursing staff would be increased from 140 to 340.

The April issue of the *Bulletin de l'Office International d'Hygiène Publique* contains articles on immunity to small pox, post-vaccinal encephalitis in Germany, England and Wales, Italy and Sweden, and pulmonary tuberculosis in Belgium, Denmark, the United States, Germany, Italy, England and Wales, and Sardinia.

The Lord President of the Council has appointed Professor R. H. Fowler, F.R.S., at present Plummer Professor of Applied Mathematics in the University of Cambridge to be Director of the National Physical Laboratory, with effect from October 1, 1938. Professor Fowler will succeed Dr W. H. Bragg, who has been elected to the Cavendish Professorship of Experimental Physics in the University of Cambridge.

Dr L. A. Hurst, of the Department of the Interior, Government of South Africa, has been awarded a Commonwealth Fund Fellowship in Medicine tenable at the New York State Psychiatric Institute.

Colonel Cecil Birt, late A.M.S., who died on March 18, left an estate of the gross value of some £35,000. He bequeathed all his property subject to life interests to the Library Endowment Fund of the Royal Society of Medicine. Colonel Birt was a regular user of the library, and we are informed that his bequest was made spontaneously as an appreciation of the services which the library renders to Fellows. It is hoped that this example may be followed by others who recognize the value to science and medicine of a first class medical library.

The King has appointed Dr Arthur Hutton McShine to be a Member of the Executive Council of the Colony of Trinidad and Tobago.

Chairs for occupational diseases are to be founded in the universities of Czechoslovakia.

Professor F. W. O'Connor, who died on October 2, left his scientific books, papers, photographs, equipment, and 64-acre farm at Branchville, New Jersey, to the New York Academy of Medicine.

# Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

ORIGINAL ARTICLES and LETTERS forwarded for publication are held in good to be offered to the *British Medical Journal* unless the contrary be stated. Correspondents who wish not to be taken of their communications should authenticate them with their names, not necessarily for publication.

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All communications with reference to ADVERTISEMENTS should be addressed to the Advertisement Manager. Orders for copies of the *Journal* and communications with reference to subscription should be addressed to the Secretary, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

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## QUERIES AND ANSWERS

### Cancer and Smoking

Lieutenant-Colonel H. H. KING CBE M.S. (ret.) writes: A propos of the possibility of preventing cancer, are there any statistics available of the relative incidence of cancer in smokers and non-smokers? If the constant slight exposure of a tissue to a diluted carcinogenic substance definitely promotes the occurrence of cancer—as appears to be likely—then it would be advisable to ascertain whether in fact this is the case, and I suggest that this comparison would give us valuable information, particularly if it was divided into two portions: (1) cancer of the mouth, tongue and respiratory passages; (2) cancer elsewhere.

### "Typhoid Mary"

Dr J. D. ROLLESTON writes: In reply to my query in the *Journal* of April 23 (p. 932) Dr J. Rosslyn Earp, Medical Editor, Department of Health of the State of New York, has kindly sent me the following information: Dr Sebbins, the Director of the Division of Communicable Diseases in this Department, tells me that following her application in the Sloane Maternity Hospital outbreak, Mary Mallon was confined to Riverside Hospital on North Brother's Island continuously until her recent death. In so far as can be determined there is no evidence of her having caused cases since 1915. He also recommends an account of Typhoid Mary, published in the *New Yorker* of January 23, 1935. This account he tells me is quite accurate though not too solemn.

### Mosquito Bites

Dr E. B. LATHBURY (London EC2) suggests the following prescriptions: (1) of eucalypt 2 oz. ac carbol liq. 4 drops, oil citronella 2 oz. mix and apply a few drops on face and face. (2) Oil cassia 1 oz., brown oil of camphor 2 oz., vaseline lanoline or salad oil 3 oz. smear on the skin in small quantities.

Miss M. W. REEVE writes: The late Lieutenant Colonel R. H. Elliot (with whom I was for ten years) always used oil of lavender 1 part citronella oil 4 parts alcohol 1 part. This was put in a throat spray and kept in his car. He was fond of going for picnics, and as soon as he got out of his car he and anyone with him sprayed their legs and wrists. I remember this was repeated an hour or two later. Colonel Elliot was very badly affected by insect bites, and he never had any trouble after using this mixture. I have made it up for him many times.

## Alopecia

Dr J. M. DOTAN (Cumberland) writes in reply to R. J. C. (10th May 14, p. 1084): I have had similar cases at intervals from 15 to 45 years in all of which the patients were otherwise perfectly healthy. I adopted the following line of treatment with success in each case. I give each case a third degree dose of ultra violet light on the affected area and this is repeated at weekly intervals until the condition is cured. If the area is too large I divide it up and give a third degree erythema dose on no more than three areas the size of a coin piece in one week. These areas are also irradiated at weekly intervals. If the case seems more resistant than usual I put the patient on some form of mixed glands daily in addition to the usual ultra violet treatment. It is to be noted that the skin of the scalp requires a longer exposure to the light to produce a third degree erythema than the skin of other parts of the body.

## An Internal Sanitary Pad

W. B. writes: I am rather surprised that the recent correspondence in your columns on this subject should have been in the main unfavourable because several of my patients who have been using this sanitary pad for some months now have been very satisfied and have given up the use of the orthodox external pad. So much so that in stead of advising against it when asked as your other correspondents have done I have kept an open mind about it until more comprehensive results are available and have advised each patient to try it for herself. One fact at least is evident—that most women welcome the idea of a vaginal pad since however much they may be used to the external pad they are always conscious of its presence and even if in some cases there is no actual discomfort or labial chafing no one can say that it is really comfortable.

## LETTERS, NOTES, ETC

### A Twelfth Century Case of Miscarriage

Dr GILBERT W. CHARSLEY writes: In the *Journal* of May 28 (p. 1157) I read with interest Dr Annie Svidenham's memorandum on 'An Unusual Case of Miscarriage'. To add further interest perhaps I may be excused for quoting from a book *The History of Physick from the Time of Galen to the beginning of the 16th Century* written by J. Freind, M.D. and printed in 1727. In this book Dr Freind refers to Albucasis, an Arabian surgeon of the twelfth century who stated the following case of a woman who had a child which died in the uterus and after was pregnant again the second conception died too. Some time after an abscess broke out at the Navel from whence to the great surprise not only pus but bones came out. Upon reflection he found they were the bones of a Foetus and he took a great many of them out. The woman lived many years after but had a continual running Ulcer at that place. However strange this story may appear the experience of the moderns furnishes us with several parallel instances, one particularly where the Woman not only recovered but lived to have a child after.

### Food Contamination by House-flies

Dr W. B. HOWELL (Devon) writes: Now that a campaign for national fitness is on foot it is to be hoped that some effort will be made to awaken the people of England to the danger to health of house flies through food contamination. The Americans are far ahead of us in this matter. In England it is as rare to see windows screened against flies as it is common in the United States. In the English countryside farmyards are allowed to exist among residences, and close to them without anything being done to keep the flies out or to kill them at their breeding places.

### Mental and Physical Poise

Dr R. HUNT COOKE (Hendon) writes: The National Health and Fitness Campaign is one which should appeal in a great degree to the medical profession as it is compatible with the strides which are being made in preventive medicine. I was greatly impressed with the work of the Greek Dance Association at its demonstration at the Scala Theatre on May 21. One of the aims of this association is the attainment of mental and physical poise. The dances

are made up of normal movements carefully thought out to avoid muscular overdevelopment and strain and to develop control strength and grace. Repose, relaxation and rhythm are considered to be of great importance all of which are necessary to counteract the effects of modern living. This form of exercise should be of benefit to any type of person especially to neurotic subjects, as it possesses so much rhythm and teaches the expression of individuality. The classes are graded to suit both the mental and physical ability of pupils and all the teachers are people of education and culture with a knowledge of anatomy.

### Medical Work in Newfoundland

The great diversity of the medical and other philanthropic work carried on by the Grenfell Association of Great Britain and Ireland is well illustrated by its annual report for the year ending September 30 1937. The St Anthony Hospital, which began to function in 1902 dealt with 830 patients in the year under review the majority of these requiring general surgical treatment and medical care for conditions other than tuberculosis. Cases of pulmonary tuberculosis numbered 49 of malnutrition 45, and of surgical tuberculosis 20 while there were 75 obstetrical cases including 36 normal and 21 operative deliveries. Beri-beri of which there was a large number of cases for many years is rapidly decreasing in spite of the fact that the economic situation of the population of Labrador and Northern Newfoundland is probably worse than it has been for a long time. Many more families have gardens now and educational work regarding diet has been continuing steadily. The Government has also insisted that all persons receiving relief shall use a more nutritive flour instead of white flour. The increase in tuberculous cases is partly accounted for by earlier diagnosis. The most serious problem is whether the hospital should assume the treatment of the more hopeless chronic cases each of which costs the institution several thousand dollars a year. The St Anthony Hospital provides treatment for the population of an immense area extending from Cape St John on the east coast of Newfoundland to Port Saunders on the west coast and along the Strait of Belle Isle. There are two Government nurses in White Bay, one Grenfell Mission nurse at Englee on the east coast, a Government nurse at Port Saunders and two Mission nurses at Flowers Cove on the west coast. The hospital ship *Strathcona* with a doctor and a dentist visited every settlement in the White Bay district during the summer, and removed to hospital all persons needing in-patient treatment or special supervision. Dr T G Hood describes the work of the Harrington Hospital where pulmonary tuberculosis is the outstanding problem. It is remarked that thyroid disease is extremely rare in Labrador so far as the coast is concerned, though more common in the interior. The general interest of the report is enhanced by an account of the industrial handicrafts work of the Mission which is of great value economically and provides occupation for the long winter periods. Reference is repeatedly made to the friendliness, cheerfulness under difficulties and gratitude of these people.

### Use and Abuse of Antiseptics

Dr A C F HALFORD writes from Brisbane. I have been a laboratory worker and a clinical surgeon and I try to hold my experience in both spheres in their proper perspectives. It is from both points of view that I have disagreed with Mr Norman C Lake (*Journal* April 2, p 753) and I am convinced that neither laboratory tests nor clinical use justify us in giving spirit solutions of biniodide of mercury a place anywhere. Especially is this so in minor surgery. My real purpose in writing on any phase of surgical and midwifery practice is to draw serious attention to the undue prevalence of sepsis in spite of Mr Lake's claims of the hundreds of thousands of operations he mentions. The surgeon who uses only hot water and soap has been known to make the same claim but there are many wounds that break down and the fault is not merely the choice of antiseptic many are chosen but few used wisely. It is the protection of a wound against exogenous infections—cross infections and secondary infections—that worries us a position to day that is approached by the younger practitioners especially with hope but not with certainty. Why does the laboratory worker not step in and say that a wound dressed with no antiseptic protection at all cannot be safe any more than the soiled sterile plug of a tube of culture liquid can prevent contamination of the whole? Thus is it that I

continue to write protesting against inefficient lotions and aseptic dressings and plead for a return to intelligent antiseptic measures.

### Ophthalmology in Palestine

In spite of the unsettled conditions in Palestine the progress made by the Ophthalmic Hospital of St John of Jerusalem in 1937 was most satisfactory. The number of new out patients, 21 367, was the largest on record, and the out patient attendances reached the remarkably high figure of 108 616. The number of in patients 907, was below that for the previous year. The annexe was as full as usual and there was a daily average of 100 patients in the arcades of the khir. Training in ophthalmology of the Palestinian nurses continued efficient and popular. It has been decided to build a new block for paying patients and for a physio-therapeutic department on the south side of the existing buildings, the appeal for funds having resulted in the receipt of over £10,528. Many patients were received from the Army and the Royal Air Force. A slight earthquake shock towards the end of the year under review opened up the cracks in the roofs and all leaked badly during the November rains with the exception of the large dispensary roof which had previously received special asphalt treatment. The question of treating all the roofs in this manner is now being considered carefully. Sir Horace Rumbold, Vice Chairman of the Palestine Commission described the hospital as the finest piece of British propaganda in the East. The electric lighting, heating and power supply of the institution has now been undertaken by the Jerusalem Electric Corporation at a reasonable flat rate. The civil disturbances in Palestine interfered with road transport and diminished the attendances by the peasantry, as contrasted with the local town population. The number and percentage of Jewish patients increased more particularly. The incidence of trichoma among the new patients 8.82 per cent, was the lowest hitherto recorded at the hospital, indicating a temporary change in the character of the patients, there being more urban dwellers, among whom this disease is relatively less common. Some improvement was noted in the blindness rate in spite of a severe but localized outbreak of acute conjunctivitis affecting the townspeople. Potent factors in this outbreak were malnutrition debilitation due to measles and whooping cough, and the widespread economic distress consequent on unemployment. These cases do not respond well to treatment.

### Sedimentation Tests in General Practice

Dr A E FINCKH (Sydney) writes. Any general practitioner wishing to employ the blood sedimentation test may find the following technique a great advantage. Use oxalated blood as for blood sugar examinations. Of a 10 per cent potassium oxalate solution put one drop on the bottom of a small bottle. Heat gently till evaporated to dryness. Keep a number of these in stock. Collect from 2 to 3 ccm of blood from a vein and deposit in the oxalate bottle. Shake gently. Take a graduated 1 ccm pipette and suck up to near the 0 mark and block with the finger. Block the other end by stabbing into a cake of soap or wax. Keep vertically at room temperature and read off in an hour.

### Medical Golf

There were nearly a hundred competitors for the Manchester and District Medical Golfers' Association annual competition held on the Northenden links on May 25. The challenge cup for medal play was won by Dr J G Stewart of Oldham with the best net score of 67. Dr Stewart also won the Walter silver medal for the best gross score from a handicap of 10 or over. Dr W L Hunter of Hale won the Walter gold medal with the best gross score of 73 and Dr J S B Mackay of Bury won the captain's second prize. A prize for the best net score over the first nine holes was won by Dr J E R Keyms of Fairfield, and another for the best score of the second nine holes by Dr L J O Loughlin of Moss Side. Play was over eighteen holes, and the weather was favourable.

### Corrigendum

In Epitome paragraph No 398 on sulphathiazide in cerebrospinal fever, which appeared in the *Journal* of May 14 at page 80. The dosage was graduated from an upper limit of 15 grammes every four hours. Should have read. The dosage was graduated from an upper limit of 15 grains every four hours.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

### 453 Family History of Tuberculosis

D MURRAY LYON and W C REID (*Educ Med J* March 1938 p 213) have reviewed 1411 cases in which there was a family history of tuberculosis with special reference to life assurance. The records cover a period of fifteen years between 1921 and 1936. Phthisis accounts for only about 2 per cent of deaths among the general body of assured lives while in their series of cases 20 per cent of the eighty-two deaths were due to tuberculosis. The additional mortality is most marked at ages up to about 35. A family history of tuberculosis does not appear to have any significance from the assurance point of view when the proposer is over that age and is medically examined at the time of assuring. After the age of 35 provided there are no adverse features the question of whether the proposer is a little under the average weight does not appear to be of great importance.

### 454 Intestinal Tuberculosis

F TISELL (*Svenska LakSallsk. Handl.*, Bd 63 Nr 3 1937 p 149) has examined 178 cases of pulmonary tuberculosis with special reference to the detection of intestinal tuberculosis. It was found in fifty-four out of sixty-one cases examined post mortem and was located in every case but one in the ileo-caecal region. Such clinical evidence of intestinal tuberculosis as colic and loose stools proved unreliable for they were absent in 40 per cent of all the cases in which intestinal tuberculosis was radiologically demonstrable. Such general signs as a high temperature and a rapid sedimentation rate were of comparatively little value as they might well be due to the pulmonary disease. The benzidine test for blood in the faeces and Triboulet's reaction for albumin in the faeces proved of little value and the author comes to the conclusion that the most effective means of demonstrating ileo-caecal tuberculosis is by x-ray examination. Radiological evidence is less reliable in tuberculosis of the small intestine but this is rare. With regard to the prognosis the author notes that after an observation period of two and a half years 80 per cent of all the patients showing radiological evidence of intestinal tuberculosis were dead. But this high mortality must, in his opinion, be traced to the serious character of the pulmonary disease. In about one-third of the cases in which intestinal tuberculosis was radiologically demonstrable the interval between the outbreak of the pulmonary and the intestinal tuberculosis was probably less than six months.

### 455 Intermittent Claudication

F KISCH (*Wien Arch inn Med* February 28 1938, p 71) describes a simple standardized work test in connection with intermittent claudication. It consists in the rhythmic repetition—at the rate of thirty movements a minute—of maximal flexion followed immediately by maximal extension of the lower limb at the ankle, knee, and hip-joint. The movements are repeated until the characteristic pain of intermittent claudication makes its appearance. The author claims after observing fifty-three cases that this test may advantageously be used for determining the degree of claudication present at the beginning of treatment and for estimating the success or otherwise of the treatment adopted. The object of the treatment is to promote the establishment of as satisfactory a collateral circulation as possible. According to Kisch this may best be done by a combination of three factors: (a) the use of drugs as nitroglycerin, caffeine etc., and alcohol in

the form of brandy or whisky; (b) as much rest as possible for the affected limb and the avoidance of all harmful influences such as pressure, cold, heat and injury; (c) the exercise of the greatest care in ensuring the healthy function of the digestive system and the massive administration of fluids. Kisch states that the results obtained by treatment of his cases along these lines were very good in 45 per cent of cases, moderate in 20.2 per cent and no improvement was observed in 24.5 per cent.

### 456 Heart Damage after Diphtheria and Rheumatism

A VON DOMARUS (*Med Welt* January 1 1938 p 1) points out the difficulty of assessing the amount of myocardial damage present in patients with a history of diphtheria or rheumatism. Diphtheria attacks the myocardium chiefly rheumatism the endocardium. Fewer cases of myocardial damage due to the former are met with on account of the high mortality of malignant diphtheria. Diagnostic methods for the assessment of myocardial damage include radiography, auscultation, electrocardiography and estimation of the blood pressure. The shape of the heart on x-ray examination and the changes seen in the electrocardiogram are important. Nervous patients should be re-examined after some weeks of rest with the administration of bromide and valerian. Observations as to the general condition of the patient are of more value than a single low blood pressure reading. The heart's function may be assessed by the rapidity of the pulse before and after exercise and by the combined control of the pulse, electrocardiogram and blood pressure with the patient recumbent and standing and before and after exercise. Latent myocardial damage may be revealed by a marked polyuria following a single intravenous injection of 0.3 mg of strophanthin. Finally the carefully controlled effect of games, gymnastics and military exercises on the heart is of value in assessing the degree of damage. All sources of focal infection must be dealt with. Times of rest and relaxation must be carefully prescribed and adhered to. Medicinal treatment is of little value except in rare cases. Spa treatment is often beneficial. Alcohol, tobacco, tea and coffee should be forbidden. Any subjective symptoms referable to the circulatory system are contraindications to the resumption of activity. When these have disappeared a gradual return to normal life should be encouraged.

## Surgery

### 457 Primary Carcinoma of the Male Urethra

E A MILLER (*Urol cutan Rev* February 1938 p 88) describes carcinoma of the urethra as a rare condition. It is usually seen in men over 50 although cases have been recorded at an earlier age. The lesion generally arises from the bulbous urethra and stricture occurs in at least 50 per cent of cases. Various causes are suggested the most common being trauma and leukoplakia probably resulting from chronic urethral infections. The symptoms are obstructive in nature and may be divided into four stages: urethral discharge, dysuria and retention, local tumour formation, periurethral infiltration with urine, and fistula formation. In a few cases bleeding has been an early sign and these are the ones in which operative relief has been achieved. Treatment of urethral carcinoma usually only gives symptomatic relief. 79 per cent of patients live less than six months after the diagnosis has been made. In advanced cases with severe infection, hopeless infiltration and metastasis only palliative treatment can be given. When the bulbous urethra

is involved external urethrotomy with excision and cauterization may be attempted. When the pendulous urethra is the portion involved amputation of the penis has been the operation of choice usually with extirpation of the inguinal glands. Deep x-ray therapy should be given after operation. Tumours at the meatus may be treated by electrocoagulation and radium. A case is reported in which a man of 78 had a nodule in the penis behind the fossa navicularis and along the corpus spongiosum. This tumour increased rapidly in size and two further small nodules became palpable in the distal third of the corpora cavernosa. Palliative measures were unavailing, and the patient died within a fortnight of cardiovascular and renal disease secondary to the urinary obstruction.

#### 458 Early Diagnosis of Gastric Carcinoma

W THIELE (*Med Welt* February 19, 1938, p 266) reviews the different diagnostic methods for the early detection of gastric carcinoma. Pyloric carcinoma is met in about 42 per cent of all cases of carcinoma of the stomach, carcinoma of the body is found in about 32 per cent, carcinoma of the cardia in about 20 per cent, and scirrhous carcinoma in about 5 per cent. In view of the operability of the relatively frequent pyloric carcinoma, an early diagnosis of the condition is of the utmost importance. Unfortunately in 55 per cent of cases reviewed the growth was inoperable by the time the diagnosis was made and 26 per cent of the cases operated on died shortly after the operation. The author is inclined to accept the view that carcinoma of the stomach develops on the basis of chronic gastritis, 5 to 8 per cent of the patients had gastric symptoms for at least a year and 6 per cent for as long as ten years. As to age, 81 per cent of the patients were over 50, and only 6.7 per cent were under 40; the youngest patient was 28 years old. Achlorhydria was found in 65 per cent of cases, hyperacidity was found in 11.5 per cent of cases, but in no case of carcinoma of the cardia, the absence of lactic acid did not exclude carcinoma. The rate of blood sedimentation was altered in only 33 per cent of cases. The general appearance of the patients often proved deceptive, but most of them looked too young for their age. Hereditary predisposition was found in only 23 per cent of patients, the blood pressure was usually relatively low. Occult blood was almost always present in the stools. The blood calcium was usually considerably lowered (often below 10 mg per 100 c cm). Macrocytosis may appear before the usual anaemia and anisocytosis, only 65 per cent of the cases presented anaemia, and 91 per cent of the anaemias were of the hypochromic or secondary type, only 6 per cent being of the hyperchromic type. There seemed to be some relationship between pernicious anaemia and gastric carcinoma.

#### 459 Multiple Enchondromata

B COSSAR (*Polichinico Sez Piat*, March 7 1938, p 434), who records two illustrative cases in a man aged 25 and a boy aged 8, states that enchondromata may be central or peripheral according to whether the centre or the periphery of the bone is attacked. When they arise from the central part the bone increases in size and loses its shape, and the cortex becomes thinned until it breaks. On the other hand, when the growth is implanted in the periphery underneath the periosteum the bone appears to be almost unaffected and the tumour adheres to the bone by a wide base. Most enchondromata develop in the shafts of the metacarpals, metatarsals, and phalanges. They may also be found in the epiphyses of the long bones, such as the humerus, ulna, radius, femur, tibia and fibula. Most writers regard the condition as hereditary. Anatomically enchondromata consist of adult cartilaginous tissue arranged in the form of round or oval nodules, of various sizes well defined and encapsulated. It is generally agreed that the tumour remains stationary once growth has ceased; secondary changes may occur, however, such

as fatty degeneration, vesicular or mucous transformation, ossification or even malignant change. Operation should not be performed until growth has ceased.

#### 460 Bilateral Stellate Ganglionectomy

E SCHNIDER (*Zbl Chir* February 19, 1938, p 402) reports a case of Raynaud's disease in a woman aged 26. After all conservative therapy had failed it was decided to extirpate the stellate ganglia in two stages. Under general anaesthesia both hands became warm, one ganglion was removed at the first operation. The corresponding hand remained warm after operation, while the other hand was blue and cold. This hand improved after the extirpation of the corresponding ganglion at a second operation. For a short time after each operation there was a transitory Horner's syndrome, which cleared up after some eight to fourteen days. Recovery was uneventful and the improvement was lasting. The patient is now able to perform her usual household duties without discomfort, although the hands still become cyanosed on immersion in cold water. Both extirpated ganglia were examined histologically, and appeared normal.

#### 461 Resection of the Elbow-joint

A DAVIDSON and M HOROWITZ (*Surgery* February, 1938, p 226) discuss the relative merits of resection of the elbow joint and arthroplastic reconstruction. Arthroplasty aims at the interposition of a layer of fascia or membrane and the reconstruction of the bone ends so as to adapt the opposing surfaces and give stability as well as movement to the new joint, but may lead to ankylosis again. Resection of the elbow-joint is the operation of choice in cases of adult tuberculous arthritis, and is also indicated in ankyloses of all types—fibrous or osseous, and traumatic or infectious in origin. It should not be carried out after pyogenic infection until several years of quiescence have elapsed, and is inadvisable in cases of ankylosis due to rheumatoid arthritis. Resection is of value also in rehabilitation after elbow-joint fractures with deformity and disability, and in chronic irreducible dislocations. The operation is also indicated for the extirpation of benign and locally malignant osseous tumours. Resection is best delayed until the cessation of period of growth, to avoid a shortened extremity and also re ankylosis. Ollier's method of resection aims at the removal of the bone alone, leaving the periosteum to admit re formation of all the structures of the joint. The good results which follow this operation depend upon a liberal excision of bone and the early mobilization of the new joint. The technique of the operation is fully described. It has been found that active flexion is obtained in two to three months, but complete recovery does not take place in less than six months—that is, until the soft structures have adapted themselves to the resection, then lateral instability grows less marked. A residual 10 to 15 degrees of lateral movement usually persists. In a series of seventeen cases the result was excellent in eleven instances, of which nine were in adults and two in children. In two children a partial restoration of function occurred, and in three more there was ankylosis.

#### 462 Sport Injuries to the Wrist

W WEISS (*Dtsch med Wschr* March 4, 1938, p 340) reports from the University Hospital of Frankfurt a M observations on sport injuries to the wrist. He begins with the general statement that sport injuries involve the upper limbs in about 22 per cent and the lower limbs in about 60 per cent of cases. About half of the injuries to the upper limbs involve the hands and wrists, by far the most common lesion being sprain of the wrist. Of all sprains, this is second only to sprains of the ankle in frequency. He calculates that after fracture of the radius fracture of the scaphoid is the most common of all the bony injuries in or about the wrist, and he quotes

Schnelz as finding that recent fractures of the scaphoid constitute between 3 and 4 per cent of all the fractures of the limbs and between 50 and 60 per cent of all the injuries to the wrist. In the order of frequency of injuries to the bones of the carpus are fracture of the scaphoid, dislocation of the semilunar and fracture of the semilunar. With regard to the diagnosis and treatment of recent sport injuries to the wrist the author insists on the taking of radiographs in at least two different planes and he is an advocate of non operative methods of treatment provided the case is early and the correct diagnosis is made. In his opinion removal of even a single bone is liable to change the static conditions of the wrist to such an extent that there is grave risk of its subsequent usefulness being impaired.

#### 463 Intestinal Obstruction due to Gall stones

E. GASPARI (*Brit. Clin. Chir.* March 1938 p 214) reviews the diagnosis and treatment of acute intestinal obstruction due to gall stones. Three clinical types are differentiated. The acute form of the disease will usually be diagnosed as acute obstruction of the small intestine. Rarely can the obstructing stone be seen radiographically. The remitting type is the one most commonly met with and with this form the patient may have attacks of obstruction lasting for some hours and followed by varying periods of comparative comfort for weeks. Occasionally it will be possible to palpate the stone by rectal or vaginal examination. In the third form symptoms may appear very gradually and simulate the type of obstruction met with in growths of the large bowel. The passage of the stone through the duodenal fistula is not accompanied by symptoms in the vast majority of cases. Should the stone reach the bowel by a dilated common bile duct however, its passage through the ampulla of Vater will cause acute colicky pain. Early operation is essential. The author favours a low lateral incision which will enable the surgeon to palpate the caecum at once. Massaging the stone into the dilated proximal segment of the gut will avoid injury to the already damaged portion. Next the stone will be palpated, and should it be faceted, further search must be made for the presence of other stones. After the stone has been removed by enterotomy treatment will depend on the state of the bowel and the general condition of the patient. The mortality varies between 13 per cent and over 60 per cent. The author has found thirteen cases in the literature in which a recurrence of the condition took place. It is interesting to note that four of the author's eight cases gave no history of preceding gall bladder trouble. Attention is drawn to the fact that at operation or necropsy the gall bladder will often be found to be contracted.

#### 464 Benign Tumours of the Knee

A. BONACCORSI (*Polichinco Sez. Chir.* March 15 1938 p 105) who records an illustrative case states that benign tumours of the knee such as lipomata fibromata chondromata, and myxomata, are by no means common. In almost all the cases on record the tumours were connected with the joint. In his case however which occurred in a man aged 55 following a severe contusion of the knee due to a fall the tumour which was a large fibrolipoma situated on the antero superior aspect of the knee in the subfascial space above the patella was not connected with the joint. Complete recovery followed removal of the growth under local anaesthesia.

#### 465 Pseudo-uraemia of Prostatic Hypertrophy

V. ANASTAS (*Ugeskr. Laeg.* March 10 1938 p 245) challenges the conventional opinion that the patient with prostatic enlargement must be threatened with genuine uraemia when on admission to hospital he complains of thirst loss of appetite nausea headache and certain

other phenomena commonly associated with a high concentration of urea in the blood. Systematic investigations at his hospital have shown that this alarming clinical picture is often in reality due to an acidosis the correction of which in most cases speedily restores the patient to a condition in which operation is possible. Quantitative analyses of the chlorides and bicarbonates in the blood were first systematically undertaken at the author's hospital in surgical cases whenever the clinical picture suggested something amiss in this direction in 1934. Since the beginning of 1936 this examination has been undertaken in all cases of prostatic enlargement both before and after operation. Information thus obtained has been of far greater diagnostic and therapeutic value than was anticipated at the outset. By combating this nephrogenic acidosis by the intravenous injection of an isotonic (13 per cent) solution of sodium bicarbonate it has been possible to operate on seventy seven out of 112 cases of hypertrophy of the prostate within ten days of admission to hospital—usually within only four to five days of admission. Not only did this alkaline treatment shorten the pre-operative period but it also proved useful in many cases in the treatment of serious post-operative complications such as haemorrhage and ascending infection. Since the beginning of 1936 the author has observed nephrogenic acidosis in thirty nine out of 123 cases of hypertrophy of the prostate. He has repeatedly found that a high blood urea concentration irresponsive to catheter treatment and saline infusions did not represent genuine uraemia but an anhydraemia. He sounds a note of warning with regard to an overdosage of alkalis, which may give rise to tetany.

## Therapeutics

#### 466 Sulphanilamide in Streptococcal Infections

P. O. HAGEMAN and F. G. BLAKE (*Amer. J. med. Sci.* February 1938, p 163) record their observations on the use of sulphanilamide in the treatment of 114 cases of infection with haemolytic streptococci. These included cases of erysipelas meningitis otitis media and other conditions. In most instances they found that the drug favourably modified the course of the disease but that it was far from being non-toxic. Complications observed were cyanosis drug fever with or without rash nitrogen retention, hepatitis secondary anaemia and thrombocytopenia.

#### 467 Autohaemotherapy in Hypertension

P. E. PERRET (*Schweiz. med. Wschr.* March 12 1938 p 265) reports his results in the treatment of hypertension by autohaemotherapy. His routine method is to give ten to fifteen injections of 10 c.c.m. of the patient's own blood at intervals of three to four days. In resistant cases he gives a further course of ten injections of 20 c.c.m. with the same intervals. He has treated twenty cases. He finds that in hypertension generally the subjective symptoms have no direct relation to the height of the blood pressure. The symptoms probably depend on other factors such as the rapidity of changes in the tension or in the intracranial pressure. As a result of this form of treatment there is a marked improvement in the subjective symptoms. Patients sleep better and memory improves. Headaches disappeared in 80 per cent of cases usually after the first series of injections. Dizziness and a tendency to fall disappeared in 65 per cent. The effect in cases of tinnitus was disappointing only 20 per cent of cases being relieved. There was little change in the actual blood pressure in some cases it was slightly lowered and in three cases it was actually raised during treatment although the results as regards subjective symp-

tion is shown. There would appear to be a safe period for most women, but owing to the variability of ovulation time and possible multiple ovulation it is extremely difficult to detect it. In their own cases only 20 per cent of women menstruated with sufficient regularity to be candidates for safe-period instruction, and even in these cases according to the Latz-Reiner contraindications, the method is not reliable after confinements, miscarriages, illnesses, or shocks. The very people who most need a fool-proof contraceptive method for medical indications, or because of poverty, are those who are least capable of keeping accurate menstrual records or exercising self-control for the periodic continence. The writers therefore conclude that a small proportion of women will find the safe period with or without the use of a spermicidal jelly, satisfactory for their mode of living, but this method is by no means ready for general utilization.

#### 482 Cystographic Diagnosis of Placenta Praevia

K. JABLONSKI and E. MEISELS (*Zbl. Gynäk.* March 3, 1938, p. 532) comment on the uncertainty of diagnosis of placenta praevia by vaginal examination, which may also increase the dangers of infection and bleeding. They report their results in diagnosis by vesical cystography, as recommended by Ude and Urner (*Amer. J. Obstet. Gynec.* 1935, 29, 667). The bladder, photographed from the front after the introduction of 40 ccm. only of radiopaque solution, gives a flattened shadow with an upward concavity, normally its upper margin is in contact with the lower vertical convexity of the foetal skull or separated from it by not more than 1 cm. In cases of placenta praevia the distance between the bladder and skull shadows is greater than 1 cm. Jablonski and Meisels report a general confirmation of the findings of Ude and Urner with respect to central and lateral placenta praevia, the diagnosis positive or negative, was correct in thirteen cases of ante-partum haemorrhage. A marginal placenta praevia, however, especially if inserted on the posterior uterine wall, does not give a positive result with this test. The separation between the bladder and foetal head may be mimicked (1) according to some authors by the accumulation of blood clot in premature detachment of the normally situated placenta, (2) in early labour, as in a case here reported when occasionally the umbilical cord lies below the foetal skull, the bleeding being then of ordinary decidual origin, and (3) if the head is displaced upwards by a myoma of the lower uterine segment or by a small extra-uterine pelvic tumour. In premature placental detachment the present writers had normal radiological findings with this method. The disadvantage of diagnosis by cystography is that it is only applicable when the head presents, cephalic version, however, is usually possible and has in several cases been done as a preliminary to the cystography.

## Pathology

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#### Sulphur and Lactation

R. G. DAGGS and V. S. M. LIDFELDT (*J. Nutrit.* March 10, 1938, p. 211) have further examined the lactagogue effect of dietary proteins in rats. The effect is not lost on autolysing liver and is highest in the sulphur-containing fractions. Since inorganic sulphur compounds are inactive the lactagogue activity is attributed to sulphur-containing organic compounds. Assessing the lactogenic potency by weighing the litters the writers found that it is well shown by the sulphhydryl amino groups in cysteine, cystine or methionine. Simulated glutathione (a mixture of glycine and glutamic acid together with cystine or cysteine) is no more effective than cystine or cysteine, it is inferred that the S-H group is the essential factor although methionine containing sulphur in an SCH<sub>3</sub> form is equally effective and taurine (SO<sub>3</sub>H) has some

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lactogenic activity. The corresponding non sulphur amino acids are ineffective. That the increased growth in the young is due to the passage of cystine into the milk seems impossible, for administration to them of cystine gave negative results, and the milk of women given cystine contains S-H amounts not greater than that of controls. Increase of cystine in the rats' dietary led to fatty degeneration of the liver, which was preventable by the simultaneous administration of choline.

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#### Actinomycosis

F. A. LENZL (*Zbl. Bakt.* 1938, 141, 21), who has been making a study of human actinomycosis, describes the finding in certain cases of an anaerobic diphtheroid bacillus differing in its morphological, cultural, biochemical, and serological behaviour from the classical *Actinomyces bovis* of Wolff and Israel. In these cases no granules could be found in the discharge. Films showed the presence of Gram-positive diphtheroid rods frequently arranged in pairs. Anaerobic cultivation for fourteen days yielded smooth circular, greyish-white colonies not adhering to the medium, yet containing bacilli similar to those found in typical adherent colonies of the Wolff-Israel type. For the sake of convenience the author refers to the new organism as the "S" form and to the Wolff-Israel type as the "R" form. Biochemically, both organisms fermented glucose and xylose within five days, the R form fermented salicin and the S form glycerol within thirty days, maltose, lactose, mannitol, and sucrose were fermented by the R form in a few days, but irregularly and usually only after a longer time by the S form. Antigenically three types were found among strains of the Wolff-Israel organism, while four strains of the new organism were very similar to each other. A slight degree of cross-agglutination between the S and R types occurred with some strains. As the result of experiments continued over five months one of the S forms was apparently transformed into the R type, though this observation needs to be confirmed. The exact relation of the two organisms to each other is still not clear, but the author seems to regard them as belonging to the same species.

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#### Leptospira canicola

B. WALCH-SORGDRAGER and W. SCHULFINK (*Zbl. Bakt.* 1938, 141, 97) have made a careful study of *Leptospira canicola*. This organism, which is most easily differentiated from *L. icterohaemorrhagiae* by serological methods, gives rise to disease chiefly in the dog, in man only thirteen cases have so far been observed. The clinical picture in dogs infected with *L. canicola* differs from that in dogs infected with *L. icterohaemorrhagiae*. There is little or no jaundice, the kidneys are mainly infected, uraemia is common, the agglutination titre tends to be higher, the case mortality is lower, and the dogs that recover excrete leptospirae in the urine for weeks or months. In man jaundice is likewise lacking, the disease is milder than the typical Weil's disease, and meningeal symptoms are frequently observed. For the guinea-pig particularly on first isolation, *L. canicola* is much less fatal than *L. icterohaemorrhagiae*. After passage of the organism the virulence may increase. No jaundice is seen and in guinea-pigs that recover leptospirae may be excreted for months in the urine. Rats which serve as the international carrier for the Weil leptospirae are comparatively resistant to experimental infection with *L. canicola* and in spite of intensive search not a single wild rat caught has been found to be infected with this organism. From an epidemiological point of view dogs and not rats are the main carriers of *L. canicola*. Infection probably passes from dog to dog as the result of contamination of the tongue or nose with infected urine during the canine practice of sniffing the external genitalia of other dogs or of their urine after excretion. This probably explains why it is twice as common in dogs as in bitches.





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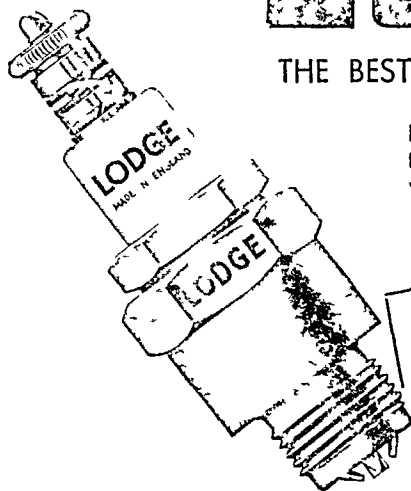
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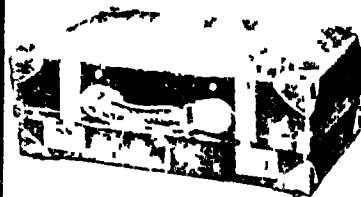


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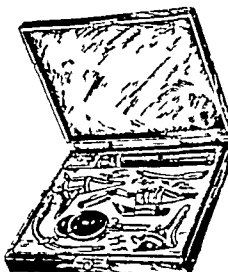
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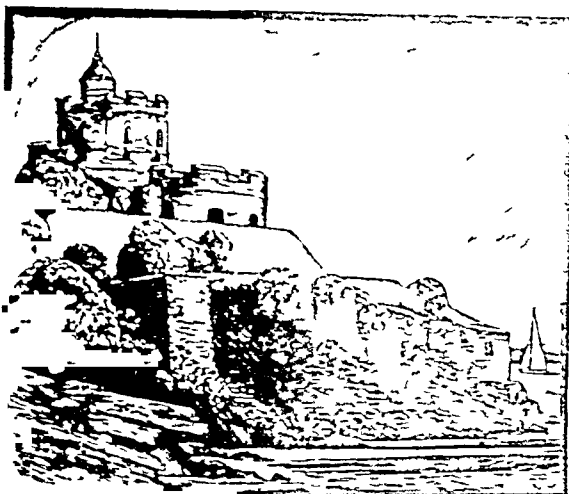
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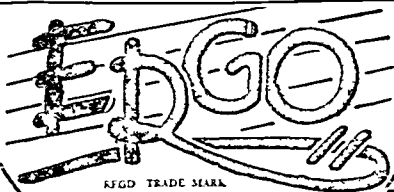
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T. D. HOWELLS  
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Applications should state when duties can be commenced.  
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## EDUCATION

### APPOINTMENT OF A SCHOOL DENTAL SURGEON

Applications are invited for an appointment as a School Dental Surgeon. Applicants must hold a registered Diploma or Degree in Dental Surgery. The successful applicant will be required to devote the whole of his time to the duties of the Office and to act under the direction of the School Medical Officer.  
Commencing salary £450 per annum rising by annual increments of £25 to £550 per annum. The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass satisfactorily a medical examination. The appointment will be terminable by two calendar months notice on either side.  
Forms of application may be obtained from the Director of Education Education Offices Woodlands Road Middlesbrough to whom completed forms should be returned not later than Wednesday June 15th 1938.  
Canvassing in any form will disqualify.  
Town Clerk's Office PRESTON KITCHEN  
Municipal Buildings Middlesbrough May 28th 1938

# LIVERPOOL COUNTY BOROUGH

## LOCAL EDUCATION AUTHORITY

### ASSISTANT SCHOOL MEDICAL OFFICERS

Applications are invited for Two Assistant School Medical Officers in the Department of the Medical Officer to the Local Education Authority at a salary in each case of £250 per annum rising by annual increments of £25 to £700 per annum.  
(Where a successful candidate holds a similar appointment under another Local Education Authority and receives a salary in excess of not advertised minimum a commencing salary of not less than the salary which the candidate is receiving under his (or her) existing appointment (not exceeding the maximum under the Liverpool Scale) may be paid.)  
Candidates must have had at least three years' experience.  
The Officers appointed will be required to reside within the City and devote whole time service to the Local Education Authority under the direction of the Medical Officer to the Local Education Authority and will not be allowed to undertake any private practice.  
The appointments will be subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council.  
Form of application which may be obtained by forwarding a stamped addressed foolscap envelope should be returned together with copies of three recent testimonials to the undersigned not later than June 11th 1938 and endorsed Assistant School Medical Officer.  
The canvassing of Members of the Education Committee or the City Council is strictly prohibited and will be considered a disqualification.  
Municipal Buildings W. H. BAINES  
Liverpool 2 Town Clerk and Clerk to the Local Education Authority  
May 31st 1938

# DERBYSHIRE COUNTY COUNCIL

## ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Assistant County Medical Officer of Health. Candidates must possess a qualification in Public Health and have both practical and administrative experience of the medical inspection of school children, the organization of school clinics and infant welfare centres and have a sound knowledge of the provisions of the Midwives Act and the rules of the Central Midwives Board.  
The Officer appointed will be required to devote the whole of his time to the duties of the office and to work under the direction of the County Medical Officer. The work will be largely administrative and office accommodation will be provided in the Central Office.  
The salary will be £600 rising by annual increments of £25 to £800 a year, together with travelling expenses in accordance with the County scale and the appointment will be subject to the approval of the Minister of Health and the Local Government and Other Officers Superannuation Act and the successful candidate will be required to pass a medical examination.  
The appointment will be terminable by three months notice on either side.  
Applications, stating a candidate's qualifications, previous experience, together with testimonials, not more than three, recent testimonials must be received by the undersigned not later than June 11th 1938. Application forms are not provided.  
County Offices Derby  
County Medical Officer of Health  
May 27th 1938  
W. M. ASH

# HIS MAJESTY'S COLONIAL SERVICE

## COLONIAL MEDICAL SERVICE.

During 1938 the Secretary of State for the Colonies proposes to select a number of Medical Officers to fill vacancies the majority of which will occur in Tropical Africa and Malaya

**QUALIFICATIONS**—Candidates must be British subjects of European parentage under 35 years of age and must possess a medical qualification registrable in the United Kingdom. Preference will be given to candidates who have held Hospital or Public Health appointments or who have special knowledge of anaesthetics, radiology surgery medicine ophthalmology gynaecology and midwifery diseases of the ear nose and throat venereal diseases etc

**SALARY**—Initial salaries vary from £600 to £700 and rise by increments to a maximum of between £1 000 and £1 200

**PRIVATE PRACTICE**—Private practice is not allowed as of right but in the case of some appointments it is permitted on certain conditions

**QUARTERS**—In Tropical Africa free quarters or an allowance in lieu are provided. In Malaya quarters are provided at an annual rental not exceeding 6% of the officer's salary

**PASSAGES**—Free first-class passages are provided on first appointment and when proceeding on and returning from leave. Assistance is also given towards family passages

**TERMS OF APPOINTMENT**—The appointments are pensionable subject to a probationary period which varies from two to three years

**COURSES OF INSTRUCTION IN TROPICAL MEDICINE AND HYGIENE**—Selected candidates will normally be required to attend a course of instruction leading to the Diploma in Tropical Medicine and Hygiene before proceeding overseas

**DUTIES**—Although Medical Officers are appointed in the first instance for general service there are opportunities for work in special branches of medicine and surgery in public health, and in medical research

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service), 8, Buckingham Gate, London, S W 1

# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in September, 1938

Candidates below the age of 28 years are preferred and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service, permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances

Opportunities are available for officers on the permanent list for post graduate study, to specialise, to take higher examinations and to obtain further qualifications

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers

Copies of the regulations for entry and conditions of service, including rates of pay, allowances and retired pay may be obtained from the Medical Director General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than 31st August, 1938

**COUNTY BOROUGH OF SUNDERLAND**

**CHERRY KNOWLE**  
(Sunderland County Borough Mental Hospital)  
Ryhope near Sunderland

**APPOINTMENT OF  
MEDICAL SUPERINTENDENT**

Applications are invited from duly qualified and registered Medical Practitioners for the appointment of Medical Superintendent of Cherry Knowle. The salary will be £1000 per annum advancing subject to satisfactory service by annual increments of £50 to £1200 per annum plus emoluments valued for purposes of superannuation at £200 per annum.

In addition to the usual duties devolving upon him as Superintendent of Cherry Knowle the person appointed will be required to advise the Committee on all the mental health services of the Borough such as mental deficiency out-patient and after-care treatment and child guidance and to carry out the other duties set out in the terms and conditions of appointment.

At Cherry Knowle a general and diagnostic block and an early treatment block are being built and other improvements are being carried out. These will be completed next year when the accommodation of the Hospital will be for approximately 700 patients.

Form of application and particulars of the terms and conditions of appointment may be obtained from me and applications addressed to me and endorsed on cover Medical Superintendent Cherry Knowle together with copies of three recent testimonials must be delivered at my office not later than Friday June 10th next.

Canvassing either directly or indirectly until after the first selection of candidates by the Committee will be a disqualification.

G S MCINTYRE  
Town Hall Town Clerk and Clerk to the  
Sunderland Visiting Committee  
May 16th 1938

**CARMARVONSHIRE COUNTY COUNCIL  
COUNTY HOSPITAL BANGOR**

Applications are invited for the following posts  
(a) CONSULTING SURGEON

Applicants must be engaged in Consulting Practice and be Fellows of the Royal College of Surgeons (England). Preference will be given to applicants who are attached to a Teaching Hospital. An Honorarium of One Hundred Guineas per annum together with travelling expenses will be granted.

(b) CONSULTING PHYSICIAN  
Applicants must be engaged in Consulting Practice and possess one of the higher Medical Qualifications. Preference will be given to applicants who are attached to a Teaching Hospital. An Honorarium of One Hundred Guineas per annum together with travelling expenses will be granted.

(c) PART TIME MEDICAL SUPERINTENDENT  
Applicants must be specially qualified in Surgery and be able to perform major operations. Preference will be given to those possessing the Fellowship of the Royal College of Surgeons (England). The successful applicant must reside within easy reach of the hospital and must be prepared to relieve the Consultant Obstetrician. Salary £200 per annum. Canvassing either directly or indirectly will be a disqualification.

Applications for each post in envelopes marked Consulting Surgeon Consulting Physician or Part time Medical Superintendent as the case may be together with copies of three recent testimonials should reach the undersigned not later than June 14th 1938.

DAVID G JONES  
Clerk of the County Council  
County Offices Carmarvon  
May 31st 1938

**COUNTY BOROUGH OF ROCHDALE  
ASSISTANT MEDICAL OFFICER OF HEALTH**

The Health Committee invite applications for the post of Assistant Medical Officer from registered medical practitioners (men or women) holding a Diploma in Public Health or similar qualification. Salary £500 rising by annual increments of £25 to £700 per annum.

The successful candidate will act under the general direction of the Medical Officer of Health and the duties while being mainly in connexion with Child Welfare will include work in the School Medical Service and Female Venereal Diseases Clinics. Experience in the modern treatment of Venereal Diseases will be necessary.

The appointment will be subject to the Local Government (Qualifications of Medical Officers and Health Visitors) Regulation 1930.

Forms of application may be obtained from the Medical Officer of Health Public Health Offices Rochdale and must be returned to him accompanied by copies of three recent testimonials and endorsed by the Assistant Medical Officer not later than Monday June 13th 1938.

HARRY BANN  
Town Hall Town Clerk  
Rochdale  
May 1st 1938

**COUNTY COUNCIL OF MIDDLESEX  
RESIDENT ASSISTANT MEDICAL OFFICER**

Central Middlesex County Hospital  
Acton Lane Willesden NW 10

Applications are invited for the above appointment.

Candidates must be registered medical practitioners who have held resident medical appointments in a general hospital and should be in possession of the diploma in psychological medicine.

The officer appointed will work under the direction of the Medical Superintendent and will devote his or her whole time to official duties.

Salary £400 per annum rising by annual increments of £25 to £475 per annum with board lodging and laundry valued at £100 per annum.

The appointment which is subject to medical examination but does not at present carry any superannuation rights will be held during the pleasure of the Council is terminable by one month's notice on either side and is for a period of four years at the end of which period the officer will leave the Council's service. In a special case the Council may decide to retain an officer on the established staff in which case the salary will be increased to a maximum of £500 per annum.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 18th 1938.

Relationship to any member or officer of the County Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed Resident Assistant Medical Officer Central Middlesex County Hospital.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
May 30th 1938

**COUNTY COUNCIL OF MIDDLESEX  
JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER**

Redhill County Hospital Edgware Middx

Applications are invited for the above appointment.

Candidates must be registered medical practitioners who have held resident appointments in a general hospital.

The duties of the appointment will be mainly obstetrical and gynaecological. The officer appointed will work under the direction of the Medical Superintendent and will devote his or her whole time to official duties.

Salary £250 per annum with board lodging and laundry valued at £100 per annum.

The appointment (which does not at present carry any superannuation rights) will be subject to medical examination and is for a period of six months in the first instance and may be extended for an additional six months. It is terminable by one month's notice on either side.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 18th 1938. Relationship to any member or officer of the County Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed Junior Resident Assistant Medical Officer Redhill County Hospital.

Canvassing directly or indirectly will be a disqualification.

N.B.—This appointment is recognised as a qualifying obstetrical post in respect of the Membership and Diploma of the British College of Obstetricians and Gynaecologists.

C W RADCLIFFE Z  
Clerk of the County Council  
Middlesex Guildhall  
Westminster SW 1  
May 30th 1938

**COUNTY BOROUGH OF SUNDERLAND  
APPOINTMENT OF OBSTETRIC HOUSE SURGEON**

Applications are invited for the appointment of a Resident Obstetric House Surgeon for the Municipal Hospital (463 beds) at a salary of £400 per annum rising by annual increments of £25 to £420 per annum.

Candidates must hold the Diploma of the College of Obstetrics and Gynaecology.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than Monday June 27th 1938.

Envelopes must be endorsed Obstetric House Surgeon.  
Town Hall  
Sunderland  
G S MCINTYRE  
Town Clerk

**COUNTY BOROUGH OF SUNDERLAND  
CONSULTANT OBSTETRICIAN**

The Corporation invite applications for the above appointment from fully qualified persons who must hold the qualification of Membership of the College of Obstetrics and Gynaecology.

The person appointed will be required to reside in Sunderland and may engage in private consulting practice.

The Corporation will pay the sum of £500 per year for the first five years such payment to include for gynaecological work in connection with certain allotted beds at the Municipal Hospital.

The person appointed will be required to give the requisite Lectures to Pupil Midwives at the Hospital and will be permitted to retain the fees received in connection therewith.

He will also be placed on the panel of doctors to be called in under the Purcell-Pryor Regulations and to be available for consultation with other doctors for difficulties arising during pregnancy or at labour the fees for these will also be retained by the person appointed.

Full particulars can be obtained from the undersigned.

Applications endorsed Consultant Obstetrician must be addressed to the undersigned and received by him not later than Monday June 27th 1938.

Town Hall G S MCINTYRE  
Sunderland Town Clerk  
May 24th 1938

**SURREY COUNTY COUNCIL  
PUBLIC HEALTH DEPARTMENT**

KINGSTON COUNTY HOSPITAL (530 Beds)

**RESIDENT ASSISTANT MEDICAL OFFICER**

Applications are invited from registered Medical Practitioners for the appointment of Resident Assistant Medical Officer at the Kingston County Hospital Kingston on Thames.

The Medical Officer appointed should preferably have had previous experience as House Physician or House Surgeon.

The appointment is for a period of six months renewable for a further period of six months and the salary is at the rate of £250 per annum together with full residential emoluments valued at £125 per annum making an aggregate of £375 per annum.

The successful applicant will be required to commence duty at the end of June.

Applications stating age qualifications and experience and enclosing copies of not more than three recent testimonials should be addressed to the Medical Superintendent Kingston County Hospital Wolverton Avenue Kingston on Thames so as to be received not later than June 15th 1938.

County Hall DUDLEY AUKLAND  
Kingston upon Thames Clerk of the Council  
May 30th 1938

**SURREY COUNTY COUNCIL  
RICHMOND INSTITUTION (750 Beds)****APPOINTMENT OF RESIDENT ASSISTANT MEDICAL OFFICER**

Applications are invited from registered Medical Practitioners for the appointment of Resident Assistant Medical Officer at the Grove Road Institution Richmond. The Institution is administered by the Public Assistance Committee of the Council.

Applicants should have had experience as a House Surgeon or Physician. The appointment is for a period of six months renewable for a further period of six months and the salary is at the rate of £250 per annum together with full residential emoluments valued at £125 per annum.

Applications stating age qualifications and experience and enclosing copies of not more than three recent testimonials should be endorsed by the Resident Assistant Medical Officer and sent to the County Medical Officer County Hall Kingston upon Thames so as to reach him not later than June 8th 1938.

County Hall DUDLEY AUKLAND  
Kingston upon Thames Clerk of the Council  
May 27th 1938

**KENT COUNTY COUNCIL  
RESIDENT ASSISTANT MEDICAL OFFICER**

Applications are invited for the post of Resident Assistant Medical Officer at the County Hospital Chatham (670 beds).

The salary for the appointment is £250 a year with residential emoluments which are valued at £150 a year.

The appointment is a whole time one and is for a period of one year only and not renewable.

Forms of application can be obtained from the Public Assistance Officer Tonbridge Road 11, Stone upon whom applications must be sent not later than Monday June 13th 1938.

W L LATTS  
Sessions House Clerk of the County Council  
 Maidstone  
May 27th 1938

# ADMINISTRATIVE COUNCIL OF ESSEX OLDCHURCH COUNTRY HOSPITAL ROMFORD

## APPOINTMENT OF ASSISTANT RESIDENT SURGEON

The County Council of the Administrative Council of Essex invite applications for the post of Assistant Resident Surgeon at the above Hospital from registered Medical Practitioners not over 45 years of age.

The Hospital is a general hospital with a maximum of 100 patients and has a staff of 100 medical and nursing personnel.

The salary for the appointment will be at the rate of £1,000 per annum, subject to satisfactory service by annual increments of £50 to £1,400 per annum plus emoluments valued at £100 per annum.

A medical examination will be required to satisfy the Council of the fitness of the candidate for the post, and the salary and emoluments for the fund established by the County Council under the Local Government and Other Officers Superannuation Act 1928.

The appointment will be subject to the Council's Salary Rules and Regulations, a copy of which will be forwarded on application.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

E. S. HOLCROFT  
Clerk of the County Council

County Hall, Chesham  
May 31st, 1938

# CITY OF BIRMINGHAM

## PUBLIC HEALTH DEPARTMENT

### AIR RAIDS PRECAUTIONS MEDICAL OFFICER FOR CASUALTY SERVICES

Applications are invited from retired Medical Officers of the Army or the Navy for the post of Medical Officer for Casualty Services (Air Raids Precautions) at the County Council House, 11th June 1938.

The appointment will be for a period of twelve months in the first instance and will be subject to renewal at the end of the first year. The person appointed will take over duties at present undertaken by Assistant Medical Officer of Health. In the case of the County Council, the duties of First Aid Commissioner under the Medical Officer of Health.

The appointment will be subject to medical examination, and if continued after the first twelve months will be subject to three months' notice of termination on either side.

Forms of application may be obtained from the Medical Officer of Health, County Council House, 11th June 1938, and on completion should be returned with copies of three recent testimonials to the undersigned not later than Saturday June 11th 1938.

F. H. C. WILTSHIRE  
Town Clerk

# COUNTY BOROUGH OF SOUTHAMPTON

## ASSISTANT RESIDENT MEDICAL OFFICER SOUTHAMPTON BOROUGH GENERAL HOSPITAL

The Council invite applications for the post of Assistant Resident Medical Officer at the above Hospital at a salary of £35.00 per annum, with annual increments of £5.00 to £40.00, together with board and lodging.

Forms of application with full particulars as to the appointment may be obtained from the Medical Officer of Health, County Council House, 11th June 1938, and on completion should be returned with copies of three recent testimonials to the undersigned not later than Saturday June 11th 1938.

R. RONALD H. MEGGISON  
Town Clerk

# DISTRICT INFIRMARY

Ashton-under-Lyne  
(General Hospital, 100 Beds)

## CASUALTY HOUSE SURGEON (male) re- quired for July 1st next

Applications should be made to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The salary for the appointment will be at the rate of £150 with the usual local emoluments.

HOUSE SURGEON required for July 1st next. Six months' appointment which may be renewed.

The staff comprises a Resident Surgical Officer and a Casualty Officer and two House Surgeons. Salary at the rate of £150 per annum with board residence and laundry.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER  
General Superintendent and Secretary

May 31st 1938

# CITY OF BIRMINGHAM

## DUDLEY ROAD HOSPITAL

### PHYSICIAN

Applications are invited for the above whole time appointment from fully qualified registered medical practitioners who have held a medical diploma or certificate of the Royal College of Physicians or the Royal College of Surgeons in England. Preference will be given to those who have held the certificate of the Royal College of Physicians or the Royal College of Surgeons in England.

Full and complete particulars of the post and conditions of service may be obtained from the undersigned.

Salary will be £1,000 per annum, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

The appointment will be subject to the Council's Salary Rules and Regulations, a copy of which will be forwarded on application.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

F. H. C. WILTSHIRE  
Town Clerk

# CITY OF SALFORD

## HOPE HOSPITAL

### Applications are invited for the post of RESIDENT OBSTETRIC OFFICER at Hope Hospital, Salford, to commence on 1st July 1938.

The salary for the appointment will be at the rate of £1,000 per annum, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

The appointment will be subject to the Council's Salary Rules and Regulations, a copy of which will be forwarded on application.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

F. H. C. WILTSHIRE  
Town Clerk

# CITY OF BIRMINGHAM

## MATERNITY AND CHILD WELFARE DEPARTMENT

### TEMPORARY MEDICAL OFFICER

A TEMPORARY MEDICAL OFFICER (woman) is required from July 1st to October 10th 1938. The work involves attendance at ante-natal and children's clinics.

Applications should be made to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The salary for the appointment will be at the rate of £150 with the usual local emoluments.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER  
General Superintendent and Secretary

# ROYAL LONDON OPHTHALMIC HOSPITAL

## (MOORFIELDS EYE HOSPITAL)

### Applications are invited for the post of OUTPATIENT OFFICER to attend on Wednesdays and Saturdays (morning) at Moorfields Eye Hospital.

The salary for the appointment will be at the rate of £150 per annum, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

The appointment will be subject to the Council's Salary Rules and Regulations, a copy of which will be forwarded on application.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

F. H. C. WILTSHIRE  
Town Clerk

# WEST RIDING OF YORKSHIRE HOSPITALS BOARD

## APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

### WAKEFIELD MENTAL HOSPITAL

Applications are invited for the appointment of an Assistant Medical Officer in the Board's service at the Wakefield Mental Hospital at a commensurate salary of £3.00 per annum, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

The appointment will be subject to the Council's Salary Rules and Regulations, a copy of which will be forwarded on application.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

G. L. BANNER  
Clerk of the Board

# MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL

Chesham  
(General Hospital, 100 Beds)

## Applications are invited for the following posts: JUNIOR HOUSE SURGEON AND CASUALTY OFFICER (male) Salary £100 per annum

Both appointments are for a period of twelve months, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

K. C. HAPDING  
Assistant Secretary

# HILL END HOSPITAL AND CLINIC FOR THE PREVENTION AND TREATMENT OF MENTAL AND NERVOUS DISORDERS

St. Ann's, Hertford

HOUSE PHYSICIAN (male or female) required for a period of six months, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

DONALD C. D. SWORD  
Secretary

# ACTON HOSPITAL

## CASUALTY OFFICER (male unmarried) re- quired to commence duties for July 1938 for a three months' appointment with provision for a further six months' period if approved.

The salary for the appointment will be at the rate of £150 with the usual local emoluments.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

G. L. BANNER  
Clerk of the Board

# THE NATIONAL THERMAL HOSPITAL

Hampstead Road, N.W.1

Applications are invited for the post of HOUSE PHYSICIAN (male) Salary £100 per annum, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

The County Council House, 11th June 1938.

G. L. BANNER  
Clerk of the Board

# KING GEORGE HOSPITAL ILFORD

(New London, 100 Beds)

HOUSE SURGEON (male) required for six months, subject to satisfactory service by annual increments of £50 to £1,400 per annum.

Applications should be made in writing to the undersigned and should be addressed to me and delivered at the County Council House, 11th June 1938.

G. L. BANNER  
Clerk of the Board

**CONNAUGHT HOSPITAL WALTHAMSTOW**  
E 17

(118 Beds with Four Resident Medical Officers)

Applications are invited for the post of **RESIDENT SURGICAL REGISTRAR** (male) to commence duties July 1st. The applicant should be a Fellow of one of the Royal Colleges of Surgeons and have a knowledge of administrative work.

The appointment will be for six months in the first instance (renewable) with remuneration at the rate of £200 per annum with board residence and laundry.

Applicants should state age, nationality, qualifications, and experience and forward copies of not more than three testimonials to the undersigned on or before Saturday June 11th 1938.

R HALTON HARRISON  
Acting Secretary

**CONNAUGHT HOSPITAL WALTHAMSTOW**  
E 17

(118 Beds with Four Resident Medical Officers)

**CASUALTY OFFICER** (male) required to commence duties July 1st.

The appointment will be for six months with remuneration at the rate of £110 per annum with board residence and laundry.

Applications stating age, nationality, qualifications, and experience accompanied by copies of not more than three testimonials must be delivered to the undersigned not later than Saturday June 11th 1938.

R HALTON HARRISON  
Acting Secretary

**APPLICATIONS ARE INVITED FOR A RADIOLOGIST** in connexion with the two Radium Bombs at the WESTMINSTER HOSPITAL ANNEXE 66 Fitzjohn's Avenue Himpstead.

Candidates must be registered medical practitioners. Preference will be given to candidates possessing or reading for the D.M.R.E.

The appointment is full time and will be for one year.

Five copies of applications and of three testimonials should be sent to the undersigned from whom the amount of the salary and other details can be obtained at Westminster Hospital Broad Sanctuary S.W.1 on or before Saturday June 11th 1938.

CHARLES M. POWER  
Secretary

**EAST HAM MEMORIAL HOSPITAL**  
Shrewsbury Road E 7  
(100 Beds)

Applications are invited for the post of **HOUSE SURGEON** to Special Departments and **CASUALTY OFFICER** (Male) for six months commencing July 1st. Salary at the rate of £120 per annum with board residence and laundry.

Applications stating age, nationality, experience, and full particulars together with copies of three recent testimonials should reach the undersigned by June 16th.

REGINALD PERRY  
Secretary

**CHARING CROSS HOSPITAL**  
ASSISTANT OBSTETRIC PHYSICIAN

Applications are invited for the post of Assistant Obstetric Physician to the above Hospital. Candidates must be graduates of a University and possess the Diploma of M.R.C.P. or F.R.C.S.

Applications accompanied by copies of three recent testimonials should reach the undersigned not later than June 13th 1938.

GEORGE J. JONES  
Charing Cross Hospital W.C.2 Secretary

**DREADNOUGHT HOSPITAL GREENWICH**  
S.E. 10  
(Seamen's Hospital Society)

**HOUSE SURGEON** required for six months as from July 1st. Salary £110 per annum and a proportion of fees with board residence and laundry. Candidates must be male and single. Applications with copies of three testimonials to be sent in on or before July 8th to the undersigned.

F. A. LYON  
May 24th 1938 Secretary

**DREADNOUGHT HOSPITAL GREENWICH**  
S.E. 10  
(Seamen's Hospital Society)

**HOUSE PHYSICIAN** required for six months as from July 1st. Salary £110 per annum and a proportion of fees with board residence and laundry. Candidates must be male and single. Applications with copies of three testimonials to be sent in on or before July 8th to the undersigned.

F. A. LYON  
May 25th 1938 Secretary

**EVELINA HOSPITAL FOR SICK CHILDREN**  
Southwark S.E.

There is a vacancy for an **AURAL SURGEON** to the Hospital. Candidates must be Graduates in Surgery in a recognized University or a Fellow of the Royal College of Surgeons of England and must not be engaged in General Practice. There is an honorarium of fifty guineas attached to the post.

Applications with copies of not more than four testimonials should reach the House Governor not later than June 10th.

Candidates will be required to call upon Members of the Medical Staff whose names together with the Standing Orders relating to the post will be forwarded to applicants.

W. H. SIDNELL  
House Governor

**KING EDWARD MEMORIAL HOSPITAL**  
Ealing (145 Beds.)

Applications are invited for the post of **HOUSE SURGEON** (male) to act in the Eye, Gynaecological and Ear, Nose and Throat Departments. Some experience to be gained in Anaesthetics and also in Casualty work. Six months appointment with possibility of re-election for a further period to this or to some other post. Salary £150 per annum with the usual residential emoluments.

Applications stating age, experience, and qualifications and accompanied by copies of two recent testimonials to be sent to the undersigned immediately.

R. A. MICKELWRIGHT  
House Governor

**PLAISTOW MATERNITY HOSPITAL**  
HONORARY ANAESTHETIST

Applications are invited for the above post. The **ANAESTHETIST** appointed will be required to give anaesthetics when asked to do so by members of the Honorary Medical Staff and to deliver about twenty lectures per annum to midwives. Honorarium twenty guineas per annum. Lectures two guineas each.

Applications accompanied by copies of three recent testimonials should be sent to the undersigned by June 15th.

C. H. ANDREWS  
Plaistow Maternity Hospital Secretary  
Howards Road Plaistow E 13

**GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL**  
London W 1

Applications are invited for the post of **HONORARY ASSISTANT SURGEON**. Candidates should be Fellows of the Royal College of Surgeons of England and they are requested to call upon the present members of the staff. Applications stating age, qualification, and experience and enclosing copies of recent testimonials should be received by the undersigned on or before June 10th.

F. P. CARROLL  
May 20th 1938 Secretary Superintendent

**LONDON HOSPITAL E. 1**

Applications are invited for the post of **MEDICAL FIRST ASSISTANT AND REGISTRAR**. The appointment is for one year but is renewable annually on application for two further periods of one year. Salary £300 per annum payable by the Hospital and Medical College jointly. Candidates must be fully qualified medically.

Applications should arrive at the Hospital not later than by the first post on Saturday June 11th.

ARTHUR G. ELLIOTT,  
House Governor

**PUTNEY HOSPITAL LOWER COMMON**  
S.W. 15  
76 Beds (including 13 Private Wards)

Applications are invited for the post of **RESIDENT MEDICAL OFFICER** (male). Previous hospital appointment essential. Salary £150 per annum with certain emoluments from private wards.

Applications stating age and giving full particulars together with three recent testimonials must be received by the undersigned by June 15th.

H. SLYMOUR HADWEN  
Secretary

**ST MARKS HOSPITAL FOR CANCER**  
FISTULA AND OTHER DISEASES OF THE RECTUM  
City Road London E.C. 1

Applications are invited for the post of **HOUSE SURGEON** (male). Duties to commence on July 1st 1938. Salary £120 per annum with board residence and laundry. The appointment is for a minimum of six months.

Applications with copies of testimonials must reach the Secretary (from whom further particulars may be obtained) not later than Monday June 13th 1938.

**ST PAULS HOSPITAL FOR UROLOGICAL AND SKIN DISEASES**  
Endell Street London WC 2

Applications are invited for the post of male **HOUSE SURGEON**. Candidates must be qualified and registered. Salary £100 per annum with board residence. The appointment is for three months in the first instance and the holder will later be eligible for the post of Resident Medical Officer. During his appointment as House Surgeon the duties involve work in the surgical wards and in the out-patient department.

Applications with copies of recent testimonials to be submitted not later than June 11th. The successful candidate will be required to take up duty about the middle of June.

J. P. KEY CHISLETT  
Secretary

**WILLESDEN GENERAL HOSPITAL**  
Harrow Road N.W. 10**OUT PATIENT DEPARTMENT**  
CLINICAL ASSISTANTS (HONORARY)

Applications are invited for appointment to the following sessions:

Ear, Nose and Throat—Wednesday afternoons  
Gynaecological—Thursday mornings  
Skin—Saturday mornings  
Surgical—Friday afternoons

Applications should be forwarded to the Secretary from whom further details of the appointments may be obtained and should be received not later than first post on Thursday June 9th 1938. May 16th 1938.

**THE ELIZABETH GARRETT ANDERSON HOSPITAL**  
Euston Road N.W. 1

The Managing Committee invite applications from fully qualified medical women for the following appointment—

**HONORARY ASSISTANT PSYCHIATRIST** to the Out-patient Department.

Applicants should have the D.P.M. or M.D. in physiological medicine. Duties to commence September 1st 1938. Further particulars to be obtained from the undersigned with copies of testimonials sent not later than

— N —  
Secretary

**THE ELIZABETH GARRETT ANDERSON HOSPITAL**  
Euston Road N.W. 1

The Managing Committee invite applications from fully qualified medical women for the appointment of

**HONORARY ASSISTANT PHYSICIAN**

Applicants must hold the M.D. degree and be members of the Royal College of Physicians. Duties to commence September 1st 1938. Further particulars to be obtained from the undersigned to whom applications with copies of three testimonials should be sent not later than Friday June 24th 1938.

JEAN R. MURRAY  
Secretary

**THE ELIZABETH GARRETT ANDERSON HOSPITAL**  
Euston Road N.W. 1

The Managing Committee invite applications from fully qualified medical women for the post of **MEDICAL REGISTRAR**—non resident. Honorarium £100 per annum. Duties to commence August 1st 1938. Further particulars of the post to be obtained from the undersigned to whom applications with copies of three testimonials should be sent not later than Friday June 14th 1938.

JEAN R. MURRAY  
Secretary

**THE HOSPITAL FOR WOMEN**  
Soho Square London W 1

Applications are invited for posts of **HONORARY CLINICAL ASSISTANTS** to the **SURGEONS** in charge of Out-patients. The appointments will be for attendance at one or two Out-patient sessions per week for a period of six months commencing July 1st 1938. Sessions are held at 1.45 every weekday except Saturday. Applications must reach the undersigned by Friday June 17th 1938.

J. P. HEMING  
Secretary

**THE HOSPITAL FOR WOMEN**  
Soho Square London W 1

Applications are invited for the post of **RESIDENT MEDICAL OFFICER** for a period of six months commencing July 1st 1938. The salary is at the rate of £100 per annum with board residence and laundry.

Applications and testimonials must reach the undersigned by Friday June 17th 1938.

J. P. HEMING  
Secretary



# WOOD GREEN AND SOUTHGATE HOSPITAL

(5, Bury-Street to be at end)  
Bundy Green Road N 11

The Council of the above Hospital have appointed for the appointment of a **SECOND HONORARY Gynaecological Surgeon** and a **Second HONORARY Obstetric Registrar** for the year 1938-39. The Council are desirous of receiving applications from qualified persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**RESIDENT SURGICAL OFFICER REQUIRED**  
FRANCIS CLINIC AND REHABILITATION CENTRE at the ALBERT DOCK HOSPITAL, E16 (St. Mary's Hospital, Sec 14). Appointment will commence on July 1, 1938. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN**  
Finsbury E13  
A vacancy exists in the post of **RESIDENT SURGICAL OFFICER AND RESIDENT HOUSE PHYSICIAN** (now vacant) male or female. The appointment is for one and six months respectively. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**METROPOLITAN HOSPITAL**  
London E8  
The Committee of Management are prepared to receive applications for the appointment of **RESIDENT SURGICAL OFFICER**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**ROYAL NORTHERN HOSPITAL**  
Holloway N  
Applications are invited for the post of **HOUSE SURGEON** vacant July 15th. The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer). Salary at the rate of £70 per annum and board remuneration and laundry. Applications with copies of testimonials should be sent by June 10th to the undersigned from whom the necessary forms of application and rules can be obtained.  
GILBERT G. PANTER  
Secretary

**KING GEORGE HOSPITAL, ILFORD**  
(near London) (70 Beds)  
The Board of Management are prepared to receive applications for the post of **HONORARY PSYCHOLOGIST** to act as a consultant. Further particulars may be obtained from the undersigned to whom applications should be sent not later than June 20th.  
G. ALSTIN HEPPWORTH  
Secretary and Superintendent

**KING GEORGE HOSPITAL, ILFORD**  
(near London) (107 Beds)  
The Board of Management are prepared to receive applications for the post of **HONORARY ASSISTANT PHYSICIAN**. Further particulars may be obtained from the undersigned to whom applications should be sent not later than June 20th.  
G. ALSTIN HEPPWORTH  
Secretary and Superintendent

**ANNE MCALL MATERNITY HOSPITAL**  
London  
Applications are invited from medical women for the post of **HONORARY ASSISTANT PHYSICIAN** (1) **OBSTETRIC REGISTRAR** and **Operative Midwifery**. Further particulars may be obtained from the undersigned to whom applications should be sent not later than June 20th.  
G. ALSTIN HEPPWORTH  
Secretary and Superintendent

# WEST LONDON HOSPITAL HAMMER SMITH W 6

**RESIDENT HOUSE PHYSICIAN AND TWO HOUSE SURGEONS** for the year 1938-39. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**WEST LONDON HOSPITAL HAMMER SMITH W 6**  
The Council are desirous of receiving applications for the post of **RESIDENT SURGICAL OFFICER**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**ST JOHN CLINIC AND INSTITUTE OF PHYSICAL MEDICINE**  
(London) (London) (London)  
The Council are desirous of receiving applications for the post of **RESIDENT SURGICAL OFFICER**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**BOLINGBROKE HOSPITAL**  
Walsworth Common SW 11  
(115 Beds)  
The Board of Governors are prepared to receive applications for the post of **HONORARY PHYSICIAN**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**THE WILLESDEN GENERAL HOSPITAL**  
Harrow Road NW 10  
Applications are invited from fully qualified persons for the post of **RESIDENT SURGICAL OFFICER**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**WILSON HOSPITAL MITCHEM**  
Applications are invited for the post of **HONORARY CONSULTING PHYSICIAN**. Further particulars may be obtained from the undersigned to whom applications should be sent not later than June 20th.  
G. ALSTIN HEPPWORTH  
Secretary and Superintendent

# ST PETER'S HOSPITAL FOR STONE, ETC H 11

The appointment of **CLINICAL ASSISTANTS** for the year 1938-39. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**THE QUEEN'S HOSPITAL FOR CHILDREN**  
H 11  
The Board of Management are prepared to receive applications for the post of **OPHTHALMIC SURGEON**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**THE QUEEN'S HOSPITAL FOR CHILDREN**  
H 11  
The Board of Management are prepared to receive applications for the post of **HOUSE PHYSICIAN** required July 1, 1938. Six months' appointment. Salary at the rate of £100 per year. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**THE QUEEN'S HOSPITAL FOR CHILDREN**  
H 11  
The Board of Management are prepared to receive applications for the post of **TEMPORARY VACANCY** has occurred in the department of **PSYCHOLOGICAL MEDICINE**. Applications must be made to the undersigned to whom applications should be sent not later than June 20th.

By Order J. THOS BARBER  
Hon Secy

**THE MANOR HOUSE HOSPITAL**  
Gowley Green London NW 11  
(150 Beds)  
Applications are invited for the post of **JUNIOR MEDICAL OFFICER**. Salary at the rate of £100 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**THE CITY OF LONDON MATERNITY**  
City Road E.C.1  
Applications are invited for the post of **ASSISTANT PRESIDENT MEDICAL OFFICER**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.

By Order J. THOS BARBER  
Hon Secy

**THE CITY OF LONDON MATERNITY**  
City Road E.C.1  
Applications are invited for the post of **ASSISTANT PRESIDENT MEDICAL OFFICER**. Candidates must be Fellows of the Royal College of Surgeons of London and must be in general practice. The salary for the office is £1,000 per annum. The Council are desirous of receiving applications from persons who are willing to undertake the duties of the office for a period of not less than 12 months. The salary for the office of Surgeon is £1,000 per annum and for the Registrar is £500 per annum.



# MANCHESTER ROYAL INFIRMARY

## RESIDENT JUNIOR MEDICAL OFFICER

at the  
BARNES CONVALESCENT HOSPITAL

The Board of Management of the Manchester Royal Infirmary invite applications for the above post.

Applicants must hold a Medical and Surgical qualification and be registered and have held a hospital appointment.

The appointment is for six months renewable for a further period of six months subject to the provisions of the By laws as to notice etc. Salary at the rate of £150 per annum with board residence and allowance for laundry.

Applications stating age with testimonials to be sent to the Chairman of the Medical Board not later than June 16th 1938.

By Order

F J CABLE  
Gen Supt and Secretary

# MANCHESTER ROYAL INFIRMARY

## CHIEF ASSISTANT TO THE NEURO SURGICAL DEPARTMENT (Non resident)

The Board of Management invite applications for the above appointment.

Candidates should be Fellows of the Royal College of Surgeons of England.

The duties require attendance at the Infirmary on seven half days per week. The appointment is for one year renewable for a further period subject to the provisions of the By laws as to notice. Salary £350 per annum.

Further information may be obtained from the undersigned to whom applicants must send fifteen Copies of their application and testimonials by Thursday June 9th 1938.

By Order

F J CABLE  
General Superintendent and Secretary

# MANCHESTER ROYAL INFIRMARY

## JUNIOR ASSISTANT MEDICAL OFFICER IN RADIOLOGICAL DEPARTMENT

The Board of Management invite applications for the above whole time appointment. Applicants must be registered and hold a Medical and Surgical qualification and the D.M.R.L. or equivalent.

The appointment (non resident) is for twelve months renewable for a further period of twelve months subject to the provisions of the By laws as to notice. Salary is at the rate of £350 per annum. Applicants must state age and send fifteen Copies of their application and testimonials to the undersigned by Thursday June 9th 1938.

By Order

F J CABLE  
General Superintendent and Secretary

# NORTHAMPTON GENERAL HOSPITAL

(351 Beds)

There will be a vacancy on July 1st for a RESIDENT ANAESTHETIST. The appointment will be for three months in the first instance and the successful candidate will be eligible for re-election for a further period of six months.

The salary will be at the rate of £150 per annum with board residence and laundry.

Candidates who must be duly registered and qualified must be males and of British nationality.

Applications stating age qualifications etc with copies of three recent testimonials must reach the undersigned not later than the first post on Wednesday June 15th.

GORDON M STURTRIDGE MB  
Superintendent

# KENT AND CANTERBURY HOSPITAL

(183 Beds 4 R.M.O.s)

Applications are invited for the post of HOUSE SURGEON (male) to the special departments (Ear, Nose, and Throat, Ophthalmic and Genito Urinary). The appointment is for six months commencing July 4th 1938.

Salary £125 per annum with board residence and laundry.

Applications together with copies of recent testimonials should be forwarded immediately to the undersigned.

J F KENT  
Superintendent and Secretary

# LINCOLN COUNTY HOSPITAL

Wanted JUNIOR HOUSE SURGEON (male) unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service. Board residence and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Acts.

Applications stating age and other particulars with copies of not more than three testimonials to be sent to the undersigned from whom further particulars may be obtained.

ARTHUR MOORE  
Secretary Superintendent

# NEWCASTLE UPON TYNE EYE HOSPITAL

## HONORARY OPHTHALMIC SURGEON

Applications are invited for the post of Honorary Ophthalmic Surgeon.

Candidates must be fully qualified practitioners who shall have attended for not less than six months the practice of an Ophthalmic Hospital and shall be either Fellows of the Royal College of Surgeons in England, Edinburgh or Ireland or Masters or Bachelors of Surgery of some recognized University in the United Kingdom or Members of the Royal College of Surgeons in England.

Applications stating age qualifications ophthalmic experience etc with copies of recent testimonials should be sent to the undersigned on or before Monday June 20th 1938.

Canvassing will on no account be allowed either by the candidate or any person on his behalf. If on investigation such rule has been broken the candidate concerned shall be disqualified from the appointment.

CHARLES E V UPTON

Eye Hospital St Mary's Place  
Newcastle upon Tyne Secretary

# NORTH RIDING INFIRMARY

(General Hospital 143 Beds Three Residents)

Wanted SENIOR HOUSE SURGEON to take up duties July 1st. Candidates must be male unmarried and of British nationality. Preference will be given to applicants who have held a previous hospital appointment.

The present Casualty Officer is a candidate for the post and applicants are requested to state whether they wish to apply for the Casualty Officer's post salary £150 in the event of him being appointed.

Salary is at the rate of £175 per annum with board residence and laundry.

Applications stating age qualifications and experience together with copies of three recent testimonials should be sent to the undersigned not later than June 14th.

GERALD A KENYON

Secretary Superintendent

# NORTH RIDING INFIRMARY

(General Hospital 143 Beds Three Residents)

Wanted at once THIRD HOUSE SURGEON male (Medical work forms part of duties). Candidates must be unmarried and of British nationality. Appointment will be for not less than six months and renewable. Salary is at the rate of £140 per annum with board residence and laundry.

Applications stating age qualifications and experience together with copies of three recent testimonials should be sent to the undersigned not later than June 14th.

GERALD A KENYON

Secretary Superintendent

# MONTAGU HOSPITAL MEXBOROUGH

(113 Beds)

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (lady) commencing salary £125 per annum with the usual residential emoluments. The successful candidate who will be required to commence duties on June 16th will also act as Ante natal Officer to the Maternity Department and should have some obstetrical experience. The appointment is for six months and is subject to renewal. Applications stating age nationality qualifications and experience accompanied with copy testimonials to be sent to the Secretary Superintendent.

H. CORLESS  
Sec retary

# HEREFORDSHIRE GENERAL HOSPITAL

Hereford (152 Beds)

Applications are invited for the post of HOUSE PHYSICIAN (male).

Salary at the rate of £100 per annum with board residence and laundry.

Applications stating age and qualifications to be sent with copies of three recent testimonials should be sent to the undersigned on or before June 15th 1938.

T W UPTON

Secretary

# ROYAL LANCASTER INFIRMARY

Lancaster (140 Beds—4 Residents)

Applications are invited for the post of HOUSE SURGEON. Salary £150 per annum with board residence and laundry. The appointment is for six months. Applications stating age qualifications experience and nationality together with copies of three recent testimonials to be sent to the undersigned.

FRANK A MILNES

Superintendent Secretary

# LEIGH INFIRMARY LANCASHIRE

Wanted JUNIOR HOUSE SURGEON immediately. Salary £150 per annum. The appointment is for six months with eligibility for re-election. Must be good Anaesthetist.

Applications to be addressed to Mr J A SMITH Secretary 5 Silk Street Leigh Lancashire.

# THE ROYAL HOSPITAL

Wolverhampton  
(Incorporated under Charter)

HOUSE PHYSICIAN required. Duties to commence July 1st. The Hospital contains 300 beds includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum. Board furnished rooms and laundry provided.

Applications with copies of testimonials to be forwarded to the undersigned.

Wolverhampton W H HARPER  
May 30th 1938 House Governor

# THE ROYAL HOSPITAL

Wolverhampton  
(Incorporated under Charter)

HOUSE SURGEON required (General Surgery). Duties to commence July 1st. The Hospital contains 300 beds includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum. Board furnished rooms and laundry provided.

Applications with copies of testimonials to be forwarded to the undersigned.

Wolverhampton W H HARPER  
May 30th 1938 House Governor

# THE WEST NORFOLK AND KINGS LYNN GENERAL HOSPITAL

RESIDENT HOUSE SURGEON

The Governing Board invite applications for the above post. The appointed applicant will have charge of Casualty Department and one Surgical Ward. Salary £120 per annum. The appointment is for six months in the first instance. Preference if suitable will be given to the Resident House Surgeon when the post of Resident House Physician falls vacant. Applications stating age nationality qualifications should be accompanied by testimonials and reach the undersigned not later than June 9th 1938.

JOSEPH E SEARJEANT FRCGS

House Governor and Secretary

# THE BOLTON ROYAL INFIRMARY

(315 Beds including two Auxiliary Hospitals)

Applications are invited from ladies and Gentlemen for the posts of TWO HOUSE SURGEONS. The duties of one post includes ear nose and throat work and gynaecology.

Salary £150 per annum with board residence and laundry.

Applications for the posts stating age nationality and experience together with copies of testimonials should be forwarded to the undersigned as soon as possible. Duty will commence on July 1st 1938.

H CORLESS

Sec retary

# CHELLENHAM GENERAL AND EYE HOSPITAL

(176 Beds)

HON PHYSICIAN

The Board of Management invite applications for the post of Hon Physician. Applications with copies of testimonials should be sent in sealed envelopes endorsed Hon Physician to the undersigned by June 15th 1938.

Personal canvass of the Members of the Board is expressly forbidden.

J CUMMING SMITH FRCIS  
The General Hospital  
Cheltenham  
May 21st 1938 Secretary

# NORFOLK AND NORWICH HOSPITAL

Norwich (417 Beds)

Applications are invited for the post of HOUSE SURGEON. Salary £120 per annum with board residence and laundry. Candidates (male) must be unmarried and must possess registered qualifications.

Applications stating age nationality etc together with copies of testimonials should be forwarded to the undersigned not later than Tuesday June 7th.

FRANK INCH  
House Governor and Secretary

May 27th 1938

# ROTHERHAM HOSPITAL

Wanted SENIOR HOUSE SURGEON (male) qualified. Salary £200 with board residence and laundry. 130 beds. Excellent experience to be gained.

Applications with copies of recent testimonials to be sent to the Secretary G W ROBERTS 5 Moorgate Street Rotherham.

## APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Secretary 7 Drumhugh Gardens, Edinburgh)

### (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(continued)</b>	<b>PUBLIC HEALTH</b>
ABERTYSSWG MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Medical Officer)	MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE. (Assistant Medical Officer of Health and Assistant School Medical Officer)
BLAENAVON MEDICAL SOCIETY (Chief Medical Officer)	NEATH AND DISTRICT (Medical Officer)	COUNTY OF ROXBURGH (Assistant Medical Officer of Health)
GILFACH GOCH GLAMORGAN (Wholesale Medical Supplies)	OGMORE VALLEY GLAMORGAN (Wholesale Medical Supplies)	<b>DISPENSARY APPOINTMENTS</b>
LLWYNYPFA CLYDACH VALE PENYGAIG GLAMORGAN (Wholesale Medical Supplies)	OWDALE MON. (Medical Officer)	LIMERICK CITY (Wholesale Dispensary Medical Officers)

### (b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association B.M.A. House, Tavistock Square, W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Federally Society's Officers)	The Medical Secretary New South Wales Branch 135 Macquarie Street Sydney N.S.W.	<b>VICTORIA</b> (All Institute Medical Officers)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St. East Melbourne Victoria	<b>WESTERN AUSTRALIA</b> (Contract and Lodge Practices)	The Hon. Sec. Western Australian Branch British Medical Association Sheil House, 20 St. George's Terrace Perth Western Australia
<b>QUEENSLAND</b> (Brisbane Association Federally Society's Institute)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. House Wickham Terrace Brisbane B.17				

June 1, 1935

By Order of the Council

G. C. ANDERSON Secretary

### THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners for the post of ASSISTANT RESIDENT MEDICAL OFFICER at the St. John's Hospital, 135 Macquarie Street, Sydney, N.S.W. Salary £600 per annum plus maintenance. The appointment is limited to a period of one year. Candidates should have qualifications in experience and with a certificate of three recent examinations, should reach the undermentioned standard (see Medical Officer's Journal, 1935, p. 100). D. A. POWELL, Principal Medical Officer.

### VICTORIA CENTRAL HOSPITAL WALLASEY General Hospital of 135 Beds.

A salaried position and qualifications are required for the position of SENIOR RESIDENT HOUSE SURGEON (male) for a period of three months from July 1st to September 30th. Salary £160 per annum. Applications with copies of testimonials should be addressed to the undersigned FRANK DEAN, F.C.S., Secretary Superintendent.

### WESTON SUPER MARE HOSPITAL (50 Beds) HOUSE PHYSICIAN

Applications are invited for the post of Resident House Physician at this Hospital. Salary at the rate of £100 per annum with board and room. Applications should be sent to the undersigned LESLIE J. FURSLAND, Secretary.

### THE WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL (112 Beds)

#### RESIDENT HOUSE PHYSICIAN

Applications are invited for the above position which becomes vacant on July 1st next. Salary £100 per annum. To have charge of Medical and Ophthalmic and also to act as Resident Anaesthetist. The post is for six months in the first instance offers valuable experience in both inpatient and Outpatient work. Applications with copies of testimonials should be sent to the undersigned as early as possible. JOSEPH E. SEARJEANT, F.C.C.S., House Governor and Secretary.

### VICTORIA HOSPITAL BLACKPOOL (18 Beds)

#### HOUSE SURGEON (Male) to Special Departments (Eye, Ear, Nose and Throat and Ophthalmic)

Applications are invited for the above appointment which will be vacant on July 1st. There are four residents in office. An appointment is for six months. Salary at the rate of £120 per annum with board and room and laundry. Applications with copies of testimonials should be sent to the undersigned GENERAL SUPERINTENDENT.

### TILBURY HOSPITAL, ESSEX (Summer Hospital Society)

HOUSE SURGEON (male) required for six months as from July 1st. Salary £120 per annum with board and room and laundry. Applications with copies of testimonials should be sent to the undersigned F. A. LYON, Secretary, Seamen's Hospital Society, G. E. 10.

### WARNEFORD HOSPITAL, OXFORD

Applications are invited for the office of PHYSICIAN SUPERINTENDENT to the Warneford Hospital, Oxford. A Resident House Physician for the treatment of mental disorders. Candidates must be duly registered Medical Practitioners and have had experience in the care of mental disorders. They should not be under thirty or over forty five years of age. The initial salary will be determined by a committee and qualified candidates will not receive less than £1,000 per annum. A house is provided for the use of the Physician Superintendent who will also have the usual emoluments. Arrangements will be made for the accommodation of the candidate for a period of one month before the appointment.

Time will be allowed for him for a limited amount of private practice. The monthly salary to be determined by the committee may be as high as £1,000 per annum. Applications should be sent to the Chairman of the Board of Management, Warneford Hospital, Oxford. They should be accompanied by a copy of the candidate's curriculum vitae and testimonials. The committee will select the candidate and will be responsible for the candidate's appointment. Applications should be sent to the Chairman.

### CITY MENTAL HOSPITAL HUMBERSTONE Leics

Walter J. LOUGHER, TENNIS ASSISTANT MEDICAL OFFICER (M.B., B.S., 1919) for the City Mental Hospital, Humberstone, Leics. Applications should be sent to the Chairman of the Board of Management, City Mental Hospital, Humberstone, Leics. They should be accompanied by a copy of the candidate's curriculum vitae and testimonials. The committee will select the candidate and will be responsible for the candidate's appointment. Applications should be sent to the Chairman.

(A postscript column on p. 58)

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## APPOINTMENTS—Contd

ROYAL BUCKINGHAMSHIRE HOSPITAL  
Aylesbury (115 Beds)

Applications are invited from qualified and registered candidates for the post of JUNIOR RESIDENT MEDICAL OFFICER. Salary £150 per annum with quarters in newly built flat. board and laundry provided.

The post will be for a period of five months commencing August 1st 1938 after which it will be permissible to apply for the Senior post.

Applications stating age, qualifications and experience with copies of three testimonials should be sent to the undersigned by June 15th 1938.  
F. G. DAWES Secretary

# ROYAL HALIFAX INFIRMARY

Hospital recognized by the Royal College of Surgeons (England)

Wanted a RESIDENT SURGICAL OFFICER (male unmarried). Candidates must be duly qualified and registered. Preference will be given to candidates holding higher qualifications. The appointment will be for twelve months. Salary including all services required in connection with Paying Patients Ward £50 per annum with residence board and laundry.

The Hospital contains 250 beds including Maternity Department and Paying Patients Block. There is also a Pathological Laboratory and a large Eye Ear Nose and Throat Department. Radio logical Department and Radium Clinic.

Also wanted a HOUSE PHYSICIAN who will also have charge of Eye Ear Nose and Throat Department (male unmarried). Candidates must be duly qualified and registered. Salary including services required in connection with Paying Patients Ward £175 per annum with residence board and laundry.

Particulars of the duties may be obtained from the undersigned to whom applications stating age and nationality together with copy testimonials should be sent not later than Tuesday June 7th 1938.  
A. MIDGLEY Secretary

# ROYAL MANCHESTER CHILDREN'S HOSPITAL PENDLEBURY

Applications are invited for the post of NON RESIDENT ASSISTANT MEDICAL OFFICER at the Out Patients Department, Grosvenor Street, Manchester. Salary is at the rate of £150 per annum and the appointment is for a period of six months. Candidates must be on the Medical Register.

Particulars of duties can be obtained from the Secretary. The hours of duty are from 9 a.m. till 1 p.m. or until the work of the Dispensary is finished. Patients' attendance number about 100 000 per annum.

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned as early as possible. Canvassing directly or indirectly may disqualify.  
By Order  
H. HEARDMAN Secretary

# SUSSEX MATERNITY AND WOMEN'S HOSPITAL

Brighton (50 Beds)

RESIDENT HOUSE SURGEON (male) required. Salary at the rate of £130 per annum board and washing found and £40 allowed for travelling expenses. Good experience in midwifery and gynaecology required. No canvassing allowed. The successful candidate will be required to enter on his duties on July 1st.

Applications in writing accompanied by testimo nials should be sent to PERCY F. SPOWART Secretary at the Hospital, Buckingham Road Brighton.  
May 30th 1938

# ROYAL SOUTH HAMPSHIRE AND SOUTHAMPTON HOSPITAL (296 Beds)

Applications are invited for the following appointments:

One RESIDENT ANAESTHETIST

One CASUALTY OFFICER who shall have had some experience in the reduction and treatment of fractures.

For the six months commencing July 1st 1938 each at a salary of £150 per annum with board lodging and laundry. Candidates must be male and unmarried.

Applications accompanied by not more than three testimonials should be sent to the undersigned not later than June 10th 1938.  
S. W. BARNES House Governor and Secretary

# GROSVENOR SANATORIUM

Ashford Kent (236 Beds)

# 4 RESIDENT MEDICAL OFFICERS

Applications are invited from fully qualified men for the appointment of Resident House Physician from July 1st. The appointment is for a period of at least six months at a salary of £100 per annum with board lodging and laundry.

Previous experience not necessary. Applications stating age and qualifications, nationality and accompanied by copies of recent testimonials to be sent to the Medical Superintendent.

# BURTON ON TRENT GENERAL INFIRMARY

Applications are invited for the post of CASUALTY OFFICER AND HOUSE PHYSICIAN salary at the rate of £100 per annum with board residence and laundry. Board commences July 1st 1938.

Applications giving age, qualifications and nationality together with copies of testimonials to be sent to F. W. THORNTON Secretary

**BRISTOL GENERAL HOSPITAL**

The Committee invite applications for the following appointments, which become vacant on September 1st next:

**TWO HOUSE PHYSICIANS** Three HOUSE SURGEONS RESIDENT OBSTETRIC OFFICER HOUSE SURGEON to the Special Departments and 3 CASUALTY HOUSE SURGEON

The appointments will be for six months at the rate of £100 per annum and at the rate of 100 per annum for the Casualty House Surgeon, and in the event of a second appointment being held at the rate of £100 per annum in each case, with board residence, etc. provided in the Hospital.

Candidates must be registered under the Medical Act and possess sound ideas of good general work and also must have recent experience in the duties of a General Practitioner. For each of the above there to be a list of 10 names. The Secretary must be furnished with copies of testimonials, approved by the University, and before Saturday July 1st 1938 from whom further particulars may be obtained.

THOMAS W. GREGG F.R.C.S. Secretary

**ACCOATS HOSPITAL, MANCHESTER**

CHIEF ASSISTANT OFFICER TO THE ORTHOPAEDIC DEPARTMENT

Applications are invited from July 4th and sent in for the above post. Salary £100 per annum. Duties to assist the Honorary Orthopaedic Surgeon and to take charge of the Department in his absence. He will be required to attend three evenings per week. Preference will be given to candidates with previous orthopaedic experience.

Applicants must have qualifications, experience, and full particulars will be forwarded to the undersigned on or before June 15th to either a list of three recent testimonials.

By Order of the Board  
HERBERT J. DAFFORNE,  
Gen. Sec. and Secretary

**ADDENBROOKS HOSPITAL, CAMBRIDGE**

Applications are invited for the post of RESIDENT ANAESTHETIST AND EMERGENCY OFFICER (male). The appointment will be for six months from July 1st 1938. Salary at the rate of £120 per annum with board residence and laundry.

Candidates who must be unmarried and duly registered are requested to forward their applications, together with qualifications, etc., together with copies of not more than four recent testimonials, on or before June 15th to either a list of three recent testimonials.

A. BEARDSALL,  
Secretary Superintendent

**BECKETT HOSPITAL AND DISPENSARY, BURY (113 Beds & Residents)**

Applications are invited for the post of JUNIOR HOUSE SURGEON (male). Candidates must be registered and have a minimum of 10 years' experience. Salary £100 per annum with board residence and laundry.

Applicants must have qualifications, experience, and full particulars will be forwarded to the undersigned on or before June 15th to either a list of three recent testimonials.

ARTHUR L. BOURNE,  
Secretary Superintendent

**BOSTON GENERAL HOSPITAL (70 Beds)**

RESIDENT MEDICAL OFFICER (male) required. To commence duty as soon as possible at the rate of £100 per annum with board residence and laundry. The appointment is for six months and may be renewed. Applications, stating qualifications, experience, and full particulars will be forwarded to the undersigned on or before June 15th to either a list of three recent testimonials.

GORDON EASTO,  
Sec. & Secretary

**EAST SUFFOLK AND IPSWICH HOSPITAL, 30 Beds, 8 Residents**

Wanted July 1st, HOUSE SURGEON (male) to the Orthopaedic and Fracture Department at the rate of £100 per annum with board residence and laundry. The appointment is for six months and may be renewed. Applications, stating qualifications, experience, and full particulars will be forwarded to the undersigned on or before June 15th to either a list of three recent testimonials.

ARTHUR GRIFFITHS,  
Secretary

**Applications are invited for the post of HOUSE SURGEON, Salary £100 per annum with board residence and laundry.**

Applicants must have qualifications, experience, and full particulars will be forwarded to the undersigned on or before June 15th to either a list of three recent testimonials.

**CHELTENHAM GENERAL AND EYE HOSPITALS**

(10 Beds, Four Residents)

Recruited for the F.R.C.S. D.L.O. and D.O.M.S. Examination.

Applicants are invited for the following appointments (male) vacant July 1st 1938:

1 ONE HOUSE PHYSICIAN

1 ONE HOUSE SURGEON for General Surgery

1 ONE HOUSE SURGEON for Eye and Ear

Throat and Nose Departments

Salary £100 a year with board residence and laundry.

There are two House Surgeons for General Surgery and one for Eye and Ear and one for Throat and Nose and General and Dental Departments.

Applicants must be registered under the Medical Act and possess sound ideas of good general work and also must have recent experience in the duties of a General Practitioner.

For each of the above there to be a list of 10 names. The Secretary must be furnished with copies of testimonials, approved by the University, and before Saturday July 1st 1938 from whom further particulars may be obtained.

J. CUMMING SMITH F.R.C.S. Secretary

**BUTE HOSPITAL, LUTON**

The Committee of Management invite applications for the post of SURGEON in charge of the FRAC TURE CLINIC in the new Luton and District Hospital (150 beds).

Candidates must be experienced in the work of a Fracture Clinic and must be Fellows of the Royal College of Surgeons of England or of the Royal College of Surgeons in London and be recommended by the Board of Directors and enter into a full and final contract for private practice in the Hospital area to that of a Consulting Orthopaedic Surgeon.

Duties will not commence before January 1st 1939 but the Committee desire to appoint as soon as possible so that the appointee may have the maximum of working and advance on the layout and equipment of his department.

Salary £60 per year.

Applicants' status and experience should be forwarded to the Secretary Medical Advisory Committee at the Bute Hospital, who will be pleased to supply any further information.

Bute Hospital R. E. LINGARD Secretary

**HOSPITAL OF ST. CROSS, RUGBY (10 Beds)**

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (three R.M.O.s).

Salary to commence at the rate of £100 per annum for the first three months, £125 per annum for the next three months and at the rate of £150 per annum for the subsequent months.

Full board and laundry provided. Six months' appointment and eligible on completion of one year for further extension of six months.

Candidates must be prepared to commence duties as early as possible.

The post of the Hospital is excellent and offers opportunities for the development of the candidate's own ideas.

Certificates and other fees shared by R.M.O.s. Applications stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W. COCKBURN,  
Superintendent and Secretary

**ROYAL VICTORIA HOSPITAL, FOLKESTONE (116 Beds, Extra 12 to 155 Beds)**

The Committee of Management invite applications for the posts of SENIOR AND JUNIOR HOUSE SURGEONS duties to commence on June 1st.

Salaries £100 and £120 per annum respectively with board apartments and laundry.

The appointment is for six months and may be renewed as renewable for a further period of six months for the Junior House Surgeon as Secretary of the Hospital if recommended by the Medical Committee.

Applicants with copies of not more than three recent testimonials to be sent to the undersigned not later than June 10th.

F. T. WILTON,  
Secretary Superintendent

**GRIMSBY AND DISTRICT HOSPITAL (100 Beds)**

Applications are invited for the post of RESIDENT ORTHOPAEDIC OFFICER. Salary £120 per annum with board residence and laundry. The appointment is for twelve months and may be renewed. Duties to commence on August 1st 1938.

Candidates must be registered under the Medical Act and have had experience in Orthopaedic and Fracture work.

Applications with copies of not more than three testimonials to be sent to the undersigned before June 1st.

H. B. COATES,  
Secretary Superintendent

May 1st 1938.

**HULL CORPORATION HEALTH DEPARTMENT**

Hull Municipal Maternity Home and Infants Hospital (104 Beds)

JUNIOR RESIDENT MEDICAL OFFICER (Woman)

Applications are invited from unmarried or widowed Women Medical Practitioners for the appointment of JUNIOR RESIDENT MEDICAL OFFICER at the above Institution.

Salary £100 per annum, to either with board washing and residence at the Maternity Home.

The appointment will be for six months with a possible extension for a further period of six months.

Applications on forms to be obtained from the undersigned are returnable not later than Saturday June 11th 1938.

NICOLAS GEBBIE M.D.  
Medical Officer of Health

Health Department,  
Guildhall, Hull.

May 1938

**KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL (109 Beds)**

Madingley (109 Beds)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON which post becomes vacant on June 1st 1938. The appointee is for six months but a senior post at a higher salary may be given after that period if mutually agreed upon.

Candidates must be duly qualified and registered Medical Practitioners and of British birth and nationality and should have experience of ophthalmic work with board residence and laundry. The Hospital is recognized by the Examiners' Board for the D.O.M.S.

Applicants' status and qualifications together with copies of not more than three testimonials should be sent to the undersigned.

JOHN W. STRICKLAND,  
Secretary

**LIVERPOOL HAHNEMANN HOSPITAL Hope Street.**

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Hospital which post falls vacant on July 1st next. Only one R.M.O. kept.

Duties include occasional anaesthetics and assisting at operations general ophthalmic and aural.

Appointment is for six months, renewable at the rate of £100 per annum.

Knowledge of Homoeopathy desirable but not essential.

Applicants must state nationality and previous experience and enclose photograph and copies of testimonials to the Registrar on or before June 15th.

Applicants must be prepared to commence duties as early as possible.

The post of the Hospital is excellent and offers opportunities for the development of the candidate's own ideas.

Certificates and other fees shared by R.M.O.s. Applications stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W. COCKBURN,  
Superintendent and Secretary

**LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL**

Applications are invited from duly registered candidates (male and unmarried) for a HOUSE SURGEON salary £100 per annum from August 1st.

A HOUSE PHYSICIAN salary £125 per annum from July 1st.

The appointments are for six months and may be renewed as renewable for a further period of six months for the Junior House Surgeon as Secretary of the Hospital if recommended by the Medical Committee.

Applicants with copies of not more than three recent testimonials to be sent to the undersigned not later than June 10th.

F. T. WILTON,  
Secretary Superintendent

**SUSSEX EYE HOSPITAL, East in Road Brighton (50 Beds)**

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum with board residence and laundry. Good salary and experience. The appointment is for a period of six months. Duties to commence on July 1st.

The Hospital is recognized by the Examiners' Board of the Royal College of Physicians of London and the Royal College of Surgeons of England for the D.O.M.S. Diploma.

Applications with copies of not more than three testimonials to be sent to P. F. Spooner, Assistant Secretary, Sussex Eye Hospital, Eastern Road Brighton.

May 1938

**CONSUMPTION SANATORIUM BRIDGE OF WEIR (10 Miles S.W. of Glasgow)**

and COLONY FOR EPILEPTICS (Near B.)

MALE RESIDENT MEDICAL OFFICER. Required July 1st. Medical Superintendent, having previous experience in managing institutions. Appointment for six months in the institution at rate of £200 per annum and £100 per week with room, board, and laundry.

Applications with copies of not more than three testimonials to be sent to the undersigned before June 1st.

H. B. COATES,  
Secretary Superintendent

May 1st 1938.

## COUNTY MENTAL HOSPITAL RAINHILL LANCs

Wanted ASSISTANT MEDICAL OFFICER male Salary £550 per annum rising to £600 after one year's satisfactory service. The successful applicant will be expected to obtain a diploma in Psychological Medicine within two years of appointment on obtaining which in addition £50 per annum will be paid.

In the case of the successful candidate being single a deduction of £150 per annum is made from the salary for board furnished apartments attendance and washing but in the case of a married man being appointed an unfurnished house on the estate can be provided at a rental of £50 per annum.

Facilities for Laboratory and Research work. Preference given to one who has held a resident post in a General Hospital.

Applications with testimonials and full particulars to be sent to the Medical Superintendent and to be received not later than Thursday June 16th 1938.

## THE BIRMINGHAM UNITED HOSPITAL

PSYCHOLOGIST required for duty at the Nerve Hospital Birmingham.

This Hospital is associated with and staffed by the Queen's Hospital unit of the Birmingham United Hospital.

Candidates must be qualified Medical Practitioners and will be required to produce evidence of special experience in Psychology.

Salary to commence £500 per annum decreasing by £100 annually.

The successful applicant will be required to attend five afternoon and two evening clinics per week.

Private practice will be allowed.

Applications should be marked Psychologist and addressed to the Secretary Midland Nerve Hospital Bath Row Birmingham 15 to reach him not later than June 18th 1938.

May 27th 1938

## THE BOLTON ROYAL INFIRMARY (315 Beds including two Auxiliary Hospitals)

Applications are invited from Gentlemen for the post of ASSISTANT RESIDENT SURGICAL OFFICER.

The duties comprise responsibility for the whole of the Casualty and Orthopaedic Departments and to deputise for the R.S.O. in his absence.

The post is recognized by the Royal College of Surgeons of England for the Final Fellowship Examination.

Salary £200 per annum with board residence and laundry.

Applications stating age nationality and experience together with copies of testimonials should be forwarded to the undersigned as soon as possible. Duty will commence on July 1st 1938.

H CORLESS  
Secretary

## THE GLOUCESTERSHIRE ROYAL INFIRMARY AND LYE INSTITUTION

Gloucester  
(232 Beds—Five Residents)

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary at the rate of £150 per annum with board residence and laundry.

The appointment is for six months which may be extended for similar periods by re-election from time to time.

Applications stating age qualifications experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than Wednesday June 15th.

The elected candidate will be required to enter upon his duties on June 24th.

F J SYMONS  
Secretary

## KING EDWARD VII HOSPITAL WINDSOR (200 Beds)

HOUSE SURGEON required July 1st. Applicants must be fully qualified men or women registered and unmarried.

Salary at the rate of £110 per annum together with board residence and laundry.

Applications stating age qualifications and experience accompanied by testimonials should be sent to the undersigned not later than June 6th.

The appointment is recognized by the Royal College of Surgeons of England for the six months training required of candidates before admission to the final examination for the Fellowship.

A E CHURCHER  
Secretary

## THE LADY CHICHESTER HOSPITAL HOME FOR FUNCTIONAL NERVOUS DISEASES (60 Beds)

JUNIOR HOUSE PHYSICIAN (woman) required. Six months appointment at £75 per annum all round. Valuable experience for Diploma in Psychological Medicine.

Duties to commence middle of July. Applications with testimonials to be sent to the Secretary Mr L. L. Spooner 33 West Street Bristol on May 30th 1938.

## THE JESSOP HOSPITAL FOR WOMEN Sheffield (151 Beds)

The Board of Management invite applications for the post of SENIOR RESIDENT OFFICER (male) unmarried.

The appointment is for six months in the first instance from July 1st 1938.

Salary £150 per annum plus board residence and laundry.

Previous resident experience essential.

The duties include charge of the Maternity Department 36 beds and general supervision of the Gynaecological Department.

Applications stating age and experience with copies of recent testimonials should be forwarded immediately to the undersigned.

DAVID OSWALD

Superintendent and Secretary

## THE JESSOP HOSPITAL FOR WOMEN Sheffield (151 Beds)

The Board of Management invite applications for the post of HOUSE SURGEON (male) unmarried for a period of six months commencing July 1st 1938.

Salary £100 per annum together with board residence and laundry.

Applications stating age together with copies of testimonials should be addressed to the undersigned immediately.

DAVID OSWALD

Superintendent and Secretary

## ABERDEEN ROYAL INFIRMARY

The Board of Directors invite applications for the appointment of SENIOR CASUALTY OFFICER in the Out Patient Department to take up duty on July 11th 1938. The salary is at the rate of £200 per annum plus an allowance in lieu of quarters and is tenable for one year with eligibility for reappointment.

Applications together with six copies of recent testimonials should be lodged on or before June 11th 1938 with the undersigned from whom particulars regarding the appointment can be obtained.

1 Albany Place JOHN A. MCCONACHIE  
Aberdeen Clerk and Treasurer  
May 27th 1938

## THE DEWSBURY AND DISTRICT GENERAL INFIRMARY DEWSBURY

Applications are invited for the post of SECOND HOUSE SURGEON (male) vacant August 1st next. The duties are principally those of a House Physician and Casualty Officer. Salary £150 per annum with board, residence and laundry.

The Infirmary is a new Voluntary Hospital of 100 Beds and has the usual Special Departments with Visiting Consulting Specialists in attendance.

Applications stating age and hospital experience (if any) together with copies of recent testimonials to be sent as immediately as possible to my office.

TRED SMITH  
Secretary Superintendent

## THE ROYAL INFIRMARY SHEFFIELD (500 Beds)

Applications are invited for the post of CLINICAL ASSISTANT to the Ophthalmic Department (male or female). The Ophthalmic Department contains 68 Beds and an Out Patient Department which is open daily.

Salary £300 per annum.

The appointment will be for one year subject to two months' notice and the officer elected will be eligible for reappointment. Letters stating age and giving full qualifications previous hospital experience etc. to be forwarded to the General Superintendent and Secretary not later than May 30th 1938.

May 2nd 1938

## THE ROYAL INFIRMARY SHEFFIELD

The Board of Management invite applications for the post of OPHTHALMIC HOUSE SURGEON. The salary attached to the post is £120 per annum with board and residence.

This appointment will be tenable for the period of six months commencing May 1st 1938.

The Ophthalmic Department contains 69 beds and an Out Patient Department which is open daily.

Applications with copies of testimonials to be sent to the General Superintendent and Secretary April 20th 1938.

## WILTSHIRE SUFFOLK GENERAL HOSPITAL Bury St Edmund's (112 Beds)

Applications are invited for the following posts: HOUSE PHYSICIAN. Duties include charge of the Medical Beds, Maternity Ward and Casualty and Administration of Anaesthetics. Salary £150 per annum with board lodging and laundry. Vacancy June 30th 1938.

Applicants for the post must be registered Practitioners. Applications stating age experience and nationality with copies of three recent testimonials to be sent to the Secretary. The appointment is for six months. May 30th 1938.

## THE LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Mount Pleasant Liverpool

Applications are invited for a FULL TIME RESIDENT MEDICAL OFFICER to the Hospital for Consumption and Diseases of the Chest. Previous Hospital experience desirable. Both medical and surgical treatment of Pulmonary Tuberculosis are undertaken at this Hospital.

The appointment will be for a period of one year. Salary £150 per annum with board and residence.

Applications stating age nationality qualifications and experience together with copies of three recent testimonials or names of two local referees to be sent to the Secretary not later than June 22nd 1938.

## THE WESTERN INFIRMARY OF GLASGOW (Incorporated)

The Managers invite applications for a FULL TIME ASSISTANT IN THE RADIUM DEPARTMENT with opportunities for experience in X-Ray therapy and Diagnosis. The salary is £400 per annum.

Five applications with copies of at least two testimonials with each application to be lodged with the subscriber on or before Thursday June 16th.

Canvassing not permitted.  
J. MATHESON JOHNSTON  
87 Union Street Secretary and Treasurer  
Glasgow  
June 1938

## TAVONIAN AND SOMERSET HOSPITAL Taunton

A HOUSE PHYSICIAN and a HOUSE SURGEON (males) required the last week in June. Six months. One other House Surgeon in residence. Salaries: rate of £125 per annum with board residence and laundry and the retention of certain fees.

Applications with copies of not more than three recent testimonials to F J J STACEY Secretary.

## THE WOMEN'S HOSPITAL CATHARINE STREET LIVERPOOL (Gynaecological Hospital—10 Beds)

HOUSE SURGEON required for six months commencing July 1st. Salary £100 per annum. Applications with copies of three testimonials to be sent to the Hon. Secretary of the Medical Board.

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years. House. 4 bed. 100. 100. 100.

ISLE OF WIGHT—£1200 PA PANEL  
2. Area 1500 pa. Good loc. Family house and  
business. 100. 100. 100. 100. 100. 100.

MIDLANDS—AVERAGE £1068  
Panel 1000. Prem 11 years. 100. 100. 100. 100. 100. 100.

LOCK UP LONDON SW—HELD BY  
WOMAN £250 pa. Panel 100. 100. 100. 100. 100. 100.

LONDON W2—AVERAGE £1900  
Pa. Panel 1000. Fees 5 to 11. Lease of 10  
years. House 100. 100. 100. 100. 100. 100.

LADY DR S PRACTICE—EASTERN  
SUBURB. £1000/1000 pa. Small panel and  
P.M.S. Prem 11 years. 100. 100. 100. 100. 100. 100.

HANTS—COUNTRY TOWN AVER  
AGE £1000 pa. Panel 1000. Apprs 11.0. Prem  
11 years. 100. 100. 100. 100. 100. 100.

LONDON W12—AVERAGE £800 PA  
Selected panel of 500 scope. 100. 100. 100. 100. 100. 100.

BRITISH WEST INDIES—About £500  
pa. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

LONDON NCU11—£12—ABOUT  
£1000 pa. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

GLOS—SHARE OF £2800 PA  
Panel 1000. Apprs. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

CO DURHAM—AVERAGE £12.0  
Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

AGENT WITHIN 20 MILES—ABOUT  
£1000 pa. Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

NEST COAST TOWN—FOR SHARE  
Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

COYDON AREA—NEARLY £700  
Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

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DIRE REQUIRED IN X-RAY AND  
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AGE £1000 pa. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

SURREY NEAR LONDON—£800 PA  
Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

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Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

LONDON W6—NON PANEL AVER  
AGE £1000 pa. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

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Par 1 PRACTICE. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

LONDON W—Good mixed PRACTICE,  
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residential locality. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

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3 SOMERSET COAST—PRACTICE in pleasant  
town. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

4 LONDON SE—General PRACTICE Panel  
1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

5 WEST COAST—PARTNERSHIP in country  
town. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

6 LONDON SW—Cash locum up PRACTICE  
Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

7 CORNISH COAST—PRACTICE in beautiful  
part. 100. 100. 100. 100. 100. 100. 100. 100. 100. 100.

8 S COAST—PRACTICE in popular town  
Panel 1000. 100. 100. 100. 100. 100. 100. 100. 100. 100.

9 LONDON W—General PRACTICE small panel  
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Mrs MILLICENT HICKS Secretary

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Dent Collection: 1011



# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)

(FOUNDED 1880)

Tele Address  
Triform, Westcent—London

TAVISTOCK HOUSE SOUTH  
TAVISTOCK SQUARE, W C 1

Telephone Euston {1644  
1645

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical, Scholastic, and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent. Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

## REDUCTION IN FEES

In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill, book debts, furniture, drugs, fittings and other effects (excluding sales of any freehold or leasehold property, or of practices, effects, etc., outside Great Britain) is limited to a maximum fee of Fifty Pounds.

## FULL TERMS ON APPLICATION

### Practices and Partnerships for Disposal

### Full Particulars sent free

1 LONDON, SE 13—PRACTICE, about £1,600 p.a., in suburban district. Panel 1,400. Pleasantly situated house (4 bedrooms), garage and garden. Price £1,650. Scope Premium £3,350 or near offer.

2 WEST END OF LONDON—Good class non-dispensing PRACTICE, about £1,150. No panel. Large house to rent. Premium lease and practice £3,000.

3 MIDDLESEX—PARTNERSHIP in Practice, about £2,200 in developing district. Panel over 2,000. Small house. Rent £65 p.a. Good scope. Premium for share of £900/£1,000 two years purchase.

4 SE COAST—PRACTICE, £878 p.a., in popular watering place. Good detached corner house for sale or might rent. Scope. Premium two years purchase.

5 BUCKS—PRACTICE in growing town. Receipts last year £894. Panel about 790. House for sale. Well equipped hospital. Premium £1,500.

6 LONDON W 6—Non dispensing PRACTICE about £1,150. Pleasant suburb. No panel. House (5 bedrooms), garage and garden, for sale. Scope. Premium £1,000.

7 LONDON, SE—PRACTICE in outlying suburb. Earnings past year, £1,368. Panel 560. House (5 bedrooms), garage and garden. Rent £150. Premium £2,800.

8 ESSEX—Country PRACTICE, about £700 p.a. Panel about 450. Very good house (5 bedrooms), garage and garden. Rent £65 p.a. Premium £1,050.

9 LONDON, SW—Medical Woman's PRACTICE, about £960 p.a., in outlying suburb. No panel. Suitable accommodation available. Premium £950.

10 SURREY—Medical Woman's PRACTICE, about £900, in developing district. No panel. Rent of house, £100 p.a. Scope. Premium £500.

11 SMALL RADIOLOGICAL PRACTICE in provincial town. Good opportunity for young able man. Prospect of hospital appointment later. Premium £1,600 to include modern plant (value about £1,100).

12 PARTNERSHIP in increasing Ear, Nose and Throat Practice in provincial town. Partner must hold F.R.C.S.

13 MIDDLESEX—FOURTH PARTNER required in Practice over £7,600 p.a. in residential district on the Thames. Panel 3,600. House (5 bedrooms) to rent. Scope. Premium 6/10ths share £3,100.

14 LONDON, NW—PARTNERSHIP in Practice averaging about £5,200 p.a. Panel about 6,000. Maisonette (2 bedrooms etc.) to rent. One fifth share at first at two years purchase.

15 NE COAST—Middle and better working-class PRACTICE over £1,150 p.a. in seaport town. No panel. Private residence for sale. Premium £750, to include furnishings etc. of consulting rooms.

16 LONDON W 9—PRACTICE doing between £900/£950 p.a. in residential district. Panel about 60 but plenty of scope. Rent of maisonette (4 bedrooms) £200 p.a. Premium £1,000 or offer.

17 S WALES—Chiefly non dispensing PRACTICE, £830 p.a. in seaside town. Panel 380. Centrally situated house. Price £1,250. Good scope. Premium £1,450.

18 LONDON, NW 4—Middle class PRACTICE, about £800 p.a., in developing part. Panel 300. House (3 bedrooms), for sale or rent. Scope. Premium £1,250.

19 LONDON, SW 16—Medical Woman's PRACTICE over £1,000 p.a. Panel 430. Semi detached house. Price £950 freehold. Scope. Premium £1,500.

20 MIDLANDS—PARTNERSHIP in country town. Practice Receipts, 1937, £4,510. Panel over 3,500. Premium one third share one and a half years purchase, or whole practice would be sold.

21 HOME COUNTY—FOURTH PARTNER required in Practice in growing town. Panel 3,000. Incoming partner must be energetic, aged about 30 (married preferred) with a leaning towards medicine. Initial share about £1,250 p.a. Premium £3,000. Preliminary Assistantship.

22 SW OF ENGLAND—Non dispensing PRACTICE, averaging £1,616 p.a. in favourite watering place. Small panel. Semi detached house for sale. Good hospital. Premium £2,800.

23 KENT—PARTNERSHIP in country Practice, about £1,900 p.a., in very beautiful neighbourhood. Panel 1,050. House (4 bedrooms), in own grounds for sale or rent. Premium two fifths (possibly half) share two years purchase.

24 CORNWALL—PRACTICE averaging £655 in market town on West coast. Panel 200. House (5 bedrooms), garage and garden, for sale. Scope. Premium one and a quarter years' purchase.

25 LONDON, SE 22—PRACTICE in suburban district. Receipts past year £1,284. Panel 700. Good house with garage and nice garden for sale or rent. Premium two years' purchase.

26 NEAR MARBLE ARCH—Old established PRACTICE about £1,900 p.a. Panel about 1,300 offering ample scope in near future, also midwifery. Well built detached double fronted leasehold house with garage and garden, for sale. Premium two years purchase.

27 HOME COUNTY—PARTNERSHIP in Practice, averaging £3,500 p.a. in beautifully situated country town. Panel about 1,350. Choice of house. Incoming partner must be experienced and aged about 35/40. Premium one half share two years' purchase. Hospital.

28 LONDON, N 7—PRACTICE averaging about £2,000 p.a., including valuable appointments and panel 1,200. Small house (3 bedrooms) garage and small garden for sale or rent. Premium £4,400 or near offer.

29 SW OF ENGLAND—PARTNERSHIP in Practice averaging about £3,200 in market town. Panel over 7,000. Well built house (6 bedrooms, etc.) garage and a lot of garden. Price £2,200. One third share at first at two years purchase. Hospital.

30 LONDON, SW—PARTNERSHIP in mixed class Practice about £4,350 p.a. in residential suburb. Panel 2,400. Very nice house with garage and quarter acre garden for sale. Two fifths share at first at two years purchase.

31 S OF ENGLAND—PARTNERSHIP in Practice over £3,600 p.a. in market town about 80 miles from London. Panel 1,700. Very charming, old world house. Price about £1,350 freehold. Modern hospital. Premium one share two years purchase. Partner should be aged about 35.

# British Medical Bureau

(The SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1850)

Tele Address  
TAVISTOCK HOUSE SOUTH  
TAVISTOCK SQUARE, W.C.1

Telephone Euston 1644  
1645

## Practices and Partnerships for Disposal (continued)

32 N MIDLANDS—PRACTICE in residential district near progressive town. Receipts 1937 £770. Panel about £100. Attractive modern house (4 bedrooms) with large garage and good garden for sale. Premium £1,000.

33 LONDON SW9—Non panel PRACTICE averaging over £1,500 p.a. House on main road to rent on lease. Premium one year's purchase.

34 S Lincs—Country PRACTICE nearly £800 p.a. in agricultural district. House to rent. Premium £1,600 to include surgery, furniture, Morris 8 Saloon car, etc. etc.

35 S COAST—Non dispensing PRACTICE £1,250 p.a. in health resort. No panel but ample scope. Commodious well built residence with garage and garden for sale. Premium £2,400.

36 CORNISH COAST—PARTNERSHIP in non dispensing Practice nearly £3,000 in favourite resort. Panel 1,000. House obtainable. One third share at two years purchase. Good anaesthetist required. Short Assistanthip.

37 LONDON N12—PRACTICE doing about £400 in growing district. Panel 158. Attractive modern double fronted Labour saving house (4 bedrooms etc.) for sale. Premium £7,000.

38 S COAST—PARTNERSHIP in Practice £4,770 p.a. in residential town and health resort. Panel 6,000. Semi detached house (5 bedrooms) garage and garden to rent. Premium one fourth share £2,800.

39 W OF ENGLAND—PARTNERSHIP in Practice about £2,000 in first rate residential town. Panel about 3,000. House obtainable. Good scope. One third share at first at two years purchase.

40 MIDLANDS—PARTNERSHIP in old established Practice £3,270 p.a. in manufacturing town. Panel 3,820. Modernized house (4 bedrooms) and professional accommodation. Good garage and garden for sale or rent. Premium one half share £5,270.

41 LONDON SW—Good class PRACTICE about £1,000 in residential part near West End. Fees £1 1s upwards. Rent of consulting rooms £200 p.a. on lease. Premium two years purchase.

42 LONDON EC—Old established City PRACTICE averaging about £1,700 p.a. Panel 316. Premises rented on lease. Good scope. Prem one and a half years purchase.

43 HOME COUNTIES—PARTNERSHIP in increasing middle-class Practice about £1,600. Panel about 500. Modernized house for sale or rent. Scope. Cottage hospital. Premium one half share £1,600.

44 S OF ENGLAND—PARTNERSHIP in Practice over £3,600 p.a. in growing seaport town. Panel 2,225. One fifth share at two years purchase. Prelim A Assistantship.

45 SUSSEX—Country PRACTICE near coast. Receipts last year £270. Panel about 600. Attractive modern house garage and garden. Price £1,500. Premium £500.

46 FRENCH RIVIERA—Old established PRACTICE. M.D. or M.R.C.P. necessary.

47 S MIDLANDS—PARTNERSHIP in Practice nearly £5,000 p.a. in first rate town. Panel over 1,500. Applicant should be about 30 years of age and well qualified. One fourth share at two years purchase after Assistanthip.

48 LONDON SE—PARTNERSHIP in Practice nearly £700 p.a. in rapidly growing district. Panel about 1,000. Modern labour saving house (4 bedrooms) to rent. Hospital. Premium one fourth share £2,250.

49 MIDLANDS—PARTNERSHIP in Practice averaging £2,880 p.a. in manufacturing town. Panel 1,100. Suitable house. Premium two-fifths or one half share two years purchase. Succession in about two years.

50 INLAND HEALTH RESORT—Old established SPA PRACTICE about £1,450 p.a. Fees £2 2s. and £1 1s. Good house in excellent position for sale. All kinds of sport. Premium one and a half years purchase.

51 EASTERN COUNTIES—PARTNERSHIP in Practice £2,200 p.a. in marine town. Panel over 4,000. House to rent. Premium one fifth or one fourth share two years purchase.

52 S COAST—PRACTICE in health resort. Receipts 1937 about £1,600. Panel 900. House (3 bed and dressing rooms) large garage and garden. Price £2,250. Good scope. Premium £750.

53 DEATH VACANCY—ANGLESEY COAST—PRACTICE about £900 p.a. (appointments and panel 455). House (6 bedrooms) with nice garden. Rent £60 p.a.

54 W OF ENGLAND—PRACTICE nearly £1,200 p.a. in small favourite watering place. Panel 715. Detached house (5/6 bedrooms) garage and good garden. Rent £55 p.a. Scope. Premium £2,250.

55 LONDON E5—Middle-class PRACTICE about £2,700 p.a. Panel 1,200. Price of surgery premises £1,200. Private residence available if needed. Good scope for panel. Premium two years purchase.

COLONIES—Number of Colonial PRACTICES. Incomes range from about £750 to £5,000 p.a.

Purchasers can raise additional capital for the purchase of approved practices or shares. Particulars will be forwarded on application.

## RELIABLE LOCUMS AND ASSISTANTS ARE URGENTLY REQUIRED

All communications to be addressed to The Manager

## SCOTTISH BRANCH, 21, Alva Street, Edinburgh, 2

Telephone  
Edinburgh 2563

### FOR DISPOSAL

A EDINBURGH—DEATH VACANCY—Old established PRACTICE. Receipts average £631. No panel. Ample scope for increase. Excellent house for sale.

B N OF SCOTLAND—Country PRACTICE. Long established. Receipts approximately £1,000. Panel 27.

C SCOTLAND—Old-established City PRACTICE. Receipts £1,480. Panel 1,270. Fees 3/6 to 10/6. Premium two years purchase. Attractive house to be sold. Price £1,100.

D WALES—PARTNERSHIP in country town. Receipts £1,200. Panel over 1,000. Suitable house. Price £500. One half share at one year's purchase.

E EDINBURGH—Small PRACTICE. Receipts £450. Suitable house must be bought. Premium practice and house £1,600.

F EDINBURGH—Old established PRACTICE. Receipts averaging £1,022. Panel 80. Suitable house. Price £1,500 or might be let on lease. Premium one and three quarters years purchase or near offer.

G N OF SCOTLAND—Old-established country PRACTICE in beautiful district. Receipts average over £1,000. Excellent house to rent. Premium one and a half years purchase. Reasonable offer considered for quick sale.

H EDINBURGH—Small PRACTICE. Receipts approximately £400. Suitable house to rent. Any reasonable offer considered.

For further details apply The Manager 21 Alva Street Edinburgh.

Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed.

# BRITISH MEDICAL BUREAU

(The Scholastic, Clerical and Medical Association Ltd.)

(FOUNDED 1880)

## NORTHERN BRANCH

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**FOR DISPOSAL**

Full particulars free on request

Practices and Partnerships wanted Large list of bona fide purchasers with ample capital available Enquiries invited from prospective vendors All information treated in strict confidence

**NORTH LANCs—YORKSHIRE BORDER**—Old established unopposed Country PRACTICE in present hands 20 years Cash receipts £1 000 p a Panel and appointments approximately £420 p a Well built house with ample accommodation central heating electric light garage and garden of 2 acres Rent £75 p a Premium—£1 500 Vendor retiring—No 1119

**NORTH STAFFS**—Very old-established better working and middle-class PRACTICE. Cash receipts this year £2 431 Panel 1 225 Scope as district developing Excellent house 2 reception 4 bedrooms maid's room separate Surgery premises garage and garden For sale Freehold Premium—Practice—13 years purchase—No 1120

**LEICESTER—DEATH VACANCY**—Very old established middle and better working-class PRACTICE. Average cash receipts approximately £1 275 p a including Panel £450 p a and P.M.S. £125 p a Excellent house with ample accommodation Premium—best offer—No 1121

**NEAR MANCHESTER—PARTNERSHIP** in very old-established middle and better working-class PRACTICE WITH SUCCESSION in one or two years Cash receipts £2 600 p a Panel 1 450 Good scope Suitable accommodation available Preliminary Assistantship if desired Premium—2½ths share—2 years purchase—No 1108

middle and better working class

year £1 471 Panel 1 000 Excellent house (built 3 years ago) 2 reception 3 bedrooms garage garden 3 Professional rooms (separate entrance) Price £1 400 Premium—1½ years purchase or near offer—No 1112

**NEAR MANCHESTER—PARTNERSHIP** in old-established mixed-class Practice owing to recent death of senior partner Average cash receipts £2 446 p a (increasing) Scope for in crease Good house to rent 2 reception 4½ bedrooms 3 Professional rooms garage and small garden Premium—one half share—2 years purchase or near offer—No 1114

**NORTH MIDLANDS**—Old-established mixed Panel and Private PRACTICE in Country district near large town Average cash receipts £1 067 p a Panel 970 and transferable appointments £200 p a Excellent detached house 2 reception 6 bedrooms Professional rooms garage and large garden Price £1 250 Premium—1½ years purchase—No 1117

**NORTH WEST LANCs**—Old-established mixed Panel and Private PRACTICE in large town Cash receipts last year £1 040 Panel over 1 000 Good house pleasantly situated garage and small garden Premium—Practice—14 years purchase—No 1118

**NORTH EAST COAST**—Panel and Private PRACTICE Cash receipts last year £2 160 Panel 2 220 Appointments and Clubs (transferable) approximately £464 p a Good house 2 reception 3 bedrooms 3 Professional rooms garage and small garden Price £700 Premium—2 years purchase—No 1094

**DERBYSHIRE**—Old-established PRACTICE capable of great increase Cash receipts last year £740 (increasing) Panel 662 Excellent house 2 reception 4 bedrooms 3 Professional rooms (separate entrance) garage and good garden Premium—Practice and house—£1 700—No 989

**MANCHESTER**—Well-established mixed Panel and Private PRACTICE in pleasant suburb adjacent to housing estate Cash receipts last year £1 050 Panel 950 Nice semi-detached house 2 reception 4 bedrooms garage and garden Premium—1½ years purchase—No 1115

**YORKSHIRE (W R)**—Very old-established Mixed Panel and Private PRACTICE Cash receipts £1 200 p a Panel 900 Scope Good detached house 2 reception 4 bedrooms Professional rooms garage and garden Premium—1½ years purchase or near offer—No 1060

**NORTH WALES**—Seaside Resort—Good-class PRACTICE. Cash receipts over £1 200 Panel 1 425 Welsh not essential Nice house with garage and garden to rent or purchase Good winter climate Premium—£1 700 or near offer—No 929

**LIVERPOOL**—Steadily increasing mixed-class PRACTICE in suburbs Cash receipts last year £750 Panel 650 Excellent detached house 2 reception 6 bedrooms garage and garden Premium—Practice—best offer—No 1036

**WORCESTERSHIRE**—Very old-established Country PRACTICE in beautiful district Cash receipts £500 p a Panel 400 and appointments £60 p a Nearest urban 5 miles Attractive house 3 reception 5½ bedrooms electric light water and garage and garden Good sport Premium—Practice—£1 500—No 1097

**YORKSHIRE (W R)**—Old-established mixed Panel and Private PRACTICE in better working-class and rural district Cash receipts last year £1 186 Panel 1 354 Scope Good house 2 reception 3 bedrooms maid's room 3 Professional rooms (separate entrance) garden with tennis court Rent £45 p a Garage rented Premium—2 years purchase or near offer—No 1122

**NORTH WEST COAST**—Small increasing PRACTICE on outskirts of Seaside resort Cash receipts last year £388 Panel 302 Great scope as district is developing Nice bungalow 2 reception 2 bedrooms garage and small garden Rent £52 p a Premium—£700 or near offer (to include drugs book debts etc)—No 1116

**MANCHESTER—MEDICAL WOMAN'S PRACTICE** in present hands 9 years Cash receipts last year £1 021 Panel 370 Good detached house, 2 reception 3 bedrooms garage and garden Price £1 050 Premium—1½ years purchase—No 1072

**SHROPSHIRE**—Old-established unopposed Country PRACTICE. Cash receipts last year £688 Panel 450 Modern house 2 reception 5 bedrooms, 3 Professional rooms garage and large garden. Electric light. Rent £50 p a Premium—best offer—No 1086

**MANCHESTER**—Sound old established mixed Panel and Private PRACTICE in industrial district. Cash receipts last year £2 200 Panel 2 730 Good bedrooms, 2 Professional rooms Rent £50 p a

1084

**PARTNERSHIP** in sound PRACTICE in residential district Cash receipts about £4 000 p a Panel 2 500 English or Scottish Good house to rent, 1½ share offered on terms to be arranged—No 1045

**CENTRAL WALES**—Very old-established unopposed Country PRACTICE in present hands 13 years. Average cash receipts over £2 000 p a Panel returns about £620 p a and appointment £285 p a Excellent house 2 reception 6 bedrooms 3 Professional rooms electric light garage for 2 cars and beautiful garden Price

£1 500 Premium—Practice—£3 200—No 1068

**NORTH EAST COAST**—Middle-class (non Panel) PRACTICE. Cash receipts £1 100 p a Rent of surgery premises £26 p a Premium—£500—No 1078

**MIDLANDS**—Old-established middle and working class PRACTICE in large town Cash receipts last year £1 011 Panel over 1 100 Scope Excellent modern house 2 reception 4 bedrooms garage and large garden For sale Freehold Premium—Practice—£2 000—No 1123

**LANCS TOWN**—Very old-established mixed-class PRACTICE in present hands 30 years Capable of great increase Cash receipts last year over £600 Panel 620 Practice produced £1 200 some years ago Good house 9 rooms garage and garden Rent £65 p a Premium—best offer—No 1019

old established middle-class PRACTICE in d to sell whole Practice or on half share Cash receipts last year £5 727 Panel 2 110 Premium—Plenty of scope Good house available with garden and garage 2 years purchase—No 1107

old established PRACTICE in small town Good house 2 reception 4 bedrooms 1 Professional room electric light garage and good garden 1½ share offered on terms to be arranged—No 1095

hold All kinds of sport Premium—Practice and house—£2 400—No 1095

**YORKSHIRE**—Old-established PRACTICE in pleasant country town Cash receipts last year £1 080 Panel 500 (producing £330 p a) Scope Excellent house 3 reception 6 bedrooms 3 Professional rooms garage and large garden Good sport and educational facilities Premium—Practice—£1 700—No 1117

**MIDLANDS—MEDICAL WOMAN'S PRACTICE** in large city Cash receipts £645 p a Panel 350 Scope for increase Good house garage and garden to rent Premium—best offer—No 1104

**ASSISTANTS WANTED—OUTDOOR—MIDLANDS** LANCs AND YORKS TOWNS—£400/£500 p a with House and Car allowance INDOOR LANCs YORKs MIDLANDS AND N.E. COAST—£300/£400 p a found Many vacancies Details on request LOCUMS ALSO REQUIRED

All communications to be addressed to the Branch Manager BRITISH MEDICAL BUREAU, 33 CROSS STREET MANCHESTER 2

# BOVRIL MEDICAL AGENCY, LTD.

ALDINE HOUSE,  
10-13 BEDFORD STREET, STRAND, LONDON, W.C.2

Telegrams BOVMEDICAL, LESQUARE, LONDON

Telephone TEMPLE BAR 1616 (3 Lines)

Chairman and Managing Director Dr J FIELD HALL

The maximum commission payable on the sale of any Practice or Partnership in Great Britain placed exclusively in the hands of this Agency is £50 (fifty pounds) which sum covers goodwill drugs, surgery fittings fixtures and furniture, instruments and book debts but not house property. Schedule of Terms will be forwarded on application.

Accountancy and legal services furnished by the Agency where desired at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 NORTHANTS—Old-established mixed-class PRACTICE producing £1,000 p.a. Panel of 1,600. Fees 3 to 10 s. Dent. 4 s. 6 d. with 1 d. current. Fresh 1d for sale or might rent. Premium £1,500.
- 2 ESSEX—ATTRACTIVE COUNTRY DISTRICT—PARTNERSHIP—ONE HALF SHARE (of old-established mixed-class Practice producing £1,200 p.a. with good house. Panel brings in about £1,000 p.a. Good house with 4 bedrooms, etc. Rent £50 p.a. Very reasonable premium for house sale.
- 3 SOUTH CORNISH COAST—Old-established PRACTICE producing £1,500 p.a. Panel of 1,200. Fees 6 to 10 s. Dent. 4 s. 6 d. with 1 d. current. Fresh 1d for sale or might rent. Premium £1,000.
- 4 HOME COUNTIES—RESIDENTIAL TOWN WITHIN 10 MILES OF LONDON—PARTNERSHIP—ONE FOURTH SHARE (with 1/2 share in other 1/2) offered in well-established mixed-class Practice producing £1,500 p.a. Panel of 1,600. Appointments with rent £200 p.a. In a new part must be expected in surgery a d. preferably 1d. Fee a half per cent. Rent £100 p.a. Very reasonable premium for house sale.
- 5 LONDON W.9—City better-class PRACTICE averaging £1,200 p.a. in a residential district. Panel (recently started) about 1,000 but very good scope. Income rent of manor-house £100 p.a. Premium £1,000 or near offer for house sale.
- 6 SCOTTISH HIGHLANDS—Old-established mixed-class Practice producing £1,200 p.a. Panel of 1,600. Fees 3 to 10 s. Dent. 4 s. 6 d. with 1 d. current. Fresh 1d for sale or might rent. Premium £1,000.
- 7 KENT—COUNTRY PRACTICE—Established 40 years a d. d. by vendor. 15 years. Gross cash receipts about £1,000 p.a. Panel brings in about £500 p.a. Appointments about £10 p.a. Low expenses. Good house in a desirable area of ground with 2 reception, 6 bedrooms, etc. Freehold £1,000 or near offer for house sale.
- 8 SOUTH MIDLANDS—PARTNERSHIP—A HALF SHARE in old-established good-class country Practice in beautiful district. Gross cash receipts £1,000 p.a. including panel of about 2,000. Very nice house with garden and garage. Freehold for sale. Very good hunting, shooting and other sports. Premium 2 years purchase.
- 9 SOUTH WEST ENGLAND—FAVOURITE SEASIDE RESORT—Old-established non-dispensing PRACTICE averaging for last 3 years £1,640 p.a. Secured panel of 1,000. Good house with 2 reception, 4 bedrooms, etc. Freehold £1,000. Premium 2 years purchase.
- 10 COUNTRY TOWN WITHIN 15 MILES NORTH OF LONDON—Old-established better-class PRACTICE producing for last 12 months over £2,000 p.a. Panel started of 45. Corner house with reception 5 bedrooms, etc. Garden, garage. Freehold for sale. Sport of all kinds. Good schools. Good house, large d. prospect of vacancy within year or so. Premium 11 years purchase.
- 11 SURREY—Old-established mixed-class PRACTICE in favourite locality which may reach of London. Average gross cash receipts over £1,400 p.a. Panel and clubs bring in about £600 p.a. Choice of houses on rental. Premium 2 years purchase.
- 12 DEVELOPING NORTHERN SUBURB—Well-established PRACTICE producing for last 12 months over £2,000 p.a. including about £600 from panel and 1,400 from clubs. Mod. in 1. Tached house with 2 reception, 4 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 13 WEST COAST—Old-established PRACTICE in residential and holiday resort. Receipts for last 12 months nearly £1,500 p.a. Panel of 1,000. Panel brings in about £500 p.a. Well built house with ample accommodation. Freehold £1,000. Premium 2 years purchase.
- 14 MIDDLESEX—RIVERSIDE SUBURB—PARTNERSHIP—ONE FIFTH SHARE (with increase later) in exceptionally sound mixed-class Practice offering considerable scope. Gross cash receipts approximately £1,500 p.a. Panel of 1,000. Very low expenses. Choice of houses. Premium 2 years purchase, part by arrangement.
- 15 KENT—RESIDENTIAL DISTRICT WITHIN 10 MILES OF LONDON—Mixed-class PRACTICE producing over £500 p.a. including panel of 373. Low expenses. House with reception 4 bedrooms, etc., garden. On rental. Premium £70 or near offer.
- 16 SURREY—RIVERSIDE TOWN—Old-established non-dispensing PRACTICE, averaging for past 3 years £1,400 p.a. Good house with ample accommodation and attractive garden on rental. Good scope for panel if a d. Premium 2 years purchase.
- 17 LONDON—WESTERN DISTRICT—Old-established non-dispensing PRACTICE producing about £500 p.a. but could be increased substantially if panel work was taken. Well situated corner house on main road with 2 reception, 5 bedrooms, etc. Premium £1,000.
- 18 LONDON—WEST END—Better-class non-dispensing non-panel PRACTICE established many years and held by vendor 10 years. Average gross cash receipts for past 3 years £1,500 p.a. Fees from 1 guinea. Premium £1,750 with good introduction.
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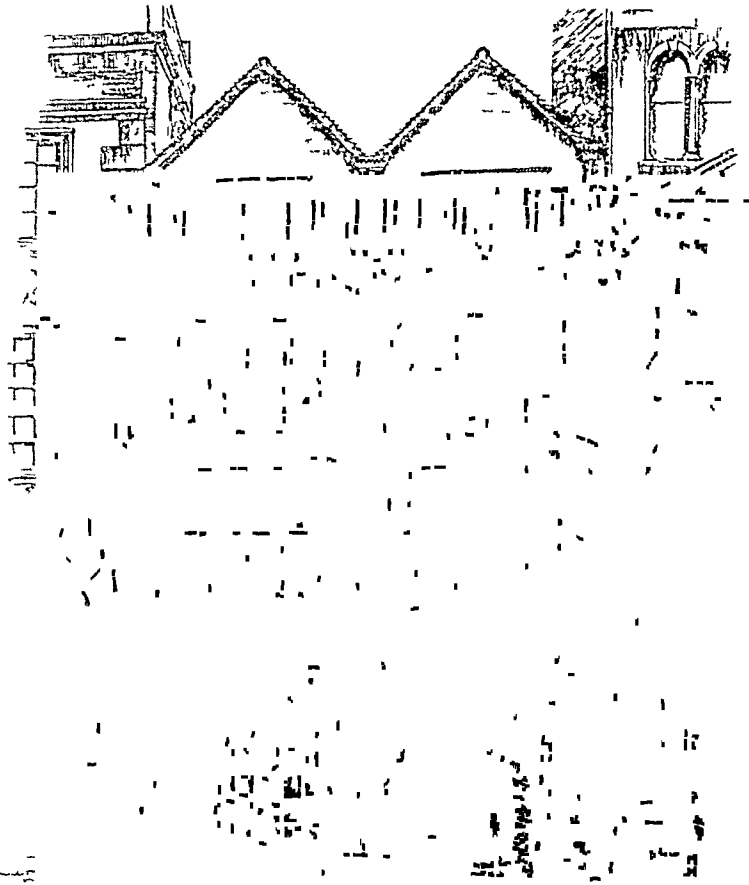
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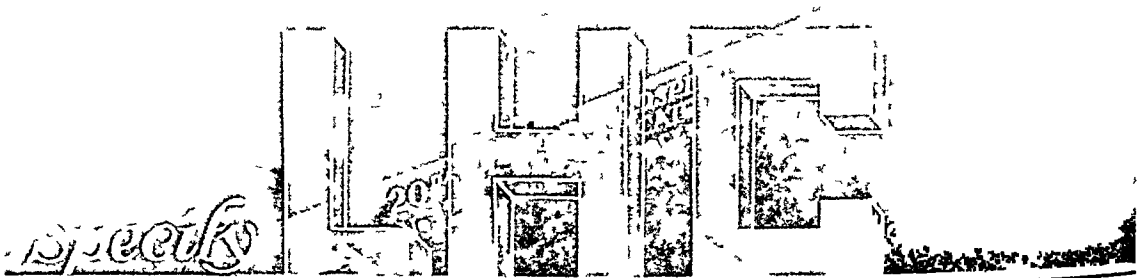


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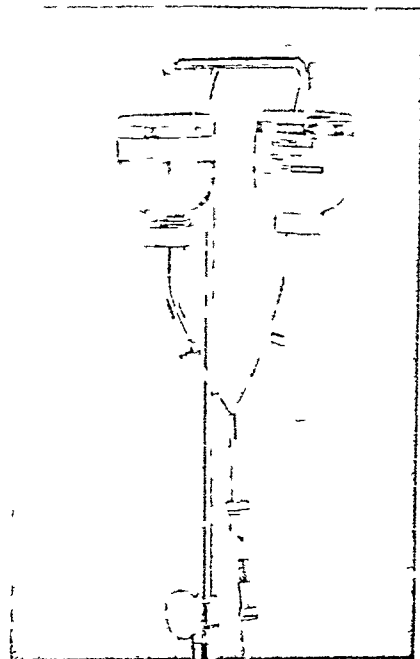
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Made exactly according to the direction of its inventor the late Sampson Gamgee, F.R.S.E., Consulting Surgeon to the Queen's Hospital, Birmingham. Composed of high grade cotton wool enclosed in absorbent gauze.

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10 FOR 6°  
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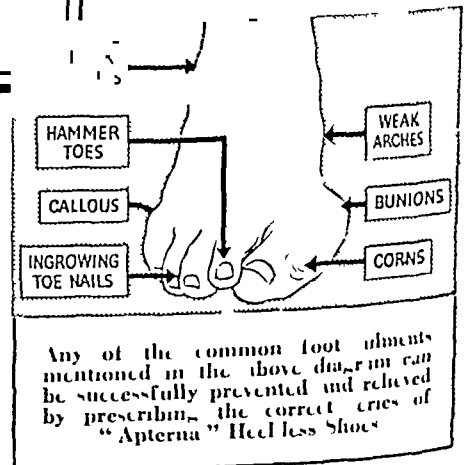
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### By wearing 'APTERNA' HEEL-LESS SHOES

These shoes are designed in the common-sense knowledge that the majority of foot troubles are due in large measure to faulty footwear which aggravates the trouble and does not permit the natural exercise and freedom which is essential to foot health.

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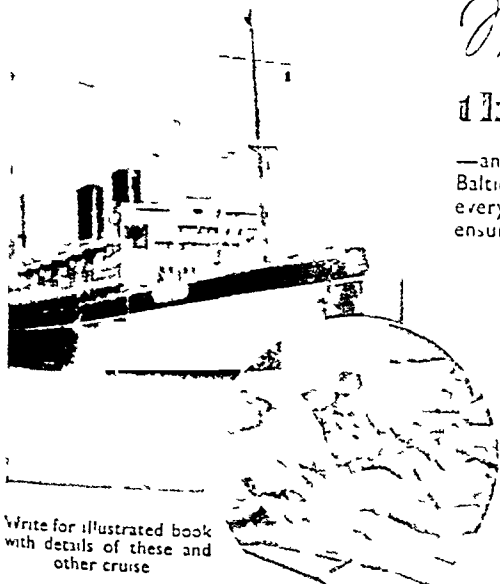


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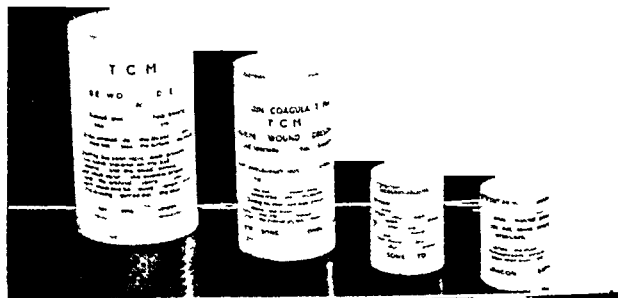
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Some time ago we announced the production of Thrombin-Coagulant-Maw, a preparation of remarkable efficiency for clotting blood

We now offer a range of Surgical Dressings known as Thrombin-Coagulant-Maw Dressings, to which this preparation has been applied with such regard for the scientific principles concerned, both chemical and physiological, that we venture to suggest a new method of treatment has been found



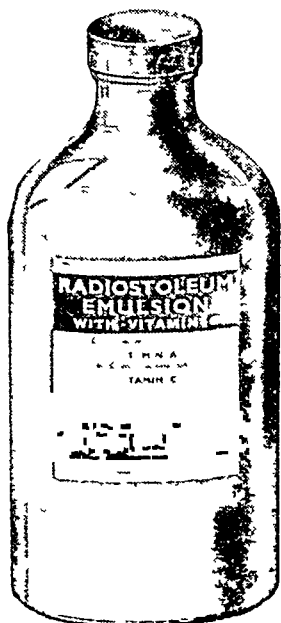
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Whenever a wound is accessible to the application of a Dressing, T C M Dressings will be found of great value in all cases requiring hæmorrhage control. They are very reasonable in price and represent a true economy of your own time and money, whenever hæmorrhage has to be treated

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Radiostoleum Emulsion with Vitamin C provides a satisfactory medium through which to administer Vitamins A, C and D to infants, particularly those which are artificially fed. It is most palatable and mixes readily with the feed or it can easily be given direct from a spoon. Each teaspoonful contains 6000 international units of Vitamin A, 200 international units of Vitamin C and 1200 international units of Vitamin D.

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They are absolutely essential for the maintenance of an adequate state of nutrition. However, not infrequently an apparently minor mineral deficiency may weaken the body's defensive mechanism to such a point that

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IN the Treatment of Weak Babies, in the Gastric and Enteric Troubles of Infants and in the Wasting and Febrile Diseases of Children, the Ease of Assimilation and Power of Valentine's Meat-Juice to Sustain and Strengthen has been Demonstrated in

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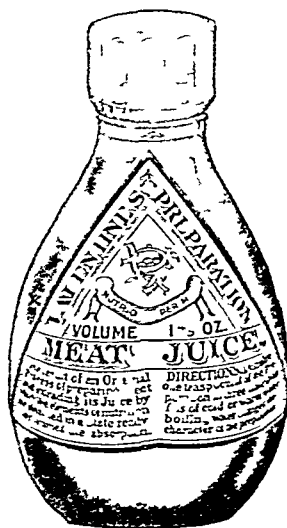
The quickness and power with which Valentine's Meat-Juice acts, the manner in which it adapts itself to and quiets the irritable stomach, its agreeable taste ease of administration and entire assimilation recommend it to physician and patient

Physicians are invited to send for Clinical Reports

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Quick relief may be obtained by the direct administration of 'Endrine' to the nares

'Endrine,' by virtue of its content of natural ephedrine, exerts prompt control which is maintained for several hours

For small children or where the membrane is hyper-sensitive use 'Endrine' Mild (Green label)

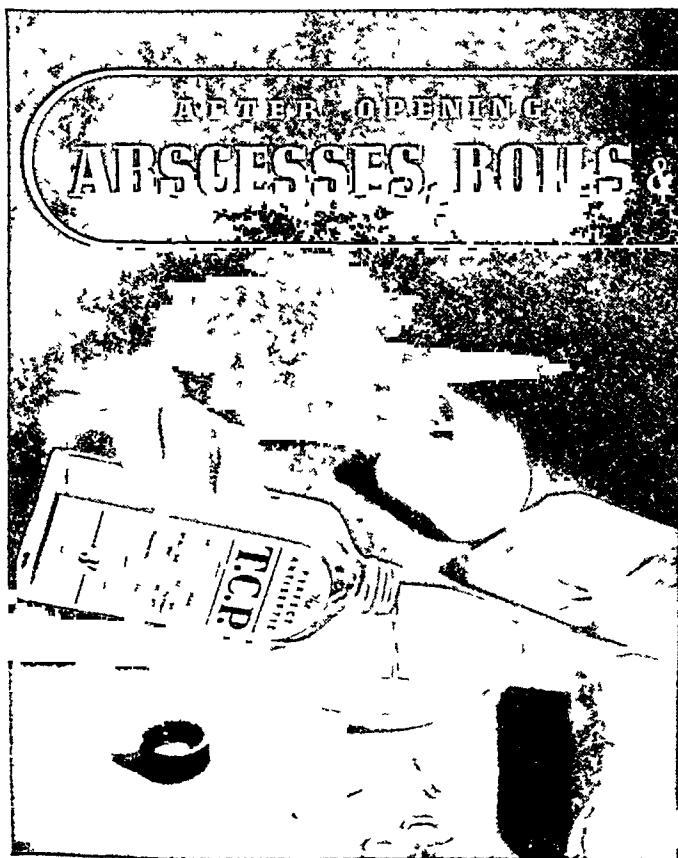
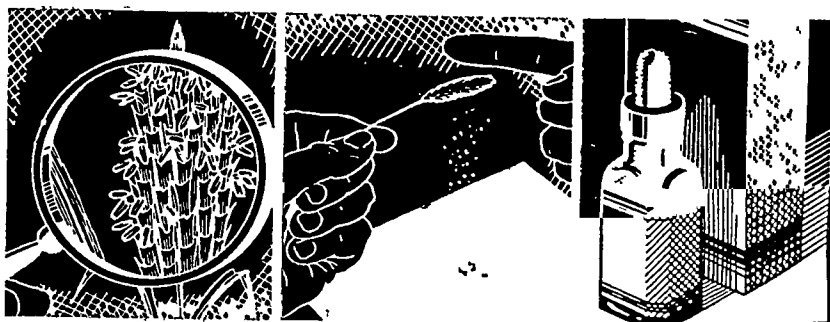
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*because* the risk of subsequent sepsis is thereby eliminated

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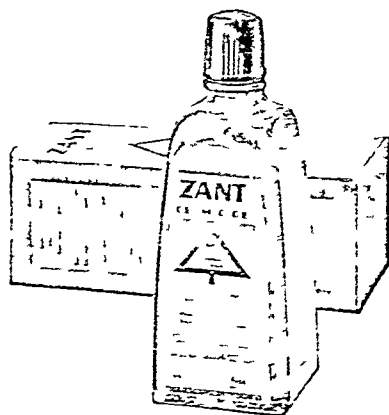
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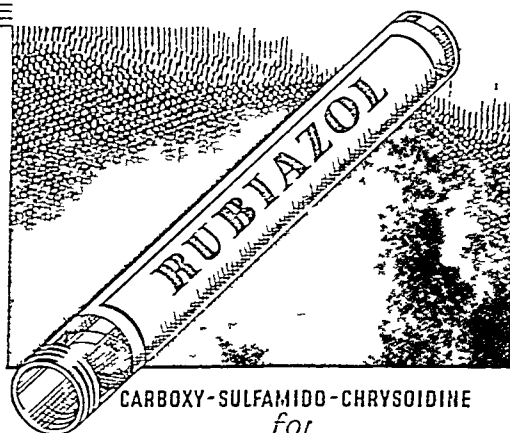
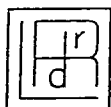
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(Brit Med Journ May 21st 1938, p 1085)

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(Lancet May 7th 1938 p 1045)

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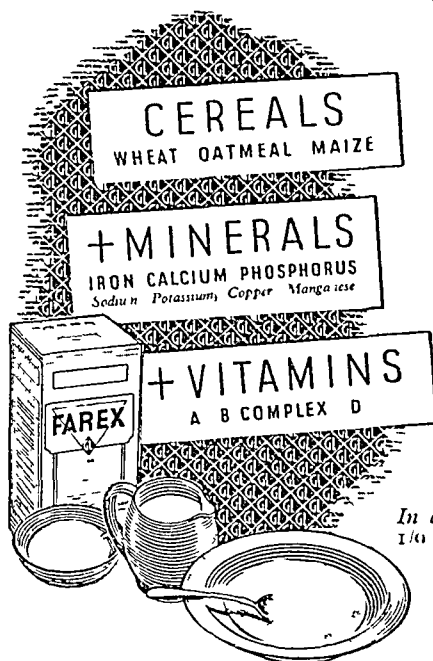
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FOOD FOR ALL NEEDS

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Palatmord No 3211, O S & Co with Pulverette 'Alphidine,' O S & Co  
Pancreatin, gr 5

Equals Iodine, gr  $\frac{1}{2}$

One thrice daily, before meals

One twice daily, between meals, on two or  
three days each week

For full particulars see B M J, Oct 2nd, 1937, p 660

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The hypnosis is easily controlled and the management of the patient is simplified

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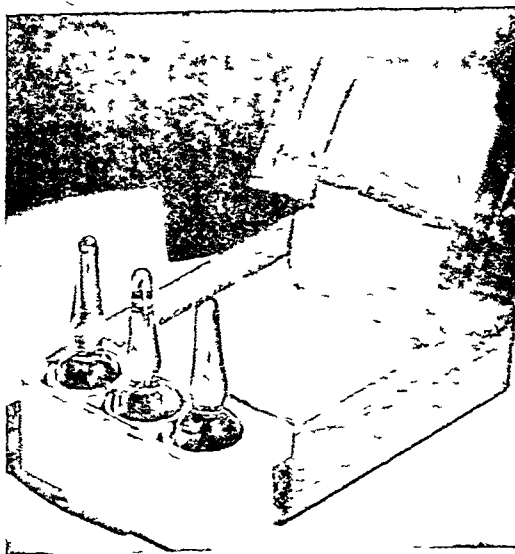
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An initial injection of 2 c.c. followed by 1 c.c. every 14 days produces a maximum response. For maintenance a monthly injection of 2 c.c. suffices

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Infectious gastro-intestinal diseases diarrhoea, dysentery typhus, etc  
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TABLETS - GRANULES - POWDER

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TABLETS AND POWDER

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Alocol is a powerful antacid agent which forms with the stomach contents a colloidal jelly with the power of adsorbing free hydrochloric acid thus fixing it and eliminating it from the system. It has a remarkable soothing effect on the inflamed or irritated gastric mucosa and is therefore rapidly effective in relieving pain. Being non absorbable Alocol is free from any risk of alkalosis.

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*Approved by the Institute of Hygiene and the Diabetic Association*

These beverages have been analysed by the Institute of Hygiene and found "free from sugar and metallic 'contaminants'" The analyses shown have been accepted by the Medical Advisory Council of The Diabetic Association and recommended for diabetic and obese subjects

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Carbohydrates	absent	6.2%	Carbohydrates	absent	9.1%
Protein	absent	absent	Protein	absent	absent
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TRADE MARK  
HEMATIC COMPOUND  
AN IMPROVED IRON THERAPY



3 PLASTULES PLAIN  
ARE EQUIVALENT TO

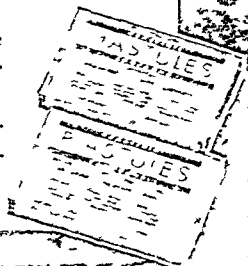
1) Ferrous Capsule  
of Reduced Iron

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1) Ferrous and On half  
of a Capsule of Iron  
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The soluble ferrous salt in 'Plastules' produces maximal results in small doses which obviates the unpleasant effects of the larger doses of ferric compounds. The average case requires only three 'Plastules' Plain daily. 'Plastules' are prepared by combining ferrous iron and vitamins B<sub>1</sub> and B<sub>12</sub> in soluble gelatin capsules. They are available in two types—plain or with

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**The Safest and most Reliable Local  
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**COCAINE FREE  
LOCAL  
ANAESTHETIC**

**THE OLDEST  
AND STILL  
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**For use in all cases of Local and Spinal Anaesthesia.**

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especially when Pyro is a  
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Diseases of the Stomach

(N. 10. 1. D. 12. D. 4. 11)

Undoubtedly a valuable and  
convenient preparation —

— LANCET —

Obviously likely to be of  
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cases of irritative dyspepsia  
with atony of gastric or intes-  
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— BRITISH MEDICAL JOURNAL —

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Half to one drachm diluted

In 10, 22, 40 and 60 oz  
bottles only

Supplied also in Opio  
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INDICATIONS FOR 'SANATOGEN'

No 2

# Disease-emaciation

"EVERY medical practitioner knows how difficult it is to nourish a patient suffering from disease-emaciation. Do we not all recognise the fact that the starving tissues are fed, not by the food swallowed by the patient, but by the amount of nutrient matter absorbed by the gastric and intestinal mucous membrane? If we could ensure the absorption of nutriment into the blood, the problem of nutrition in disease would be reduced to a matter of mere chemistry and mechanical feeding. Judging from clinical results, 'Sanatogen' appears in many cases to possess some power of ready absorbability, without which the richest foodstuff represents simply so much foreign matter in the stomach and intestines. My own experience of 'Sanatogen' is that it stays the diarrhoea—ten or twelve motions a day are thereby reduced to one or two, it stops vomiting, and it improves general conditions and causes the patient to put on flesh."

"NUTRITION IN WASTING DISEASES OF CHILDREN AND ADULTS"  
(*Medical Press and Circular*)

"THIS condition, which results from imperfect digestive or absorptive power, or which may follow stomatitis, pyloric stenosis, deformity of the tongue or palate, tuberculosis or syphilis, is most frequently associated with improper feeding. Fats in such cases are not well tolerated, but the contrary is true with respect to proteids. The use of 'Sanatogen', in these cases, proved so satisfactory that we have been encouraged to try it in other cases of infantile atrophy, and have had almost equally pleasing results in a number of patients suffering from this condition. It is quite apparent that 'Sanatogen' has considerable power in influencing nutrition."

"INFANTILE ATROPHY"  
(*Practitioner*)

"I HAVE before me the records of forty cases fed with 'Sanatogen'. They show, what was obvious to myself and the nurses when watching the cases, that these patients wasted less during the acute stage, and picked up more rapidly during the convalescent stage, than patients who did not have 'Sanatogen'. This fact, indeed, was soon recognised by the ward sister, without my having in any way drawn her attention to it. . . I am firmly convinced that it is a most valuable food for the typhoid patient."

"THE TREATMENT OF TYPHOID FEVER"  
(*Medical Times*)

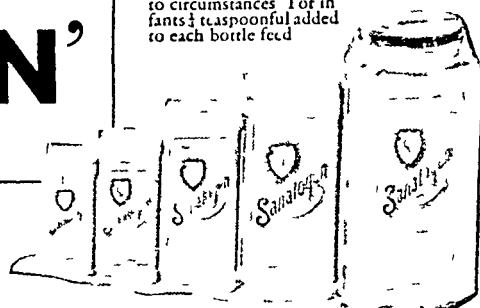
# 'SANATOGEN'

(Trade Mark)

1 Gram of Cream and Sodium Glycophosphate

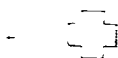
Sold by all chemists  
price 1/- to 1/9

DOSAGE For children and adults two teaspoonsful three times daily or according to circumstances. For infants 1 teaspoonful added to each bottle feed.



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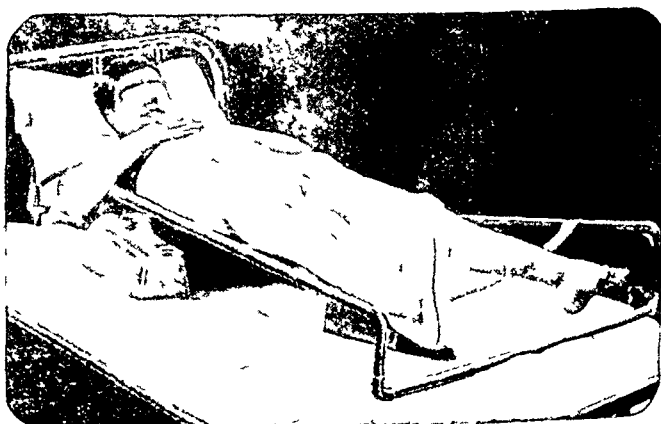


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# BRITISH MEDICAL JOURNAL

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## THE CLINICAL ASPECTS OF THE TRANSMISSION OF THE EFFECTS OF NERVOUS IMPULSES BY ACETYLCHOLINE\*

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### LECTURE I

#### Physiology of Acetylcholine

The brilliant researches by Loewi and Dale and their co-workers since 1921 have built up step by step a firm structure upon which rests the belief that acetylcholine transmits the effects of nervous impulses from the nerve endings to the organs throughout a large part of the body. It is not necessary for the purpose of these lectures to review this evidence for a number of able exhaustive and critical accounts have been published recently (Loewi 1933, Alles 1934, Dale 1934, 1935, 1937, Bacq 1935, Gaddum 1936, Brown 1937 and Cannon and Rosenbluth 1937) but the main conclusions will be briefly recounted.

When a new principle is established that clarifies our understanding of the processes by which the body normally functions and indicates an essential link in the chain of events that lead to the actions of our organs in health clinicians should consider whether this new principle may not throw light on some abnormality of function that is observed in disease for it some deviation from the normal process should occur it may be expected to produce abnormalities of function with accompanying signs or symptoms. Furthermore when in this instance the new physiological principle involves the presence of a chemical substance which has specific and striking effects when administered to the animal body the investigation of its action on human beings in health and disease is clearly indicated in an endeavour to utilize the newly discovered pharmacological effects for cure or alleviation of ill health.

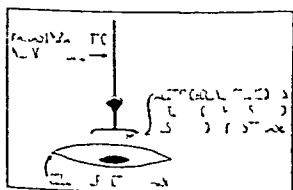


FIG 1

I propose in this first lecture to describe briefly what is now the accepted place of acetylcholine in the normal functioning of the body and the conditions that modify its actions to describe the effects of administering it to

animals under experimental conditions the effects in more detail of administering it to normal human beings and the attempts that have been made to use it for therapeutic purposes.

The transmission by acetylcholine occurs in its simplest form between the nerve endings of the parasympathetic or cranio-sacral portion of the autonomic nervous system and the effector organs supplied by it and Fig 1 shows diagrammatically what is believed to occur. On the arrival of the impulse at the nerve endings acetylcholine is formed and transmits the effect of the nerve impulse to the cell of the effector organ producing in it its physiological action whether that be stimulation or inhibition. Since the effect of such a nerve impulse is short lived it is unlikely that acetylcholine is there previous to the arrival of the impulse and it must be rapidly removed or destroyed following the impulse.

#### ORIGIN OF ACETYLCHOLINE

How the acetylcholine is produced is still uncertain. It may be set free from a preformed compound or it may be synthesized by the arrival of the impulse. Brown (1937) has summarized what is known of its storage and liberation and Mann, Tennenbaum and Quastel (1938) have recently brought forward evidence pointing to the presence in the brains of rats of a precursor which is synthesized during tissue respiration in the presence of glucose which is itself inactive and from which acetylcholine can be set free by denaturing tissue proteins. Their work is suggestive but in the meantime the origin of the acetylcholine set free on the arrival of a nerve impulse must be regarded as unknown.

#### DESTRUCTION BY ESTERASE

The extraordinary evanescence of the action of acetylcholine was noted by Dale (1914) and he suggested that it was rapidly hydrolysed by an esterase. This has been confirmed by a number of workers (Loewi 1921, 1922, Loewi and Navratil 1926, Galehr and Plattner 1927) and the action of the esterase has been carefully studied by Matthes (1930). Its specificity for choline esters was demonstrated by Stedman, Stedman and Easson (1932) and Plattner and Hintner (1930) determined its distribution in the organs and tissues of the body. The choline esterase activity of sera from normal man and from patients has been estimated by Lucas, Hall and Ettinger (1935), Verebely (1926) and McGeorge (1937) but owing to technical difficulties it has not been possible to assess the esterase activity at parasympathetic endings though

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Brucke (1937) has shown that sympathetic ganglia contain considerable amounts of choline esterase. It is therefore probable that, following the arrival of the impulse at the nerve endings, the acetylcholine is produced, transmits the effect of the impulse, and is almost immediately destroyed by the choline esterase present locally in the tissue.

#### ACTION OF PHYSOSTIGMINE

Loewi and his co-workers observed that the rapid hydrolysis of acetylcholine was inhibited by physostigmine (eserine). This inhibition has been studied by Engelhart and Loewi (1930) and by Matthes (1930), who showed that physostigmine could inhibit the action of choline esterase in as low a concentration as one part in 30 millions and that the action is reversible, the esterase activity being restored when the physostigmine is removed by dialysis. Jones and Todd (1935) found that the subcutaneous injection of physostigmine in man depressed the esterase activity of human serum. This action of physostigmine has been of great importance in proving the presence of acetylcholine following stimulation of nerves, for by preventing the rapid destruction of the ester the addition of physostigmine to perfusion fluids has enabled acetylcholine to be identified in the perfusion fluid following nerve stimulation. Further, the addition of physostigmine causes an intensification and prolongation of the effects of acetylcholine, an action which is specific for choline esters and is utilized in the recognition and identification of choline esters or of acetylcholine itself. This action of physostigmine throws light on its established therapeutic uses as a parasympathetic stimulator and is shared by a substance of similar composition, prostigmin, a synthetic compound that has already found an important place in therapeutics.

#### ACTION OF ATROPINE

The effects following injection of acetylcholine into the circulation had an important role in the development of the knowledge of the action of that substance as transmitter of the effects of nervous impulses, and it was noted by Dale (1914) that many of the pharmacological results could be prevented by atropine. Many of the effects of nerve stimulation where acetylcholine is believed to be the transmitter are similarly prevented by atropine, and Loewi and Navratil (1924) showed that even where atropine prevents these effects, as in the frog's heart, it does not prevent the appearance of acetylcholine. Atropine therefore inhibits the effect of acetylcholine on the cell of the

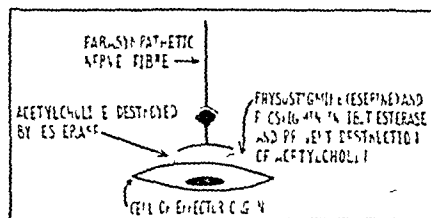


FIG 2

effector organ but not the production of the acetylcholine on the arrival of the impulse at the nerve endings. The actions of physostigmine and of atropine on acetylcholine transmission are shown diagrammatically in Figs 2 and 3.

At certain sites where acetylcholine is believed to be the transmitter atropine, while preventing the effects of injected acetylcholine, does not prevent the effects of nerve stimulation. This lack of uniformity in atropine inhibition has created difficulties in the acceptance of acetylcholine as the transmitter at these places where atropine

fails to inhibit the effects of nerve stimulation. Dale and Gaddum (1930) pointed out that the potentiation by physostigmine of the effect of nerve impulses in these instances undoubtedly indicated transmission by a choline ester, and suggested that "in such cases the nerve impulses liberate acetylcholine so close to the reactive structures that atropine cannot intervene, whereas it can prevent its access to them when it is artificially supplied from without."

At certain other sites of acetylcholine transmission atropine not only fails to prevent the effects of nerve stimulation but fails to inhibit the action of injected acetylcholine. At these situations the association between the

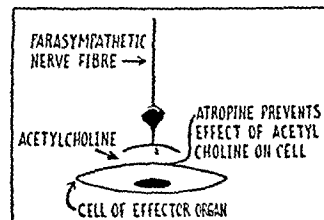


FIG 3

nerve endings and the effector cells may be still more intimate.

The action of atropine in relation to acetylcholine transmission accounts for many of its pharmacological actions and of its therapeutic uses, which are based in most instances on its capacity to inhibit parasympathetic effects.

#### DISTRIBUTION OF CHOLINERGIC NERVES

The nerves whose effects are transmitted by acetylcholine do not belong to any anatomical group, and Dale (1933) has suggested the term 'cholinergic' for their designation, the term 'adrenergic' being applied to the nerves whose effects are transmitted by adrenaline or some other chemical substance closely allied to adrenaline.

The cholinergic nerves may be subdivided into those whose action resembles the effects of the administration of muscarine, and those whose action resembles the effects of nicotine. In most instances the muscarine-like transmissions can be prevented by atropine, while in no instance is the nicotine-like transmission prevented by atropine, but the important distinctions between the two types of transmission are found in the latent period, duration and localization of response, and potentiation by physostigmine. In the muscarine-like transmission the latent period is longer, the duration of the effect is longer, the effect is less strictly localized, and physostigmine produces constantly an increase in the magnitude and duration of the response.

As the result of experiments on mammals, the cholinergic nerves with a muscarine type of transmission are found to include the postganglionic fibres of the parasympathetic or cranio-sacral autonomic system. The following actions belong to this group:

- (a) Constriction of the pupil by oculomotor fibres
- (b) Salivation by the chorda tympani
- (c) Cardiac inhibition by the vagus
- (d) Bronchial constriction by the vagus
- (e) Increased tone and contraction of oesophagus, stomach, small intestine, colon, and rectum by the vagus and the sacral outflow
- (f) Contraction of the bladder by the sacral outflow and pelvic nerves
- (g) Slight contraction of the uterus by the sacral outflow and pelvic nerves.

(n) Vasodilatation through the chorda tympani and (in some animals) in the distribution of the vagus

(i) Vasodilatation in the external genital organ by its sacral outflow and nervi erigentes

Of these constriction of the pupil stimulation of the salivary glands cardiac inhibition and bronchial constriction are inhibited by atropine. There is still doubt as to the effect of atropine on the nervous impulses to the stomach but the action on the intestines bladder and uterus and the vasodilator effects of the chorda tympani and nervi erigentes are not inhibited by atropine.

Other cholinergic nerves with a muscarine type of transmission are

(j) The post ganglionic sympathetic fibres to the sweat glands

(k) Sympathetic vasodilators to the muscles

In both of these the effects of nerve stimulation are abolished by atropine.

(l) The antidromic vasodilator impulses conveyed by sensory nerves to the cutaneous vessels are cholinergic but are not inhibited by atropine.

In view of the vasodilator effect of choline esters when administered by injection producing generalized vascular dilatation involving the vessels of the skin muscles kidneys lungs liver and brain it is probable as Brown (1937) suggests that vasodilators throughout the body are cholinergic.

The cholinergic nerves with nicotine like transmission are

(i) All preganglionic fibres acetylcholine acting as the transmitter at ganglionic synapses both in the parasympathetic and in the sympathetic autonomic system

(ii) The motor nerves to the skeletal muscles acetylcholine being the transmitter at the neuromuscular junction

For technical reasons it has not been possible to demonstrate the production of acetylcholine at the ganglionic synapses of the parasympathetic system where the ganglia are situated close to the effector organ and the post ganglionic fibres are short but there is evidence from the regeneration experiments of Langley and Anderson (1904) indicating that transmission at these ganglia is the same as at the sympathetic ganglia. Embryologically the medulla of the adrenal body is analogous to sympathetic ganglia and stimulation of the sympathetic fibres to the adrenal body with the resulting secretion of adrenaline has been shown to be accompanied by the production of acetylcholine.

(iii) The nerves to the adrenal medulla are thus similar to preganglionic sympathetic fibres and are cholinergic and of the nicotine type.

All neurones leaving the central nervous system are thus seen to be cholinergic and the only effector peripheral nerves that are not cholinergic are the post-ganglionic fibres of the sympathetic system. But the post ganglionic sympathetic fibres to the sweat glands and the post ganglionic sympathetic vasodilator fibres to muscles are cholinergic and in addition the antidromic vasodilator impulses through sensory nerves to the cutaneous vessels of the limbs are cholinergic.

The diagram published by Dale (1934) illustrates concisely this distribution of cholinergic fibres.

## Pharmacology of Acetylcholine

The effects of acetylcholine when administered to animals under experimental conditions afforded valuable evidence that suggested the possibility of this substance acting as a chemical transmitter and strongly supported the part played by it in physiological processes. Hunt and Taveau (1906) observed its prompt depressor effects. Dale (1914) studied its actions in cats anaesthetized or with the brain destroyed and found that while very small doses (0.0001 mg) by intravenous injection produced a fall of blood pressure through vasodilatation larger doses (0.01 mg) caused a slowing of the heart followed by poisoning. It stimulated contraction of the unstriated muscle of the digestive tract caused the bladder to contract constricted the bronchioles produced miosis and increased the flow of tears saliva and pancreatic juice. It also produced sweating on the pads of the cats' foot. All these actions could be prevented or diminished by atropine.

### MUSCARINE LIKE AND NICOTINE LIKE ACTIONS

Following the administration of atropine larger doses of acetylcholine produced a pressor effect. Dale stressed this dual action pointing out that the effects of smaller doses which could be inhibited by atropine resembled those of muscarine and that the effects of larger doses following the inhibition by atropine of these muscarine like actions resembled those of nicotine. With the exception of the peripheral vasodilatation and the sweating the muscarine like effects imitated closely those produced by stimulation of the cranio sacral or parasympathetic division of the autonomic nervous system.

Dale tried administration by subcutaneous injection. He found that a dose of 10 mg had no effect but that following 20 mg in a smaller cat weighing 2 kg slowing of the heart an increased flow of tears and of saliva sweating retching borborygmi and the exudation of slime from the anus laboured respiration erection of the penis and the passage of urine occurred.

Further studies of the pharmacological effects of acetylcholine have confirmed these generalizations and its actions in mammals under experimental conditions include constriction of the pupil (Lipschutz and Schilt 1931) and under certain conditions a fall in intra ocular pressure (Colle, Duke Elder and Duke Elder 1931) lacrimation salivation constriction of bronchioles increased bronchial secretion (Schilt 1932) increased depth and frequency of respirations (Gaddum 1936) inhibition of the heart, increased tone and peristalsis of oesophagus stomach small intestine and colon secretion of gastric juice (Gebhardt and Klein 1933) contraction of the gall bladder and relaxation of Oddi's sphincter (Kitakoji 1931) increased secretion of pancreatic juice contraction of the capsule of the spleen (Saad 1935) contraction of the urinary bladder feeble contraction of the uterus (Murakami 1931) vasodilatation in organs supplied by the parasympathetic nervous system generalized vasodilatation of the cutaneous arterioles including those of the limbs and the surface of the brain (Wolff 1929) and sweating. All these effects are inhibited by atropine. With larger doses and unaffected by atropine it has a pressor and cardio-accelerator effect through stimulation of the ganglia of the sympathetic nervous system and the adrenal glands and it stimulates contraction of striped voluntary muscle fibres.

The effects following subcutaneous injection are uncertain and variable and those following intravenous or



intra-arterial injection are remarkably evanescent owing to the rapid hydrolysis of acetylcholine by the choline esterase present in the blood and in the tissues. Physostigmine, by inhibiting this destruction by the esterase, can greatly increase and prolong all these effects.

### Actions of Acetylcholine in Man

In 1916, at the suggestion of Sir Henry Dale and with the assistance of R. M. Wilson, I began studies on the action of acetylcholine chloride in man, but we were unable to complete them at that time owing to the requirements of military service. We found, however, that when given by subcutaneous injection there were no apparent effects, and that even when introduced intravenously no effect was obtained if blood from the vein was allowed to flow back into the syringe. These results were probably due to the rapid destruction of the acetylcholine by choline esterase.

Villaret and Justin-Besançon (1928) were the first to report the action of acetylcholine in man. They found that it had no action when given orally, and considered that it was dangerous when given intravenously. On subcutaneous injection in doses of 0.01 to 0.05 gramme no subjective phenomena occurred, but they were able to observe a dilatation of the retinal arteries. Larger doses—0.2 to 0.4 gramme—produced a sensation of warmth and sometimes a slight and transient fall in blood pressure and slight bradycardia. As noted by Hunt and Taveau (1906) and by Dale (1914) in animals, so it was noted by Villaret and Justin-Besançon in man that there was considerable variation in the intensity of effects in different subjects and at different times in the same subject. In view of the pronounced action of small intravenous doses in animals and the relatively large doses employed by Villaret, it is probable that only a trifling amount escaped destruction at the site of injection or in the blood stream and reached the organs of the body.

In 1932 Ellis and Weiss reported the effects in normal subjects of the administration of a 2 per cent solution by intravenous and intra-arterial infusion. When given intravenously at the rate of 0.02 to 0.14 gramme per minute, flushing of the head and upper part of the body, throbbing in the head, palpitation, sweating, salivation, lacrimation, substernal constriction, nausea, and vomiting were observed. They found practically no effect on the heart rate, and only three out of thirteen subjects showed an appreciable fall in blood pressure. The intra-arterial infusion in four subjects produced flushing, sweating, heat, and increased arterial pulsation distal to the site of injection. In the same year Loeper, Lemaire, and Dany (1932) reported that they obtained contractions of the gall-bladder in dogs, and that, following the intravenous injection of 0.05 to 0.01 gramme in six human subjects, there was an increased flow of bile into the duodenum.

In 1933 E. A. Carmichael and I recorded the results of intravenous injection of acetylcholine in forty-six subjects. Doses of 0.01 to 0.03 gramme produced cardio-inhibitory effects, which appeared five to ten seconds after the injection and lasted for a few seconds only. The slowing of the heart was followed by a rise of rate above the original level: the systolic and the diastolic blood-pressure fell during the phase of slow heart rate, but returned to their original level or a little higher during the phase of rapid heart rate. A feeling of warmth throughout the body, flushing of the face, neck, and upper thorax, coughing, and a sense of obstruction to respiration occurred, but they varied in incidence and intensity in different subjects.

All these effects could be abolished by atropine and be intensified and prolonged by physostigmine. By intra-arterial injection we obtained flushing of the skin twenty seconds later in the area corresponding to the territory supplied by the artery, but we could observe no effect from subcutaneous or intramuscular injection in doses up to 0.5 gramme.

From these results and those obtained by Ellis and Weiss (1932) by continued infusion it appears that the muscarine-like effects noted in animals under experimental conditions can be obtained in man. There was, however, no evidence of the nicotine-like actions, and, although carefully looked for, no evidence of constriction of the pupil with the doses employed.

Of interest in relation to the nicotine-like effects on voluntary muscle in animals is the observation of Lanari (1936) that when 0.04 gramme of acetylcholine was given by intra-arterial injection there was no apparent effect on the muscles in normal subjects, but that slight contractions were seen in the muscles of the injected limb in cases of nerve section, strong contractions in pyramidal rigidity, moderate contractions in pyramidal lesions with flaccidity, and slight twitches only in extrapyramidal lesions and myopathies. He later (1937) described muscular contractions in cases of myotonia, with the same method of administration.

There seems to be no doubt that effects can be obtained by subcutaneous or intramuscular injection, but these methods of administration are unreliable. Villaret, Schiff-Wertheimer, and Justin-Besançon (1928) reported that they obtained in eleven of twenty-five subjects undoubted dilatation of the retinal arteries four to six minutes after the subcutaneous injection of 0.05 to 0.15 gramme. The effect lasted for six to nine minutes. Lemaire and Bioy (1934), following the subcutaneous injection of 0.2 gramme, observed a rise of pressure in the cerebrospinal fluid, due possibly to dilatation of the cerebral vessels. The rise lasted for fifteen to twenty minutes, but often failed to appear. This observation is of interest in connexion with the results obtained by Wolff (1929) in cats. He gave 0.02 to 0.2 mg intravenously to four cats prepared by trephining so that the cerebral vessels could be observed through a window. Accompanying a fall in systemic blood pressure, an increase in the diameter of the pial vessels was observed and a rise in the pressure of the cerebrospinal fluid which he considered was due to the increased size of the cerebral vessels. Merklen, Warter, and Kabaker (1932) studied the effect on gastric secretion of the subcutaneous injection of 0.2 gramme, and considered that a rise in hydrochloric acid and total acidity resulted in subjects with normal or low acidity, but that there was a fall in subjects with high acidity. Faroy and Deron (1931), using similar doses by intramuscular injection, found no rise in the hydrochloric acid content in normal subjects, but in some cases a fall.

### Acetylcholine in Therapeutics

In spite of its uncertainty when injected subcutaneously or intramuscularly, acetylcholine administered by these routes has been extensively employed for the purpose of obtaining either parasympathetic or vasodilator effects in patients. With the possible exception of its use by subconjunctival injection in spasm or embolism of the retinal arteries and in chronic glaucoma, the results have been unsatisfactory, either no effects being produced or there being so much uncertainty that other methods of obtaining them are preferable. It has usually been administered as

the chloride or bromide of acetylcholine dissolved immediately before use or stabilized in acid solution as it decomposes rapidly in alkaline solution

#### GASTRO-INTESTINAL

Abel (1933) gave 0.1 gramme by intramuscular injection hourly for six hours to fifty patients after laparotomy, starting thirty-six hours after operation until flatus or faeces were passed and concluded that such treatment appears to be almost specific in curing paralytic ileus. Heritage (1933) reported good results in similar conditions and Heitz (1929) extremely good results in lead colic. Gebhardt and Klein (1933) gave 0.1 gramme by subcutaneous injection to fifty patients with subacidity of gastric secretion or anacidity in single doses or in series of small daily doses and found an increase in acidity in a small number. He concluded that it had no true therapeutic value.

#### VASODILATOR

Numerous authors have found that in hypertension acetylcholine might cause a fall of blood pressure in doses of 0.1 to 0.2 gramme by subcutaneous or intramuscular injection but that the effect was temporary and that it had no therapeutic value in this condition. In vasospastic conditions arterial disease with pain or trophic lesions such as Raynaud's syndrome, intermittent claudication and trophic ulcers and in varicose ulcers several authors have reported that it caused a diminution of pain and early healing but their papers are not convincing. Siclounoff (1934) thought its employment deserved consideration in cerebral thrombosis to hasten recovery and de Gennes (1932), Pagniez, Plichet and Decourt (1932), Louyot (1933) and McLaughlin (1933) were of the opinion that daily doses of 0.1 to 0.3 gramme by subcutaneous injection in epileptics lessened the severity or number of attacks. Janet, Vallery Radot, and Huguet (1932) reported great improvement in two cases of acrodynia following five or six injections of 0.05 gramme at intervals of up to two days. Guns and Coene (1929) and Angelescu (1932) used it in ozaena irrigating the nasal passages with a 5 or 10 per cent solution after rendering the passages acid by previous washing with a 1 to 2 per cent solution of lactic acid; they regarded the results as hopeful.

#### IN OPHTHALMOLOGY

A more promising field for acetylcholine in therapeutics is in the treatment of congestive glaucoma and in spastic or obstructive conditions of the retinal vessels. If given by subconjunctival injection a local effect—miosis and lowering of intra-ocular tension—is obtained in chronic glaucoma and Villaret and his co-workers have stressed the vasodilatation of the retinal vessels that follows subcutaneous or intramuscular injection. Velhagen (1932) showed in cats that acetylcholine is present in the visual tract and the retina and that in glaucoma it constricts the pupil, dilates the retinal vessels, and lowers the tension. Gallois (1930) reported that following six injections of 0.1 gramme in a case of chronic glaucoma progressing unfavourably there was an improvement in the field of vision and a fall in tension. In this country Evans and Evans (1934) treated six cases of congestive glaucoma by means of subconjunctival and intramuscular injections and recorded a fall of intra-ocular tension without change in the systemic blood pressure. The chief defect in this method of treatment they point out is the evanescence of the action. Dejean (1932) recommended the use of 0.1 gramme by subcutaneous injection in ophthalmic migraine and de Saint Martin (1931) con-

sidered that similar doses gave relief in various spastic conditions of the retinal arteries. Villard, Dejean and Temple (1932) obtained a prompt return of vision in one of three cases of thrombosis of the central artery of the retina. Hartmann (1933) gave repeated intramuscular injections of 0.1 gramme in various arterial lesions with visual defects obtaining favourable results and Orr and Yeung (1935) by subconjunctival injections obtained a rapid return of vision in a case of embolism of the central artery of the retina and the embolus was observed to move towards the periphery. Duggan (1937a) treated two cases of acute retrobulbar neuritis with repeated doses of 0.1 gramme intramuscularly and considered that the vision returned more rapidly than in eight similar cases treated with amyl nitrite or intravenous injections of sodium nitrite. Hartmann (1933) believed acetylcholine to be the best therapeutic agent in tobacco amblyopia when given by the intramuscular route. Orr (1936) reported good results from the same method and Cragg (1936) concluded that it hastened recovery but Duggan (1937b) who used intravenous injections found it of doubtful value.

These results of the administration of acetylcholine to man by intra-arterial, intravenous, intramuscular, or subcutaneous injection whether in normal subjects or in patients are disappointing from the therapeutic point of view. When it is given by intravenous injection the effects are too brief when given by intramuscular or subcutaneous injection too uncertain. They are however of importance as indicating the nature of the actions that can be obtained and pointing to possible therapeutic uses of the principle of acetylcholine transmission if more stable substances with the same or similar actions should be available. A number of other esters of choline and its derivatives were studied by Hunt and Taveau and by Dale and since the publication of their researches many more have been prepared and tested. Of these only two have come into general use for therapeutic purposes—carbaminoyl-choline and acetyl  $\beta$  methyl choline—and their actions and therapeutic uses will be discussed in the next lecture.

#### REFERENCES

- Abel A. L. (1933) *Lancet* 2, 12-7.  
 Alles G. A. (1934) *Physiol. Rev.* 14, 276.  
 Angelescu G. (1932) *Ann. Oto-laryng.* p. 669.  
 Bacq Z. M. (1935) *Ergebn. Physiol.* 37, 32.  
 Brown G. L. (1937) *Physiol. Rev.* 17, 435.  
 Brucke F. T. von (1937) *J. Physiol.* 89, 429.  
 Cannon W. B. and Rosenbluth A. (1937) *Autonomic Neuro-Ejector Systems*. New York.  
 Carmichael A. E. and Fraser F. R. (1935) *Heart* 18, 263.  
 Collie J. Duke Elder P. M. and Duke Elder W. S. (1931) *J. Physiol.* 71, 1.  
 Craig B. H. (1936) *Bristol med.-chir. J.* 53, 237.  
 Dale H. H. (1914) *J. Pharmacol.* 6, 1-7.  
 — (1935) *J. Physiol.* 80, 10 (Proc.).  
 — (1934) *British Medical Journal* 1, 835.  
 — (1935) *Sammlung der Vorträge Stifterung* Heft 4 Berlin and Vienna.  
 — (1937) *Harvey Lectures* 32, 229 New York.  
 — and Gaddum J. H. (1930) *J. Physiol.* 70, 109.  
 de Gennes L. (1932) *Bull. Mem. Soc. med. Hop. Paris* 48, 394.  
 Dejean C. (1932) *Presse med.* 40, 190.  
 de Saint Martin (1931) *Ann. Oculist.* 168, 102.  
 Duggan W. F. (1937a) *Arch. Ophthal.* Chicago 17, 579.  
 — (1937b) *J. Amer. med. Ass.* 109, 1547.  
 Ellis L. B. and Weiss S. (1932) *J. Pharmacol.* 4, 235.  
 Engelhart E. and Loevis O. (1930) *Arch. exp. Pat. Pharmacol.* 150, 1.  
 Evans J. J. and Evans P. J. (1934) *Trans. ophthal. Soc.* 5, 527.  
 Faroy G. and Deror. R. (1931) *Arch. Mal. Appur. dig.* 21, 777.  
 Gaddum J. H. (1936) *Gefässerweiternde Stoffe der Gewebe* Leipzig.  
 Galhr O. and Plattner F. (1927) *Pflüg. Arch. ges. Physiol.* 218, 338.  
 Gallois J. (1930) *Bull. Soc. Ophthal. Paris* p. 311.  
 Gebhardt F. and Klein J. (1933) *Klin. Wschr.* 12, 335.

- Guns, P., and Coene, R. (1929) *Ann Malad Oreille* 48, 414  
 Hartmann, E. (1933) *Bull Soc ophtal Paris* p 414  
 Heitz, J. (1929) *Arch Mal Cam* 22 383  
 Hentige, K. (1933) *Lancet* 2, 1258  
 Hunt R., and Traver, R. de M. (1906) *British Medical Journal*, 2, 1788  
 Janet, H., Valley Radot, P., and Huguet, S. (1932) *Bull Soc Pédiat Paris* 30, 644  
 Jones, M. S., and Todd, H. (1935) *Biochem J* 29, 2242  
 Kitakoji, Y. (1931) Quoted in *Ber ges Physiol* 63, 58  
 Lanari, A. (1936) *C R Soc Biol Paris*, 123, 1090  
 — (1937) *Ibid*, 125 546  
 Langley, J. N., and Anderson, H. K. (1904) *J Physiol* 30, 439, 31, 365  
 Lemaire, A., and Bioy, E. (1934) *Progr med Paris*, p 1871  
 Lipschutz, H. and Schiff, E. (1931) *Arch exp Path Pharmacol*, 162, 617  
 Loeper, M., Lemaire, A., and Dany (1932) *Bull Mem Soc med Hop Paris* 48, 943  
 Loewi, O. (1921) *Pflug Arch ges Physiol*, 189, 239  
 — (1922) *Ibid* 193, 201  
 — (1933) *Harvey Lectures* p 218, New York  
 — and Navratil, E. (1924) *Pflug Arch ges Physiol*, 206, 123  
 — (1926) *Ibid* 214 678  
 Louyot, P. (1933) *Rev méd Est* 61 258  
 Lucas, C. C. Hall, G. E., and Ettinger, G. H. (1935) *J Pharmacol* 54 151  
 McGeorge, M. (1937) *Lancet* 1, 69  
 McLoughlin, F. L. (1933) *British Medical Journal* 1, 997  
 Minn, P. J. G., Tannenbaum, M., and Quistel, J. H. (1938) *Biochem J* 32, 243  
 Mitthes, K. (1930) *J Physiol* 70, 338  
 Merklen, P., Warter, J., and Kibiker, J. (1932) *C R Soc Biol Paris*, 111, 213  
 Murakami, K. (1931) Quoted in *Ber ges Physiol* 61, 58  
 Orr, H. C. (1936) *British Medical Journal* 2 69  
 — and Young J. H. (1935) *Ibid* 1 1119  
 Pagniez, P., Pichet, A., and Decourt P. (1932) *J Med Paris* 52, 872  
 Plattner F. and Hintner, H. (1930) *Pflug Arch ges Physiol*, 225, 19  
 Said, K. (1935) *Quart J Pharmacy* 8 31  
 Schiff, E. (1932) *Arch exp Path Pharmacol* 166, 22  
 Scicloudoff F. (1934) *Presse med* 42 1140  
 Stedman Edgar, Stedman, Ellen, and Ersson, L. H. (1932) *Biochem J* 26, 2056  
 Vahlagen, K. (1932) *Arch Augenheilk* 105 573  
 Verebely T. von (1936) *Klin Wschr* 15 11  
 Villard, H., Dejean, C., and Temple, J. (1932) *Arch Ophtal* 49, 72  
 Villard M. and Justin Besançon, L. (1928) *Presse med* 36 673  
 — Schiff-Wertheimer and Justin Besançon, L. (1928) *C R Soc Biol Paris*, 98 909  
 Wolff, H. G. (1929) *Arch Neurol Psychiat Chicago*, 22, 686

In the Chemistry Section at the Cambridge Meeting of the British Association, August 17-28, the president, Professor C. S. Gibson, will review the recent advances that have been made, chiefly by himself and his co-workers, in the chemistry of gold. This opening address will be followed by a discussion on recent advances in the organic chemistry of the metals with special reference to the noble metals. A discussion on modern methods of chemical analysis, including physical and microchemical methods, will be opened by Dr. J. J. Fox, Chief Government Chemist and Professor W. L. Bragg will open a discussion on "Chrys". The fourth symposium, entitled "Repercussions of Synthetic Organic Chemistry on Biology and Medicine," which has an added interest in view of the exceptional circumstance that the Physiological Section will not meet this year, is being arranged by Professors E. C. Dodds and J. W. Cook. Recent work on the production of new compounds having the biological action of the sex hormones will be described by Professor Dodds and Professor L. Ruzicka (Zurich), and Dr. A. S. Parkes will deal with some of their interesting biological interrelationships. The second half of the programme will be occupied with descriptions of synthetic compounds which are able to induce cancer (Professor J. W. Cook) or new compounds having the physiological action of the life maintenance hormone of the adrenal cortex (Professor T. Reichstein Zurich) and of the synthesis of vitamin B<sub>1</sub> and analogous compounds (Dr. A. R. Todd). Specimens and apparatus relating to these discussions will be on exhibition throughout the meeting. By invitation of Sir William Pope a visit will be made to the University Chemical Laboratories and Sir F. Gowland Hopkins has invited the section to visit the departments of biochemistry and biology, and the Moltano Institute.

## SURGICAL TREATMENT OF DISSEMINATED SCLEROSIS BY SYMPATHECTOMY AND GANGLIONECTOMY

### TECHNIQUE BY THE ANTERIOR APPROACH

BY

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Nothing is more discouraging to the neurologist than the treatment of disseminated sclerosis. The task is made difficult on account of ignorance of the true aetiology of the disease. The correct evaluation of any therapeutic measure is complicated by the irregularity of the symptoms of the disease, with its frequent spontaneous remissions and uncertainty of objective findings. Among the various theories of the aetiology of disseminated sclerosis the vascular hypothesis appears to be the most logical. Putnam (1933, 1931-6, 1937), in his admirable studies, has shown that the histological characteristics of the disease may be closely imitated experimentally by a number of different procedures, all of which have in common an interference with the blood supply of the affected area. These facts, according to this author, give a new importance to the vascular abnormalities which have long been recognized as a characteristic of sclerotic plaques. Putnam further states that if the specific lesion is produced by a simple mechanical interference with the blood supply it is superfluous to postulate a specific demyelinating organism, virus, or toxin to account for such lesions, and that the ultimate aetiological factor should probably be sought in a local vascular abnormality.

### The Vascular Hypothesis

Our procedure is based on the assumption that the hypothesis of Putnam is probably correct. In this we are in agreement with Wetherell (1934, 1935) and Royle (1933), who were able to show the practical application of this theory. We consider that the pathological changes in disseminated sclerosis are attributable to an ischaemic phenomenon resulting possibly from a spasm of the blood vessel supplying the parenchyma of the brain and spinal cord. Our aim, therefore, is to institute a procedure which would tend to lessen the alleged vascular contraction, thus allowing a better blood supply to the involved areas. There is but little doubt that this procedure can in no way remedy the complete damage to the nerve cells and their axons, but it is quite conceivable that the improved vascularization may re-establish some of the functions of partially damaged tissue. That this is possible is best demonstrated by the course of the disease itself. Frequent remissions and sometimes total disappearance of symptoms lead us to believe that in many cases the destruction of the nerve cells is in no sense final, and that when they are placed in more advantageous conditions their function may be regained.

The theoretical aspects of this procedure may be summarized as follows. Vascularization of the brain and the spinal cord depends entirely on the carotids and vertebral arteries. These are innervated by the sympathetic nervous

system through the stellate ganglion and the vertebral nerve. Fig 1 shows in a schematic way the structural relations concerned. As may be seen should a vascular spasm be present it would find its responsible nervous factor in either the stellate ganglion or the vertebral nerve or in both.

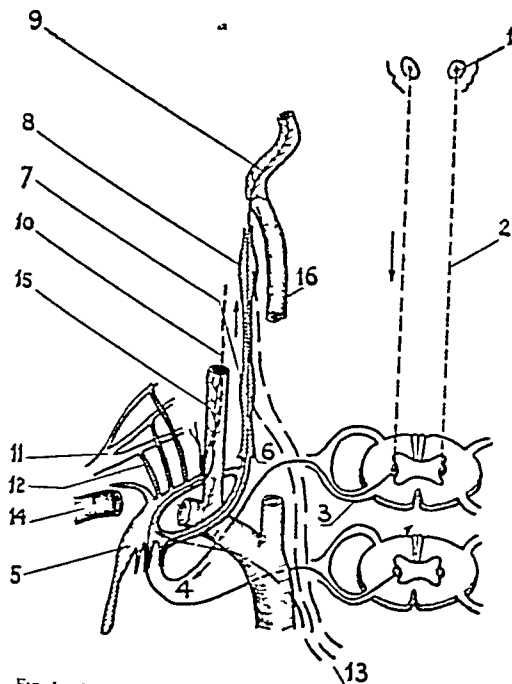


FIG 1—Stellate ganglion and vertebral nerve in their relation to the carotid and vertebral arteries (schematic figure).  
1 Hypothalamus with vasomotor centre 2 Intramedullary vasomotor tract 3 Radix medulla anterior 4 Ramus communicans albus 5 Stellate ganglion 6 Ganglion intermedium 7 Ganglion cervicale med 8 Superior cervical ganglion 9 Carotid plexus 10 Vertebral nerve 11 Brachial plexus 12 Ramus communicans griseus 13 Nervi cardiaci symp 14 Subclavian artery 15 Vertebral artery

### Operative Procedure

The extirpation of the upper thoracic and lumbar sympathetic ganglion and trunks by the dorsal approach was carried out successfully by Adson and Brown (1929) in the treatment of Raynaud's disease. The sympathetic ganglionectomy by the anterior approach by the same authors failed to give the desired results. On the other hand Griman (Rieder 1930) and French (Leriche see Cadenat 1933) investigators successfully used the latero anterior route. The dorsal approach necessitates extensive dissection as well as actual costo-transversectomy which is likely to be accompanied by a considerable shock to the patient as in most of the bone operations. The approach of Leriche and Rieder though definitely less traumatizing has the disadvantage of limiting the visibility of the operative field. The technique which we propose is an attempt to eliminate the drawbacks of the earlier trials. Our experience is based on some twenty six operations, most of them in cases of advanced disseminated sclerosis.

### PRE-OPERATIVE ROUTINE

The pre-operative preparation of the patient is essentially the same as in any other surgical procedure. A soap and water enema and a mild sedative of the barbiturate group on the eve of the operation ensure a restful night to the patient. For pre-operative medication a dilaudin-atropine combination gives

excellent results. We feel that avertin by rectum in doses of 70 to 100 mg per kilo of body weight depending on the condition and age of the patient is the anaesthetic of choice. It has the advantage of permitting the anaesthesia to be induced while the patient is still in his room and its lasting effect helps greatly in alleviating post-operative apprehension. Avertin alone is practically never sufficient. It has to be supplemented by local infiltration of 1 to 2 per cent of novocain solution with 16 drops of 1 in 1000 solution of epinephrine per 100 ccm of novocain. In certain cases a few whiffs of ether have to be given in the terminal stages. It is well to have on hand a positive pressure anaesthesia apparatus as occasionally the pleura may be punctured during the course of the operation.

An ordinary thyroidectomy set may suffice but a few specially designed instruments as illustrated in Fig 2 are of

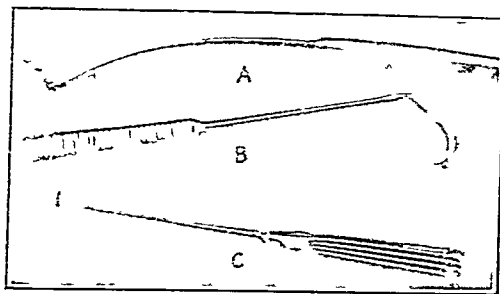


FIG 2—Special instruments. A Depressor B Retractor C Aneurysm needle

considerable help. The depressor A has the advantage of a long handle and curved spoon-like spatula which allow the retraction of the moving dome of the pleura during deeper dissection. For retraction of larger vessels the retractor B ensures a considerable amount of visibility with comparatively great safety. A small aneurysm needle (C) for ligation of smaller vessels is optional.

Careful haemostasis and exact knowledge of the anatomical relations of this region are indispensable in this procedure. Even the slightest haemorrhage obscures the operative field causing a very prolonged and distressing delay. In cases of doubt as to the nature of the structure it is always best to ligate it this precaution saving a great deal of time in the long run. The anatomy of the region though fairly uniform is none the less subject to numerous modifications. The variable calibre and the relative positions of the blood vessels are particularly annoying. The vertebral nerve is a great offender. Its position in reference to the vertebral vessels classically (Hovelacque *et al* 1937) is said to be posterior to the vertebral arteries. In some of our cases the relationship was just the reverse. We emphasize this point in order to place the operator on guard against the unexpected possibility.

### SOME DETAILS OF TECHNIQUE

After induction of the avertin anaesthesia the patient is placed in a semi-reclining position with the neck hyperextended and the head turned away from the side on which the operation is to be performed. It is essential to see that the patient is so securely fixed as not to permit any change of position during the operation. After the infiltration of the skin with local anaesthetic a semilunar incision is made just above the clavicle extending from the border of the trapezius to approximately one centimetre beyond the midline. (In the first attempt (Koch 1937) a vertical incision was made parallel to the sternocleidomastoid muscle; it proved to be somewhat unsatisfactory as it permitted but limited exposure of the caudal end of the sympathetic trunk.) The skin and adjoining platysma are separated from adjacent tissues and the cut edges are fastened with silk sutures so as to allow the maximum of gaping. The next step is a division of the clavicular portion of the sternocleidomastoid muscle. Its cranial portion is lifted and sutured to the already fastened upper edge of the skin. This procedure brings into view the

omohyoid muscle, the fascia colli media fat, and possibly some lymph nodes. The omohyoid muscle is transfixed by two sutures and divided, the sutures preventing either portion from getting lost. The removal or pushing away of the fascia colli media and adjoining fat and the division of the omohyoid muscle expose the scalenus anterior muscle with the phrenic nerve, the inferior thyroid artery, the ascending cervical artery, and the transverse cervical artery. After gentle blunt dissection the thyreo cervical trunk is brought into view. In some instances in order to get into the deeper structure it is not necessary to ligate the entire trunk; the ligation of the inferior thyroid artery suffices. The decision depends on the ease with which it is possible to retract caudally the subclavian artery. Without retracting the subclavian artery it is difficult to reach the vertebral artery with the accompanying sympathetic plexus.

Should it be necessary to ligate and cut the thyreo cervical trunk it is best accomplished by leaving a fairly large stump so as not to permit the slipping of the ligature. It is felt that it is always safer to put a second ligature just below the first.

The next step is to proceed with the division and ligation of the vertebral vein crossing obliquely from the medial aspect of the scalenus anterior into the pre-vertebral tissues. The ligation of the vertebral vein clearly brings into view the anterior aspect of the vertebral artery and medially to it the ganglion intermedium. This relation is not constant; occasionally the ganglion may be found laterally or anterior to the artery. A nerve twig from the sympathetic trunk to the stellate ganglion, the Ansa Vieussens, is seen going over the subclavian artery. It may be easily identified by applying traction which moves the subclavian artery. Using the Ansa Vieussens as the lead the sympathetic chain is reached. Once

the relationship is established the vertebral artery is stripped of its sympathetic plexus over an area of about one to two centimetres. The dissection is rendered fairly simple by use of a small sharp scalpel. When stripped the artery is pulled up and the underlying tissue examined. After lateral retraction of the scalenus anterior muscle the prevertebral fascia is divided. The stellate ganglion with its numerous branching fibres and occasional veins is then in plain sight. Careless cutting of a vessel in this region results in a brisk and obscuring bleeding. In carrying out the dissection the surgeon's action may be aided greatly by the introduction of the small spoon-like depressor A. The movement of the pleural dome on which is superimposed the costo cervical artery not only interferes with the visualization of the field but also may lead to an accidental perforation of the parietal pleura. It is self-evident that the dome must be detached from its costal and cervical attachments; this is best accomplished with the aid of a sharp thin scalpel. The costo cervical artery should always be divided and ligated. The extirpation of the stellate ganglion and of the vertebral nerve is accomplished in one step. The ganglion is grasped firmly by the Thiersch forceps and pulled inferiorly. The rim and the attachments are thus brought into light and may be cut from their upper end with sharp scissors. Once freed from the upper and posterior attach-

ments more forward traction is applied to the ganglion so as to permit the introduction of a finger between the sympathetic trunk and the posterior wall. With the finger as a guide the trunk is detached as far as possible and cut below the first costo vertebral junction, which is roughly midway between the stellate and second thoracic ganglia. If the operation is done with care, the field is dry and therefore closure may be accomplished without any drainage. If in doubt, a drain may be placed in the dependent portion of the wound. After the repair of the separated muscles the wound is closed in layers in the usual fashion. The patient is kept in bed for a period of about one week, and the other side may be operated on in approximately two weeks.

### Complications and Sequels

In the series of patients operated on by this method two fatalities have been observed. One was due to embolism, and the other patient died several hours after the operation of a brisk haemorrhage due to the slipping of the ligature from the thyreo-cervical trunk.

The anticipated Horner's syndrome was observed in every case, though enophthalmos had a tendency to regress,

becoming quite inconspicuous within a few months. The physiological complication to be expected is the inability of the heart to respond with acceleration to any muscular effort (the cardiac nerve is severed from its attachment when the stellate ganglion is removed). For about two months following the operation the patient must avoid any extreme exertion, as it may be accompanied by weakness and even collapse. Shortly after the operation some patients complain of pains in the shoulder and arm on

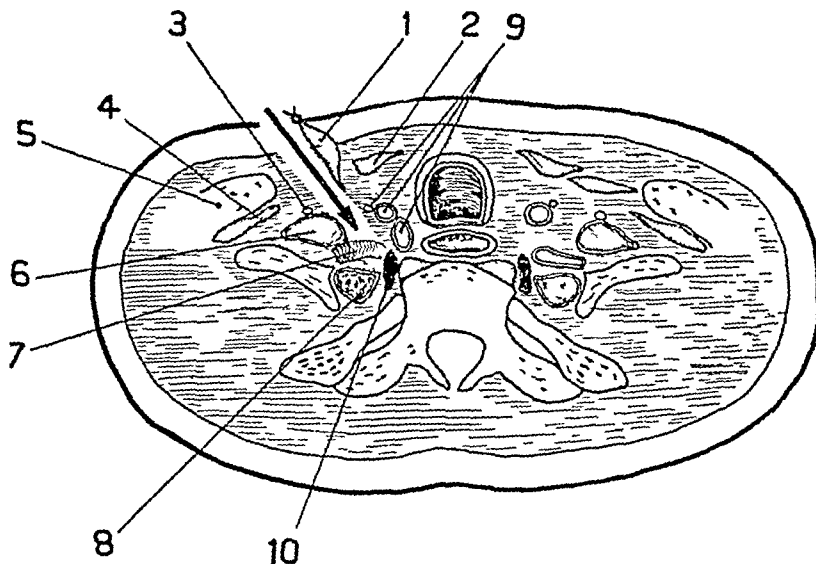


FIG. 3.—Cross section of the neck showing the interior approach to the stellate ganglion. 1 Sternocleidomastoid muscle (sutured end) 2 Sternocleidomastoid muscle (inferior portion) 3 Phrenic nerve 4 Omohyoid muscle 5 Clavicle 6 Scalenus anterior muscle 7 Subclavian artery 8 Lung 9 Vagus, carotid artery and internal jugular vein 10 Stellate ganglion

the side of the operation. The pain lasts but a few days, and usually requires no attention. In certain persistent cases it was found useful to inject a small amount of novocain into the brachial plexus right above the clavicle; this gave immediate and permanent relief. Another complication seen in about one-third of the cases is incontinence. Fortunately it is not lasting, and in our experience always disappeared after the first forty-eight hours. Occasionally there is a paresis of the upper extremity of the operated side lasting but a few days and leaving no residual effects. Two patients perspired copiously in the region of the abdomen, lower back, and lower extremities. So intense was the perspiration that it necessitated special nursing care. This lasted for a period of almost six weeks and responded but poorly to atropine.

### Results

The operation was performed on fifteen cases of disseminated sclerosis, of which ten may be considered for statistical study, six to fourteen months having elapsed

since the operation Eight of the ten patients are alive to-day

Practically every case including the four most recent ones responded favourably to this surgical procedure which is in agreement with the findings of Wetherell. At no time did we notice any immediate unfavourable effects in the development of symptoms. We attach considerable importance to this since trauma in cases of disseminated sclerosis is believed to cause aggravation of symptoms.

It would be premature to draw final conclusions regarding the ultimate possibilities of this treatment. Nonetheless we feel encouraged because in the majority of cases a remarkable degree of amelioration has taken place. It is not possible to attribute all the improvement to spontaneous changes in the course of the disease. All of the patients were in an advanced stage of the disease. We are attempting now to operate on patients in earlier stages when of course the evaluation of results will be considerably more difficult and not easily assessed.

This report attempts to deal primarily with the technique of the operation and so no detailed account will be given of every case. We feel that it is desirable to present the history of one of the patients in detail in order to give an idea of the type of case we have treated. Since the procedure is in the experimental stage we have so far applied it only to cases which respond to no other method of treatment. The case below is typical of this group.

### Case History

A man 39 years old presented himself for an operation at the Middleburg Hospital in June 1936 with the following story.

After an accident in 1926 when his right thigh was run over by a carriage he developed a paraesthesia of the injured side. The Wassermann and Kahn reactions were negative but there was a slightly positive Pandy test. Shortly after the first examination the patient developed some difficulty in walking. There was a slight tremor of the lower right extremity but there was neither nystagmus nor intention tremor. The speech was normal. The patient was given an arsenic and quinine preparation and asked to report for examination later.

An examination at the beginning of 1927 disclosed general aggravation of the symptoms. Paraesthesia became more pronounced and involved both of the lower extremities. Three years later in addition to the original complaints he developed pains in the right side and there was a marked decrease in

the muscular power of the right leg. The patient began to have difficulties with his vision and was frequently nauseated. Some six months later Romberg's sign became definitely positive rotary bilateral nystagmus was noted and there was a bilateral Babinski reflex. The patient was unable to move and most of his time had to be spent in bed. Examination in the middle of 1930 showed that the right Babinski reflex had disappeared but the nystagmus persisted. The patient developed spontaneous jerking of the lower extremities and there was pallor of both retinæ. The patient was no longer able to read. There was a marked stasis of the lower extremities and some retention of urine. In 1934 in addition to the aggravation of the symptoms present pains appeared in the lower limbs. The right leg could no longer support him.

In 1936 examination on the eve of operation revealed the following salient features: diplopia marked bilateral nystagmus temporal pallor of both optic disks inability to read scanning speech bilateral intention tremor of the upper extremities abolition of abdominal reflexes most of the time the patient had to depend on a catheter for the passage of urine both knee jerks were absent both plantar reflexes were extensor both lower extremities showed occasional pain.

TABLE A

Case No.	Age of the Patient in Years	Duration of Disease in Years (by 1936)	Other Disease	Sex	Duration of Illness in Years
1	39	10		M	10
2	40	16		M	16
3	38	5		M	5
4	42	17		M	17
5	41	13		M	13
6	38	18		M	18
7	40	16		M	16
8	31	7		M	7
9	31	1		M	1
10	25	10		M	10
11	32	5		M	5
12	42	1		M	1
13	32	1		M	1
14	46	1		M	1
15	33	1		M	1

TABLE B

Signs and Symptoms	Case No 3		Case No 4		Case No 6		Case No 7		Case No 8		Case No 9	Case No 10	Case No 11	Case No 12	Case No 13	Case No 14	Case No 15
	A	B	A	B	A	B	A	B	A	B							
1. Fatigue and Weakness	xxx	x	xxx	x	xxx	xx	xx	xx	xxx	x	xx	x	xx	x	xx	x	xx
2. Stiffness of Extremities	xx	o	xxx	x	xxx	xx	xxx	xx	xx	x	xx	x	xx	x	xx	x	xx
3. Ataxia of Extremities	xx	x	xxx	xx	xx	xx	xxx	xx	xx	x	xx	x	xx	x	xx	x	xx
4. Eyes Nystagmus	o	o	o	o	o	o	o	x	x	x	xxx	x	xx	x	xx	x	xx
5. D-L-Pla	o	o	o	o	o	o	o	x	o	/	/	/	/	/	/	/	/
6. Scanning Speech	o	o	o	o	o	o	xx	x	xxx	x	xxx	x	xxx	x	xxx	x	xxx
7. Pain	o	o	xx	o	x	o	xxx	o	x	x	xxx	x	xxx	x	xxx	x	xxx
8. Intention Tremor	o	o	xx	o	xx	x	xxx	xx	xxx	x	xxx	x	xxx	x	xxx	x	xxx
9. Clonus	xx	o	xx	o	o	o	/	/	x	x	/	/	/	/	/	/	/
10. Bladder Disturbance (R=Retention, L=Incontinence)	Rx	o	o	o	x	x	Lxx	Lx	Lxxx	Lx	Lxxx	Lx	Lxxx	Lx	Lxxx	Lx	Lxxx
Time (in months) elapsed since operation	14		15		1		1		10		10		10		10		10

Explanatory Note: Intensity of symptoms are recorded as follows:

taneous jerks, and there was a marked ankle clonus. The patient could not walk independently and was able to move about only with the support of two sticks, at best, the furthest he could progress by himself did not exceed ten metres, and even then he occasionally had to be supported. When moving the body was bent forward with the two arms stretched forward clutching the two walking sticks in front.

An operation was performed on the left side on June 25, 1936. On the first day after the operation he was unable to move his left leg, and incontinence was absolute. On the second day the spontaneous jerks in the left leg disappeared, though they were still present in the right leg. On the third day the patient was able to move his left leg. There was no change in the other symptoms.

The sympathectomy and ganglionectomy were performed on the right side eleven days after the first operation. On the following day the patient was no longer incontinent. The spontaneous jerks of the right leg were only slightly perceptible. Three days later they disappeared altogether. Paraesthesia of the extremities was no longer present. Two weeks later the patient tried to walk supported by a stick and a nurse. Twenty-four hours after the first attempt he was able to move about with a walking stick. For the first time in several months he was able to lift his legs independently. In about three weeks after the second operation the patient was able to walk without the help of the stick or nurse. The walking though fairly strenuous, was successful, although the gait was shuffling. Romberg's sign was negative. There was no ataxia. On the twenty-third day the patient was discharged from the hospital. He returned for examination a month later. He moved about independently with apparent ease, though he collapsed some six weeks after the operation following a walk of a few hundred metres. The examining physician stated that the pulse frequency was normal. The collapse necessitated a rest of a few hours, after which the patient felt normal. Three months later he was able to resume his former occupation as an assistant in a grocery shop. He was able to walk about, though he preferred to be supported by a walking stick.

Fourteen months later the patient is still able to walk with the aid of a stick. There is no diplopia. He is able to read. Romberg's sign is negative, and he has no pain.

### Conclusion

The case of multiple sclerosis just described was one with a definite downward course. The only transient improvement was in 1930, when the patient temporarily lost his right Babinski reflex. The operation has not only arrested the progress of the symptoms but has also re-established some of the functions.

We are presenting all our cases in tabulated form. Table A gives age of the patient, duration of the disease from the first observed symptom, number of remissions, duration of the final stage before operation. Table B gives the outline of principal symptoms and their changes. Space will not permit detailed consideration of each case. We have confined ourselves to the most distressing symptoms and to those common to most of the cases. Neither will the record of reflexes be given, since the surgical procedure only exceptionally modified the original findings.

The evaluation of the results in Cases 1, 2, 5, 10, and 12 is not included. No. 1 has already been discussed in detail. No. 2 because of a very unsatisfactory physical condition could be operated only on one side and died of uraemia eight months subsequently. Patients Nos. 5 and 12 died, one of pulmonary embolism and the other of a haemorrhage of the thyrero-cervical trunk. Patient No. 10, though showing progressive improvement in neurological symptoms died of intercurrent infection eight months later.

This paper deals primarily with the technique of ganglionectomy and sympathectomy by the anterior approach. Our experience with this treatment in advanced multiple sclerosis suggests the desirability of further trial of this therapeutic measure.

### REFERENCES

- Adson, A. W., and Brown, G. E. (1929) *Surg. Gynec. Obstet.* 48, 577.  
Cadenat, F. M. (1933) *Presse med.* 41, 1014.  
Delmas, J., and Laux, G. (1933) *Anatomie medico-chirurgicale du système nerveux végétatif* Masson et Cie.  
Hovelacque, Monod, and Eyraud (1937) *Le Thorax. Anatomie medico-chirurgicale* Paris.  
Koch, C. F. (1936) *Cong. Franç. Chir.* Paris, 45, 451.  
— (1937) *Nederl. Tijdschr. Geneesk.* 81, 425.  
Putnam, T. J. (1933) *New Engl. J. Med.* 209, 786.  
— (1931-6) *Studies in Multiple Sclerosis, I-VII* Arch. Neurol. Psychiat. Chicago.  
— (1937) *Ibid.* 37, 1298.  
Rieder, W. (1930) *Arch. klin. Chir.* 158, 355.  
Royle, N. D. (1933) *Med. J. Austral.* 1, 586.  
Wetherell, F. S. (1934) *J. Amer. med. Ass.* 102, 1754.  
— (1935) *Arch. Neurol. Psychiat. Chicago*, 34, 99.

## THE TREATMENT OF PLACENTA PRAEVIA

### A REVIEW OF 286 CASES

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During our respective terms of office at Queen Charlotte's Maternity Hospital we were much impressed by the results of a scheme in operation for the treatment of placenta praevia. The principle of this scheme was that all cases should be treated by a preconceived routine method. We found that its use greatly facilitated our work and, so far as we could judge, led to an improvement in the mortality rate of this grave condition.

### A Standardized Method

Standardization is obviously a desirable feature in dealing with certain emergencies, as it affords an opportunity of assessing the value of the treatment, and those who have to carry this out are "forearmed" with a knowledge of the immediate steps to be taken for the relief of the disaster. It would seem of value to publish the results of a standardized treatment of a condition for which such a variety of methods are advocated. Since this scheme was put into operation 143 cases of placenta praevia have been treated over a period of approximately five years. These cases we shall refer to as Group A. For purposes of comparison we have taken an equal number of cases immediately preceding the start of the scheme. This series of 143 cases will be referred to as Group B. The principles governing the treatment of cases in Group A were laid down by Mr. Leonard Phillips, who assumed responsibility for all cases of placenta praevia. He has kindly allowed us to publish an account of his routine treatment. In order to clarify this account the following definitions are given.

1. A central placenta praevia was considered to be present if the internal os was completely covered by placental tissue.

at the time of examination per vaginam the examination being made under anaesthesia and the finger passed round the whole internal os.

2. A marginal position of the placenta was held to exist if the edge of the placenta partly covered the internal os and the presenting part could be felt covered by membrane on the other side of the internal os.

3. A lateral position of the placenta was considered to be present if the edge of the placenta could only be felt with difficulty in the lower segment by the examining finger and the placenta did not encroach upon the internal os.

### Principles and Practical Aspects of the Treatment

The following account enumerates the principles and summarizes the practical aspects of the treatment.

1. In all cases of ante partum haemorrhage a routine clinical examination was made in order to exclude toxæmia. If this was negative the cases were then regarded as instances of low insertion of the placenta until vaginal examination had excluded this complication.

2. The blood group of all patients with a pulse rate of 100 per minute or over was determined prior to vaginal examination and preparations were made for transfusion.

3. Vaginal examination was performed under light general anaesthesia with the patient in the lithotomy position such examination being performed only after full preparations had been made for packing the vagina. The examination was made very carefully the state of the cervix being noted, and the lower uterine segments gently explored with the examining finger. Subsequent procedure varied according to the findings. If a central placenta praevia was diagnosed Caesarean section was the routine method of delivery and if bleeding occurred at the examination the vagina and cervical canal were packed with gauze until it was effectively controlled by direct pressure. Counter-pressure was effected by a tight abdominal binder and a T shaped perineo abdominal bandage. The condition of the patient was as a rule adversely affected by a combination of haemorrhage and shock resulting from the operation of plugging. The next step was to restore the general condition of the patient by morphine and blood transfusion. When this was considered satisfactory Caesarean section was performed irrespective of the state of the foetus. When either marginal or lateral placenta praevia was diagnosed the membranes were artificially ruptured whether the patient was in labour or not and as much liquor as possible was allowed to escape. This usually led to satisfactory descent of the presenting part and packing the vagina was employed only if bleeding was profuse or continuous.

4. In all cases replacement of blood loss by early and adequate transfusion was carried out.

5. The performance of external podalic version and pulling down a leg was regarded as unnecessary interference but where a complete breech presentation was encountered and the os was sufficiently dilated a leg was pulled down to effect pressure by means of the half-breech Willett's scalp forceps were employed in one or two isolated cases after the removal of the haemostatic plug.

6. Stress is laid on efficient packing of the vagina. The gauze employed was in the form of rolls 4 inches wide and 6 yards long. These were soaked in 5 per cent. dilute solution and were packed tightly into the fornices. Even additional roll used was tied to the end of the

preceding one. The average number of rolls was three for primigravidae and five for multigravidae. The packing was left *in situ* for twenty four hours or until it was expelled during labour by the presenting part. This latter desirable result was obtained in most cases. Catheterization of the bladder was usually necessary while packing was in position. The advantages claimed for efficient packing are (a) bleeding can be completely arrested and time is gained to restore the patient's general condition (b) the vascular sinuses exposed by placental separation are compressed and clotting can occur (c) while packing of the vagina in conjunction with artificial rupture of the membranes is a recognized stimulus to uterine contraction we have not found that unduly rapid delivery ensued. In a certain number of cases further bleeding occurred after removal of the packing but this was effectively controlled by repacking.

### The Case Results

We have arranged in tabular form the case results of Groups A and B. The stillbirth rate is included for the sake of completeness. Plugging the vagina is regarded by some authorities as a dangerous procedure owing to the increased incidence of sepsis. However since plugging has been an essential feature we feel that our account would be incomplete without a consideration of the degree and site of infection occurring after all forms of treatment.

TABLE I

Group A

Method of Treatment	Central			Marginal			Lateral		
	No. of Cases	Mild	Severe	No. of Cases	Mild	Severe	No. of Cases	Mild	Severe
No treatment	—	—	—	—	—	—	16	—	—
A.R.M. and binder	—	—	—	20	1	—	10	18	—
A.R.M. binder and plug	1	—	—	42	18	2	16	1	—
Caesarean section	5	—	—	3	—	—	1	—	—
Plugging—Caesarean	5	1	—	1	—	—	—	—	—
Pulling down leg	1	—	—	1	1	—	12	1	—
Totals	12	1	—	79	20	2	55	19	—

A.R.M.—Artificial rupture of membranes. \* 2 to external breech presentation. † 1 to mild breech presentation. ‡ 1 to severe breech presentation.

Number of cases, 12; mortality rate 1.7 per cent; no stillbirth rate 1.4 per cent; stillbirth rate 3 per cent; number of transfusions, 37.

Group B

Method of Treatment	Central			Marginal			Lateral		
	No. of Cases	Mild	Severe	No. of Cases	Mild	Severe	No. of Cases	Mild	Severe
No treatment	1	—	—	—	—	—	2	—	—
A.R.M. and binder	—	—	—	4	—	—	1	—	—
A.R.M. and binder if seen	5	—	—	12	1	—	1	—	—
A.R.M. and plug	4	—	—	13	—	—	8	1	—
Caesarean section	11	—	—	—	—	—	2	1	—
Plugging—Caesarean	1	—	—	—	—	—	—	—	—
Pulling down leg	9	—	—	16	3	—	15	2	—
Totals	31	—	—	45	4	—	64	4	—

Monitored on admission. Number of cases, 143; mortality rate 5.6 per cent; stillbirth rate 14.7 per cent; stillbirth rate 3.5 per cent; number of transfusions, 10.



TABLE II  
Group A (Total cases morbid = 22)

Method of Treatment	Site of Infection						
	Urinary	Mild Genital	Severe Genital	Femoral Phlebitis	Respiratory	Tonsillar	Totals
No treatment	—	—	—	—	—	—	—
A R M and binder	1	—	—	—	—	—	1
A R M binder and plugging	3	11	1	1	2	1	19
Caesarean section	—	—	—	—	—	—	—
Plugging + Caesarean	—	—	—	1	—	—	1
Plugging down leg	—	1	—	—	—	—	1

Group B (Total cases morbid = 21)

Method of Treatment	Site of Infection						
	Urinary	Mild Genital	Severe Genital	Femoral Phlebitis	Respiratory	Tonsillar	Totals
No treatment	—	3	—	—	—	—	3
A R M and Willett's forceps	—	5	1	—	—	—	6
A R M and plugging	—	2	1	—	—	—	3
Caesarean section	—	1	—	1	2	—	4
Plugging + Caesarean	—	—	—	—	—	—	—
Pulling down leg	—	3	1	1	—	—	5

## Consideration of Results

The 143 cases of Group A were treated according to the method outlined above, and from a study of the figures it is evident that

1 Many cases (38 per cent) required only artificial rupture of the membranes and the application of a tight binder. Such cases were lateral or marginal insertions occurring mostly in multiparae admitted in labour. Uniformly good results are to be expected in this type of case, and are obtained in this hospital and elsewhere.

2 Haemorrhage was profuse enough to require immediate steps to arrest it in about half the cases (47 per cent).

3 Plugging the vagina has proved an extremely successful method of achieving haemostasis.

We therefore venture to conclude that the striking decrease in the mortality rate in Group A is due to (a) the co-operation and team-work made possible by the standardization of treatment, (b) the prompt arrest of severe haemorrhage by plugging the vagina, (c) replacement of blood loss by transfusion, (d) treatment of shock before delivery of the patient. A comparison of the total morbidity rates for the two groups—Group A, 15.4 per cent, Group B, 14.7 per cent—reveals but little increase in the incidence of sepsis, and the difference in stillbirth rate is negligible.

Out of a total of 286 cases treated, 146 required active intervention per vaginam, excluding those treated by artificial rupture of the membranes only. Seventy-three of these cases were plugged and seventy-three were treated by either pulling down a leg with or without podalic version or the application of Willett's forceps. The plugged series showed two cases of severe and fourteen cases of mild genital infection and the other series two cases of severe and ten of mild genital infection. The increase in sepsis rate is therefore very small. It is interesting to note that Caesarean section was performed on six occasions from six to twenty-four hours after plugging, and that only one of these patients had a morbid tem-

perature, due to a femoral thrombosis occurring on the twelfth day. We feel that we are entitled to suggest that plugging the vagina for placenta praevia is not attended with an undue liability to sepsis when its morbidity rate is compared with that following other forms of treatment which involve intervention per vaginam.

## Summary

1 The results of treatment of 286 cases of placenta praevia are reviewed.

2 The standard method of treatment at Queen Charlotte's Hospital is described. Emphasis is laid upon the value of a preconceived routine, which included plugging and replacement of blood loss.

3 We believe that the improvement in the mortality rate is due to this method.

4 Evidence is offered in support of the contention that vaginal plugging in cases of placenta praevia is not associated with a high rate of sepsis when compared with that of other forms of treatment.

In conclusion we should like to thank the members of the honorary staff of Queen Charlotte's Hospital for the use of the case records, and in particular Mr. Leonard Phillips for permission to publish an account of his routine treatment. We also wish to express our appreciation of the work of the labour ward staff, to whose co-operation much of the improvement in results is due.

CONCERNING THE BOX MASK FOR  
OXYGEN ADMINISTRATION

BY

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The main outline of this method of oxygen administration was originally described in the *Journal* about two years ago (Campbell, 1936). Since then some additional information (Barach, 1937, Campbell, 1937a, 1937b) has been published. A number of the masks have been used on patients and further data have been obtained, while various criticisms have arisen. These are dealt with below.

## Comfort of the Patient

With the earlier types of mask vision was rather restricted. In more recent types wider vision has been provided by removing the shoulders of the mask and shifting the inlet tube for oxygen from the front of the forehead to a horizontal position inside the mask as in some of the earlier experimental masks. Fig. 1 illustrates the transparent type made of celluloid acetate. This material is neat, but it is not durable and must be washed only in cold water, as warm water or exposure to the sun will warp it. This celluloid acetate is not very inflammable. More durable material is aluminium, which, although greater in cost, is perhaps more suitable for hospital patients. The oxygen enters the mask through perforations in the horizontal portion of tubing inside the mask. These perforations must be directed upwards so that the incoming oxygen strikes the middle of the top of the mask. A bobbin flow-meter records the rate of oxygen flow, and an automatic regulator is used for the cylinder.

Some patients have found the mask rather warm to the face. This was due in some cases to enclosing the chin within the mask. The opening at the back of the mask should be bent to include only the nose and mouth, and

the cheeks should be excluded. Thus only a small portion of the total area of the face is enclosed within the mask and on warm days more of the skin of the arms may be exposed to the external air to aid loss of body heat. The sensation of warmth is usually only temporary and is noticeable mainly during the early period of wearing the mask. In colder atmospheres some protection of the skin on the face, also the temperature of the skin of the enclosed portion of the face is not so high as that of the



FIG 1—Transparent (celluloid acetate) mask in position with bobbins flow meter and automatic regulator for gas cylinder (Photo by L. W. Collison)

clothed body. The opening at the back of the mask is lined with lint which is kept in position with adhesive plaster and may be easily renewed. Two or three folds of lint are used to keep the mask airtight against the nose and face.

Expectoration may take place through the lower open end of the mask if a wide mouthed vessel is used to collect the sputum. Food and medicine may be administered through a door on the front of the mask. An easier method during meals is to hold the mask in position by hand and remove it only at the brief periods when food is actually being placed in the mouth. In any case breathing usually ceases at this moment.

This type of mask has been used on some patients for prolonged periods up to six weeks without any greater discomfort than with other methods. Its advantages have been stated in the earlier papers. It has an advantage over nasal methods in that it may be used when the nasal passages are blocked. In emergency a box mask may be made from a cardboard box and a rubber tube in ten minutes (Campbell 1936).

### Oxygen Pressure Inside the Mask

Analysis of the gas inside the mask was carried out with Haldane's large apparatus using about 5 c.c. of the gas mixed with about 15 c.c. of nitrogen. Samples were taken either at the end of inspiration or of expiration by means of an evacuated sample tube to the upper end of which a fine bore glass tube filled with mercury was attached. The position in the mask from which the samples were withdrawn was important. It was 2 to 3 cm. to the right of the nose at a level of about 1 cm. above the opening in the right nostril. This point was regarded as being equally affected by the incoming oxygen at the top of the mask and the incoming air or expired air at the lower end of the mask. The gas obtained probably approximated in composition to that inspired by the subject under observation. The subject (C.P.) was 44 years of age, weighed 64.5 kg. and was 157.5 cm. in

height. His respiratory volume while sitting quietly under normal conditions was about 7.5 litres per minute. Two gases were used—pure oxygen and a mixture of 7 per cent carbon dioxide with 93 per cent oxygen. Fig. 2 records the results for oxygen pressure in percentages of an atmosphere with different rates of flow of the special gases. The oxygen percentages within the mask are slightly

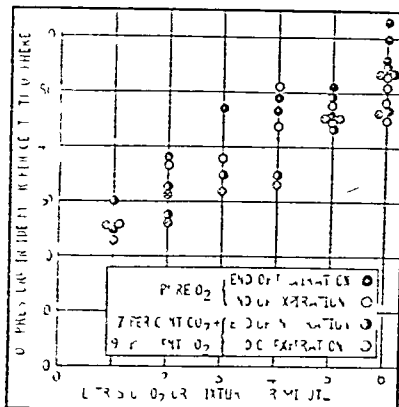


FIG 2—Oxygen pressures at the end of inspiration and of expiration inside the mask just above level of right nostril with various rates of flow of gas

higher when pure oxygen is used than with the carbon dioxide mixture. Also as a rule the percentages at the end of inspiration are slightly higher than those at the end of expiration. With 6 litres of the special gases per minute the oxygen percentages in the mask are usually between 50 and 60 and with 1 litre per minute they are between 20 and 30.

### Oxygen Pressure in the Lung Alveoli

Using Haldane's technique samples of alveolar air were taken at the end of an ordinary inspiration immediately after removal of the mask from the face. Generally

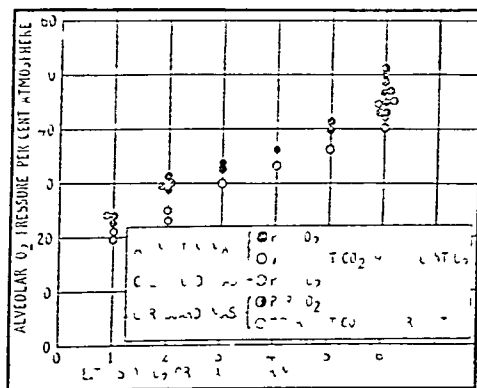


FIG 3—Oxygen pressures in the lung alveoli with various rates of flow of gas

speaking the alveolar oxygen pressures (Fig. 3) are about 10 per cent lower than the oxygen pressures within the mask (Fig. 2). Thus at 6 litres of pure oxygen per minute the oxygen pressures in the alveoli of the lung are about 40 to 50 per cent. With the carbon dioxide mixture the alveolar oxygen pressures are slightly lower than with pure oxygen. The various masks tested give similar results.

Carbon Dioxide Pressure Inside the Mask

This was measured at the same point as the oxygen pressure inside the mask. The results (Fig 4) indicate that with 6 litres of pure oxygen per minute the carbon dioxide pressure averages about 1 per cent and does not rise

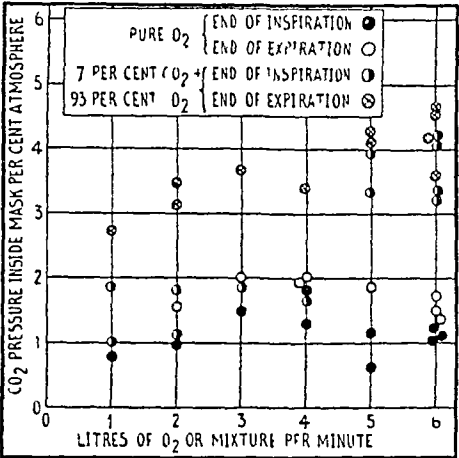


FIG 4—Carbon dioxide pressures at the end of inspiration and of expiration inside the mask, just above level of right nostril, with various rates of flow of gas

above 2 per cent. Most patients will not be affected by such concentrations of carbon dioxide. It is known from experience in submarines that discomfort is not noticeable until the carbon dioxide pressure reaches 3 per cent. Also, certain patients, according to the teaching of Yandell Henderson, are benefited by carbon dioxide as a respiratory stimulant, and he advocates from 5 to 10 per cent. To obtain about 5 per cent inside the mask it is necessary to use a mixture of 7 per cent carbon dioxide and 93 per cent oxygen at a flow of 6 litres per minute (Fig 4). Breathing about 5 per cent of carbon dioxide increased the volume breathed by the present subject from the normal figure of 7.5 litres to about 12 litres per minute, depth—not rate—of breathing was increased. With a more rapid flow and mixtures containing higher percentages of carbon dioxide, the carbon dioxide pressure in the mask may be further increased. In cases of carbon monoxide poisoning 10 per cent carbon dioxide with 90 per cent oxygen is advisable with this mask until respiration is well established, when pure oxygen should be used (Campbell, 1937a).

Carbon Dioxide Pressure in the Lung Alveoli

Fig 5 gives the results for carbon dioxide pressure in the alveoli of the lung under similar conditions. Normally the subject employed has an alveolar carbon dioxide pressure of about 5 per cent. The mask being worn and pure oxygen flowing from 1 to 6 litres per minute, the alveolar carbon dioxide pressure is usually somewhere between 5 and 6 per cent. The increase in alveolar carbon dioxide pressure above the normal is not necessarily due to the mask, because administration of oxygen at high percentage by any method tends to increase the carbon

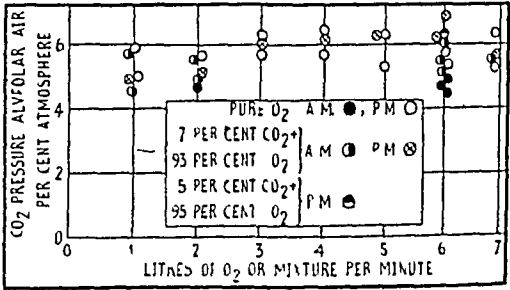


FIG 5—Carbon dioxide pressures in the alveoli of the lung, with various rates of flow of gas

dioxide pressure in the tissues, and similar alveolar carbon dioxide pressures are obtained with other methods. With 6 litres of pure oxygen the alveolar figures are usually lower one to three hours after lunch compared with samples taken four hours after breakfast. Such variations are connected with the acid base changes concerned with digestion or other factors. At 6 litres per minute, and with the mixture of 7 per cent carbon dioxide and 93 per cent oxygen, there is a slight further increase in alveolar carbon dioxide pressure.

All the observations recorded in the charts in Figs 2 to 5 were made in a room with the temperature purposely on the warm side—that is, at about 20° C and with thermometer cooling power 5 to 6, with air velocity usually between 20 and 40 feet per minute. These are fairly comfortable indoor conditions for a patient in summer weather.

Position of the Mask and Effects of Draught

In draughty wards the mask should be adjusted so that its lower front edge is about 3 cm. above the chest, or the head of the bed should be screened. As pointed out before

Table showing Effects of Draughts and Their Correction. O<sub>2</sub> Flow 6 Litres per Minute

Expt No	Date	Temp °C	Cooling Power	Air Velocity (ft per min)	Alveolar Pressures per cent atm		Conditions of Mask		
					CO <sub>2</sub>	O <sub>2</sub>	Mask	Curtain Used	Position (cm above chest)
1	29/10/37	22.0	8.6	200	5.7	28.5	Celluloid	Nil	3
2	1/11/37	20.0	6.0	40	5.7	40.5			
3	18/11/37	20.5	8.8	160	5.8	31.0	Aluminium		
4	1/11/37	20.0	10.0	210	5.8	45.0	Celluloid	Lint (8 cm long)	10
5	2/12/37	23.0	4.8	40	6.5	53.0	Aluminium	Cardboard and Nil	
6	13/11/36	20.5	5.0	20	5.9	40.0			
7a	3/12/37	21.5	10.0	215	5.9	36.2		Entire cardboard (two-thirds closed)	
7b					5.9	35.8		Cardboard and	
7c					5.7	35.0			
7d					5.8	28.8		Nil	

(Campbell 1937a) if the head is raised so that this edge is 10 cm above the chest the efficiency of the mask is affected somewhat by draughts so that with 6 litres of pure oxygen per minute the alveolar oxygen pressure is about 30 to 40 per cent in place of 40 to 50. The chest acts as a damper to draughts so that with the mask near the chest less oxygen is lost from the mask and fewer draughts of air enter the mask. In patients with a long neck the mask may be made longer and narrower without change in volume of inside space but a simpler correction is to partially close the bottom of the ordinary mask (see Table Experiment 5).

Dr R. V. Christie also kindly pointed out that draughts affect the efficiency to some extent. My results for the effects of draughts are given in the table using oxygen flow of 6 litres per minute in all cases.

With an air velocity of 40 feet per minute and the front edge of the mask 3 cm from the chest the alveolar oxygen pressure is about 40 per cent (Experiment 2) with an air velocity of 160 to 200 feet per minute the oxygen pressure is lowered to about 30 per cent (Experiments 1 and 3). The effect of such a draught is easily countered by fixing with adhesive tape a curtain of lint about 5 cm in length all round the bottom of the mask as in Experiment 4 in the table: the alveolar oxygen pressure is 45 per cent in spite of an air velocity of 210 feet per minute.

In Experiment 5 with the head held up and the mask 10 cm from the chest the alveolar oxygen pressure is kept at a high level 53 per cent by closing the lower end of the mask with a cardboard grid containing air spaces 1 cm square alternating with portions of solid cardboard of the same dimensions. In Experiment 6 with lower air velocity it is shown that no closure of the bottom of the mask is required. In Experiment 7d in the table with an air velocity of 215 feet per minute and the lower edge of the mask 10 cm from the chest and the bottom of the mask freely open the alveolar oxygen pressure is lowered to about 29 per cent but by means of the perforated cardboard grid or by closing two thirds of the lower end of the mask with a piece of entire cardboard the alveolar oxygen pressure is raised to about 35 per cent (Experiments 7a, 7b and 7c). The curtain of lint is the most efficient means of protecting against draughts but under ordinary circumstances the head of the bed may be provided with screens so that no special closing of the lower end is required. If the patient is restless and moves the head about much then the bottom of the mask may be closed by one of the above methods to gain greater efficiency. Even at the worst with the bottom of the mask open and in a draught the patient is still getting oxygen in the lungs at a pressure of about 30 per cent—that is more than double the normal—with a flow of 6 litres of oxygen per minute.

For sedentary individuals Sir Leonard Hill and others have recommended air velocities of 3, 7 and 17 metres per minute with air temperatures 15, 18 and 21°C respectively. Under these conditions the mask gives about 40 to 50 per cent of oxygen in the alveoli of the lungs with a flow of 6 litres of oxygen per minute.

Dr A. L. Barach (personal communication) uses a small injector on the oxygen inlet tube so that some air is drawn in: this increases the flow through the mask which is reduced in size. This draught helps to remove carbon dioxide and cools the face but may be too rapid and so disturb certain types of patients. He uses also a whistle arrangement which gives warning when the

oxygen tube is kinked. He recommends the apparatus for patients and for passengers in aeroplanes (Barach 1937).

### Summary

1. The recent type of mask made of aluminium or transparent celluloid acetate for oxygen administration is described. Vision is now much wider. The comfort of the patient is considered.

2. With 6 litres of pure oxygen per minute the oxygen pressure in the alveoli of the lung is kept at about 40 to 50 per cent under ordinary comfortable conditions of ventilation.

3. With 5 litres per minute of a mixture of 7 per cent carbon dioxide and 93 per cent oxygen the patient breathes about 5 per cent of carbon dioxide and the alveolar oxygen pressure is about 40 to 45 per cent. This or a similar mixture may be used when a respiratory stimulant is required.

4. The effects of draughts and of the position of the mask on its efficiency are considered. Simple means of countering effects of excessive draughts or excessive movement of the head are given.

I am indebted to Mr C. Perarde who acted as subject in the observations. The mask may be obtained from Messrs Siebe Gorman and Co. 147 Westminster Bridge Road SE 1.

### REFERENCES

- Barach A. L. (1937) *J. Amer. med. Ass.* 108 1863.  
Campbell J. Arzall (1936) *British Medical Journal* 1 12.  
— (1937a) *Lancet* 1 3.  
— (1937b) *Brit. Med. J.* 1 226.

## INTRANASAL APPLICATION OF POLLEN SOLUTION IN HAY FEVER

By

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The object of this short article is to describe a method of treatment which I have found useful during recent years in relieving hay fever. I have employed it in numerous cases either alone or in conjunction with other means and I find it invaluable both as a preventive of attacks and for use in relieving an already existing attack.

### Technique

The method is extremely simple and consists in spraying the nasal cavities with a few drops of a sterile solution of grass pollen. The solution should be applied to the septum, the middle and inferior turbinates and in particular to any hypersensitive areas. It is this done during the season in the case of a hay fever patient the immediate effect will be to produce a short bout of sneezing followed by the usual symptoms of hay fever. The effects of this artificially produced attack quickly subside and the patient then becomes more resistant to the pollen in the air with the result that for several days to a week or more many patients remain free from all symptoms of hay fever. The procedure may be repeated if necessary then be repeated.

The method above described may with advantage be used in conjunction with other means of treatment and if there are any abnormally sensitive areas in the nose I make it a practice to treat these (Francis 1934) before applying the pollen solution. It carefully carried out both

methods may be employed on the same occasion, with the result that not infrequently no further symptoms of hay fever will occur during the remainder of the season. The strength of the different pollen solutions employed depends on the severity of the symptoms in any particular case, as well as the weather conditions. In severe cases, in hot weather, small doses should be used.

### Seasonal Treatment

In an average case seen during the hay fever season, with mild symptoms, an initial dose of 10 units of pollen solution may be given intranasally, and if this does not produce mild sneezing within five minutes the dose may be repeated. Subsequent doses may be increased by 25 per cent at intervals depending on the length of time during which the patient remains symptom-free. In some cases no subsequent dose is necessary. It is convenient to arrange that the desired dose is contained in 0.25 ccm to 0.5 ccm of fluid, as this is a suitable amount to apply at one time. Necessary dilutions of concentrated pollen solutions may be made with carbolic saline (0.5 per cent phenol in normal saline), and the dose measured in a graduated medium sprayer.

If on any occasion there is pronounced local reaction, the dose should not be increased at the next application, but the same dose again given, when the local reaction will be decidedly less than on the previous occasion. After this the next dose can again be increased by 25 per cent, as a rule without resulting in any great reaction. It is difficult to lay down any hard-and-fast scale of doses, as patients vary considerably in their response to different pollens, and also in their response to the same pollen under varying conditions of weather. In hot dry weather the local reaction produced by a given dose of pollen solution will be greater than that from the same dose received by the same patient in cold wet weather. All the above factors must be taken into account when considering the best dose for any particular occasion.

It is important, so far as is possible, to include in the pollen solutions employed all the grass pollens to which the patient chiefly reacts, for a patient may, after several applications, be made quite immune to a concentrated solution of one kind of grass pollen, although a different type of grass pollen of a lesser concentration sprayed into the nose may still produce sneezing and other hay fever symptoms.

It has constantly been observed that if the same dose of the same pollen solution has been sprayed into the nose of any patient on two or more occasions at intervals of a few days or a week, or even longer, the hay fever symptoms produced have become progressively less on each occasion.

### Pre seasonal Treatment

Before the hay fever season begins larger doses may be given, and in an average case doses of 100 to 200 units of pollen solution may be sprayed into the nose to commence with, followed by a 30 per cent increase at intervals of two days or more. These doses do not as a rule cause more than slight transient symptoms of hay fever, and there is no doubt that the pre seasonal intranasal application of pollen solution increases the patient's resistance to pollen. Mackenzie (1922) has reported favourably on this method, and Caulfield (1922) has published good results from pre seasonal intranasal inoculation with pollen ointment although neither author claimed that the method by itself produced complete immuniza-

tion. I have never seen any untoward symptoms develop as a result of applying pollen solution in the way described, either before or during the hay fever season.

It is better to allow the artificially produced attack to subside naturally than to attempt to clear the nose immediately by the application of powerful vasoconstrictors, for in the latter case, although the nose may become temporarily clear, congestion usually returns after one or two hours, and it then remains obstructed for a longer period than if it had been allowed to clear naturally. As a rule, if left alone, all symptoms of the artificially produced attack completely cease in from ten minutes to one hour.

### Conclusions

The advantages of intranasal inoculation in hay fever are that it can conveniently be used in conjunction with other methods, that it provides a means of giving relief to patients during an attack, and that it increases the resistance to pollen of patients who are intolerant of injection methods.

While it is not asserted to be a method which by itself results in complete cure, it can often be advantageously employed in cases where other means have failed or have only been partly successful.

### REFERENCES

- Caulfield, A. H. W. (1922) *J. Amer. med. Ass.*, **79**, 125.  
 Fraenkel, C. (1934) *Practitioner*, **132**, 614.  
 Mackenzie, G. M. (1922) *J. Amer. med. Ass.* **78**, 787.

## Clinical Memoranda

### Treatment of Diphtheria

During the period 1935-6 I gradually came to think that the early deaths in cases of diphtheria could not be due to a toxæmic condition, but more probably to some underlying infection which was earlier in operation than the toxin of diphtheria. This view was taken by reason of the early cardiac involvement, such as the quick pulse, the onset of pericarditis, the haemorrhagic rashes, the early nephritis, and also the haemorrhagic edge of the diphtheritic membrane, to name but a few of the earlier symptoms noted in severe cases.

In support of this view were the more definite effects of the toxæmia of diphtheria, as instanced rather in the later stages (when it is admitted as a definite toxic condition), such as the slowing of the heart and the other paralytic symptoms. I thought that the more likely infection to produce these earlier symptoms would be caused by an organism common to the throat and associated with early cardiac and renal involvement. It appeared that the most likely organism—a common cause of faucial, cardiac, and renal disease—would be a streptococcus, probably one of the hemolytic type. In view of this, on January 22, 1936, I decided to try the effect of treating both a diphtheritic and a streptococcal condition.

The first case this was tried on was a girl aged 15 who was admitted to hospital on the second day of infection. She was cyanosed with a rapid running pulse with petechiae all over the chest and neck and with extensive membrane surrounded by a haemorrhagic areola. She was given on admission, 100,000 units of anti diphtheritic serum and also 20 ccm of

and puerperal serum. The following day she was given 50 ccm of anti-diphtheritic serum and a further 20 ccm of anti-typhoid serum. She made an uninterrupted recovery.

It is interesting to note that this girl's two brothers died within seventy-two hours of being taken ill with diphtheria. Following this ill severe cases were given varying amounts of either anti-typhoid serum or anti-scarlet fever serum. Towards the end of 1936 there were several cases of cross infection with scarlet fever and it was decided with the full approval and consent of the medical officer of health (Dr Parry Pritchard) that 5 ccm of anti-scarlet fever serum should be given to all cases of diphtheria on admission.

This procedure has been carried out during the whole of the year 1937 (except for three cases where the medical officer in charge of the cases did not wish the anti-scarlet fever serum given). Severe cases however were all given increasing doses—10 ccm or more—of anti-scarlet fever serum where it was considered necessary. During this period 209 cases of diphtheria were admitted to the hospital. Of these only one died. This patient however was admitted on the fifth or sixth day of illness and prior to admission was more or less of an invalid with cardiac trouble following rheumatic fever when very young. She was ten years of age and died within twenty-four hours of admission. Of these 209 cases eleven were cases of laryngeal diphtheria.

I feel that this low death rate should be brought to the notice of those concerned in the treatment of diphtheria. Research might possibly identify streptococci in the blood in early cases of severe and/or haemorrhagic diphtheritic cases.

Continued

W. HILTON PARRY M.B. Ch.B.

## A Severe Case of Chicken-pox with Some Unusual Features

A small outbreak of chicken-pox recently occurred in the scarlet fever ward of the Blackburn Corporation Hospital due to the admission of a case incubating the disease. All the secondary cases were of a mild type except the one to be described which was of an unusually severe nature and showed many interesting features.

### CASE RECORD

A boy aged 34 became ill on November 29 1937 and the following day was removed to hospital suffering from a mild attack of scarlet fever. There was no history of any previous illness. The disease ran an uneventful course there being no complications other than slight excoriation of the nostrils. The patient who was unvaccinated was a chicken-pox convalescent and on December 28 1937 (the thirtieth day of the scarlet fever) the first vesicles were noticed. These continued to come out steadily in crops and by January 1 1938 the eruption was extensive and in character and distribution very typical of chicken-pox. There was no inflammatory condition of the throat and no vesicles were present upon the buccal mucous membrane.

By January 3 his condition was worse and gave cause for anxiety. Towards evening a group of petechial haemorrhages could be seen covering an area of approximately two square inches on the front of each wrist. For the following two days his condition was grave. Petechial haemorrhages were now noticed on the trunk and limbs but were most profuse around the wrists and forearms. Fresh chicken-pox vesicles were still appearing and in fact continued to do so until January 13. Two areas one on the scalp and one on the face showed fairly extensive ulceration. The heart and lungs were normal and the urine at this time scanty but clear.

The latter was tested daily and on January 6 showed a faint trace of albumin (this was ten days after the onset of the chicken-pox and thirty-nine days after the onset of the scarlet fever). During the next few days the albuminuria increased and there was now a considerable degree of oliguria. The patient was drowsy and remained gravely ill until January 16 when some improvement in his condition was noticed although there was still profuse discharge from the ulcerative areas. From this date he made slow but steady progress towards recovery. The albuminuria persisted but by February 12 the urine was clear and the ulcers had practically healed.

### COMMENTARY

The interesting points in this case are (1) the severe nature of the disease as shown by the general toxæmia, petechial haemorrhages and ulceration; (2) the fact that fresh crops of vesicles occurred for no less than seventeen days; (3) the occurrence of nephritis. Haemorrhages in chicken-pox vesicles have been described by Healy (1936), Wanklyn (1922) and Whitaker (1915) and the term haemorrhagic chicken-pox applied to these cases. According to Goodall (1923) however cases showing petechial haemorrhage into the skin as in the case described also fall within this category.

The case certainly comes under the definition of ulcerative chicken-pox and it is interesting to note that Ker (1929) found this condition exclusively in convalescent scarlet fever cases.

Nephritis is described as a rare complication of chicken-pox and we regard the severe attack of the latter as a more likely cause of the nephritis in this case than the initial attack of scarlet fever although the possibility of a post-scarlatinal complication cannot be entirely ruled out.

### Summary

A convalescent scarlet fever case while in hospital contracted a severe attack of chicken-pox showing the unusual features of petechial haemorrhages and ulceration. Nephritis occurred as a complication. Fresh crops of vesicles continued to appear for the abnormally long period of seventeen days.

We are much indebted to Dr V. T. Thierens (medical officer of health) for his permission to publish this case.

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J. F. WARIN M.D. DPH

Assistant Medical Officers of Health

Blackburn

### REFERENCES

- Goodall E. W. (1923) *Text Book of Infectious Diseases* p. 4 London.  
Healy J. W. (1936) *Brit. J. Child Dis.* 33 201.  
Ker C. (1929) *Infectious Diseases* p. 217.  
Wanklyn W. McC. (1922) *British Medical Journal* 2 977.  
Whitaker A. G. (1915) *Ibid.* 1 15.

The eighteenth report of the Joint Council of the Order of St. John and the British Red Cross Society covers the year 1937. In his foreword the chairman Sir Arthur Stanley pays tribute to the late Dame Sarah Swift whose death has deprived the Joint Council of one of its most active and efficient members who was loved and respected by all who knew her. Among many other matters an account is given of the work of the Central Bureau of Hospital Information established in 1920 with the co-operation of the British Hospitals Association. The expansion of its activity proves that it meets a definite need. One very useful service is publication of the *Hospitals Year Book*. Copies of the report may be had from Joint Council House 12 Grosvenor Crescent S.W. 1.

## Reviews

### NEW WORK ON IMMUNITY TO TRANSPLANTED TUMOURS

*The Influence of X-Radiation on the Development of Immunity to Heterologous Transplantation of Tumours*  
By Johannes Clemmesen Translated into English by Robert Fraser (Pp 160, 13 photographs, 8 tables, 12 charts 10s) Copenhagen Levin and Munksgaard, London Humphrey Milford, Oxford University Press 1938

This monograph describes important research work bearing on immunity to transplanted tumours. As is well known, attempts to make successful grafts of a tumour growing in one species of mammal into an animal of a different species have hitherto been almost always unsuccessful. It is now shown that rats can be made temporarily susceptible to implants of certain mouse tumours by previous exposure *in toto* to strong x-radiation. The effect is not permanent, and after two to four weeks the engrafted tumours disappear. That actual growth has nevertheless occurred is proved both by the size attained by the implants and by the muscular invasion by neoplastic cells. When regression has taken place the rat is immune to further inoculations, and this immunity cannot be destroyed by subsequent exposures to x rays. If the rats are irradiated four to five days *after* implantation, the effect is less marked than when they are irradiated beforehand, this is probably because the cells of the implant have already been affected by the normal defence mechanism against foreign tissue elements. It does not seem to matter if the irradiation is carried out immediately or several days before the implantation is made. By varying the x-ray dose it is found that with bigger doses the implants attain a larger size and persist longer than when the dose is smaller. The general conclusion drawn from these experiments is that irradiation delays the mobilization of the normal defensive forces until the graft has produced enough reaction against itself to inhibit further growth and to cause regression. The author concludes that at least two factors are concerned in the production of this immunity to foreign cells, of which one is affected by the x rays, while the other is not. Special care has been taken throughout these experiments to ensure uniformity of experimental conditions and accurate standardization of dosage.

### THE PHILOSOPHY OF SCIENCE

*What Science Really Means. An Explanation of the History and Empirical Method of General Science* By Julius W. Friend and James Feibleman (Pp 222 7s 6d net) London George Allen and Unwin Ltd

If men of science and general readers do not know what science is about it is certainly not for want of books on the subject. In the book before us Messrs J. W. Friend and J. Feibleman set out to tell us *What Science Really Means*, and the wrapper of their volume advertises two other volumes, to which six Fellows of the Royal Society have contributed, apparently having much the same laudable object. Messrs Friend and Feibleman, even if by summarily dismissing many writers of ability as logically confused or incompetent they sometimes irritate the reader, have produced an interesting volume.

They hold strongly that we ought to have a sound philosophy of science, but candidly face the common sense objection that scientists who adhere to different philo-

sophical interpretations do not disagree about their scientific work. "Does this mean, then," they ask, "that the question of the reality of the scientific subject matter is meaningless?" Perhaps this *ad captandum* question suggests a certain defect of philosophical method. Because sincere Protestants and sincere Catholics are often patterns of Christian virtue, sensible people do not ask rhetorically whether there is any meaning in the difference between the two religious systems. The analogy is indeed relevant to our authors' undertaking, they argue, we think correctly, that a difference of philosophical standpoint may affect the growth of science and must affect the attitude towards science of the outsider. They point particularly to the so-called social sciences as the victims of a false philosophy. Their general argument that scientific method is uniform, that there is no antinomy between empiricism and rationalism, no warrant for holding that induction is *the* method or deduction *the* method of progress, we take to have been proved by the practice of all investigators. We doubt whether, *in practice* there has ever been any disagreement on the point. It is not probable that the Empiricists whom Galen abused really did medical "experiments" at random, really tried everything impartially. It is quite certain that Galen, with all his love for philosophical general principles, did many odd experiments, with no other reason than to gratify his curiosity—which, as Karl Pearson once said, is the dominant motive of any real researcher.

When the reader comes to the end of the book, to the future, he may have legitimate doubts whether any philosophy, whether the most eloquent exposition of what science means, will be comforting. "There is a deadly logic involved between the given stage of a social order and the given stage of science. Though some small leeway may be allowed, their ability to separate is definitely confined within certain limits. Therefore the understanding of science on the part of a society is requisite for both science and society." That any large part of society will "understand" science any better than the mother of Zebedee's children "understood" the Master's doctrine, or will ever think of science as anything but a means of increasing the *commoda vitae* is improbable. Tolerance, not understanding, is the best we can expect in any society which, like most existing societies, is ruled not by reason but by emotion. The danger is that toleration, as a practice, is by no means secure even in the countries where it is most praised, and is extinct elsewhere. Even our authors implicitly (on p. 199) commend pure science to the public on the ground that in the long run the purer science is the more likely is it that practical results will be obtained. Few can now be found to defend scientific pursuits explicitly on the ground that it is interesting to "find things out," whether the "things" are of any practical importance or not. Such an argument can only secure a hearing in a tolerant society.

### HEALTH ADVICE FOR THE LAITY

*Brush Up Your Health* By Hugh Clegg M.A., M.B. MRCP (Pp 119, with 20 drawings by Ward, and diagrams 2s 6d net) With a foreword by Lord Horder London J. M. Dent and Sons Ltd 1938

One of the major problems of public health to-day is that of making medical knowledge available in useful form to the general public. Medical science is very rich, but its only really profitable employment is in prevention. Most ill-health is caused by human ignorance and folly. The need for sound and attractive books on the everyday realities of health and illness is not nearly met. There

is a great deal of rubbish written by persons who are not medically qualified and have besides this negative handicap the positive one of being obsessed with some unbalanced prejudice in favour of a particular regime. Dr Clegg's little book is a breath of fresh air. It has the great advantage that it is written by a doctor with wide knowledge of recent discovery and current knowledge and with a grasp of the application of this vast mass of learning to the simple facts of bodily health. Moreover the author's experience in presenting information saves him from the error of being schoolmasterish. He says what he has to say in a conversational manner that makes the easiest reading and he enlivens his discourse with quiet humour. The incongruous little illustrations also add much to the book as a good sauce improves food. In the first chapter he tells the reader how to take stock—how to find out how much health he already has by means of a searching little questionnaire. The reader apporions marks as he thinks fit and then adds up the score. After that Dr Clegg deals in detail with the principal constituents of diet with alcohol and tobacco obesity, sight, constipation and teeth. A sudden page of laxative advertisements is typical of his happy employment of humorous surprise to hold the attention. The chapter on "Bringing up your Children" is full of condensed wisdom and that on "Bringing up Yourself" of applied psychology. Exercise, the skin, milk, preventive inoculation and the fear of disease are only a few of the other subjects treated by a rapid fire of fact, sound inference and helpful suggestion. This little work contains an incredible amount of meat and a few tough bits which those who take a different view will reject. Moreover some of his advice would seem to postulate an independence and a prosperity which only a smallish percentage of the populace possess and in fact he goes so far as to counsel. To diminish the risk of getting cancer of certain exposed sites take care to get into or remain in the upper and middle class (that in which the incidence of such cancer is least) and not to fall into the class of unskilled workers. But on the whole the book is a valuable contribution to the task of securing that intelligent co-operation of the lay public without which the doctor can do little good.

### A HISTORY OF NURSING

*The Story of the Growth of Nursing—as an Art, a Vocation and a Profession*. By Agnes E. Pavey, SRN. With a Foreword by Sir John Weir, K.C.V.O. (Pp. 426, 15s net). London: Faber and Faber, 1938.

The how and why of any sphere of human activity are always of interest. The origins and growth of medicine, the early attempts at the care of the human body, whether of helpless infants or of the feeble and aged or of the injured and sick, are subjects of interest to all who ponder the development of the social side of human life. Indissolubly linked with this is the growth of nursing as a necessary part of the provision for human care. Miss Agnes Pavey's book gives as inclusive and informative an account of the birth and development of each phase of nursing from the earliest to the present time as we have read. She shows what widely diverse external factors have influenced or determined the lines upon which nursing grew and how greatly social factors and historical events have directed that growth.

After an introduction showing the influence upon pathology and medicine of primitive religion of superstition and folk lore of early ideas and of wars and of religious prohibitions, the author proceeds to the gradual discovery of the right causes for phenomena in the human

body and in the world around. Then follows a rapid but very effective and interesting review of the records of the conditions of the ancient world—in Crete, Chaldaea, India, China, Greece—and so to the strong humanitarian influence of the early Christian Church through the Middle Ages until the resurgence of nursing in the nineteenth century. The author shows that although the seeds of modern nursing were sown in the remote past its full growth did not occur until recent times. Now there is no part of the world where good nursing is not valued and desired. She adds that nursing offers a wide sphere of useful and interesting activity to the women of our land. It is no longer the expression of a mystic art possessed only by the favoured or the gods or demons. Nor is it a work of self-abnegation or religious fervour undertaken as a penance or for spiritual solace and uplift nor even is it entirely a selfless answer to the call of human suffering. Much less is it a shunned and rather repulsive activity of the ignorant woman to whom no other calling is open. It has been all of these. But Florence Nightingale made it a dignified secular profession for which a thorough and arduous training is necessary.

The book is well written, it is most entertaining to read. We can conceive few more suitable gift books likely to captivate the mind of young women who are wavering in their choice of professional work.

### NEURO-OPHTHALMOLOGY

*Neuro Ophthalmology*. By R. Lindsay Rea, B.Sc., M.D., M.Ch., FRCS. (Pp. 568, 141 figures, 19 coloured plates. A coloured frontispiece, 42s net). London: W. Heinemann (Medical Books) Ltd., 1958.

To the sprawling and unsystematized literature dealing with the borderland of neurology and ophthalmology Mr Lindsay Rea has added a comprehensive volume which makes a brave attempt to bring together a diffuse mass of information. As such his book is to be welcomed and his industry can only command respect. There is much in this volume that will be new to expert ophthalmologists and neurologists and not a little that should be known more widely than it is. There is so much in the book that is helpful that the reviewer is loath to draw attention to its serious defects. The material collected covers such a wide range that analysis, assessment and critical systematization are essential. The collection of facts is a starting point of a comprehensive treatise but not by any means its end. The facts are here but the critical survey is almost completely lacking, making the book essentially a collection of raw material. Innumerable and lengthy extracts from different authors, very often saving the same thing in different words, a loose style in introducing these extracts and but little attempt to reduce the mass of opinions into a coherent statement of fact are features to be found with distressing frequency. It is creditable to give acknowledgment to writers on the subject but when this is carried to the length of almost religious veneration for every passing statement not always original or illuminating the reader has a burden which he should not be asked to shoulder. The consciousness of unity and balance that are the essential feature of a book as opposed to a systematic collection of printed abstracts are sadly lacking. Yet as already pointed out *Neuro Ophthalmology* contains a vast amount of useful information not readily available. As a starting point for anyone who wishes to follow up the literature on some clearly defined aspects of neuro-ophthalmology it can be recommended without reserve.



As a critical survey clarifying issues and hammering out broad principles in an important and ill-defined subject it leaves much to be desired

### COAL GAS, BENZPYRENE, AND CANCER

*The Cause of Cancer* By David Brownlie BSc (Pp 208 7s 6d net) London Chapman and Hall 1938

The author of this book is a chemist with special knowledge of low-temperature carbonization. His thesis is very simple. Benzpyrene has been proved to possess carcinogenic properties, it is formed during destructive distillation of coal in the manufacture of coal gas, it is known to be present in coal tar and *may* be present in coal gas, if it is present in coal gas it *may* escape combustion and contaminate food cooked in gas-stoves and give rise to cancer among the urban population who live largely on food cooked in gas stoves. After chapters devoted to inaccurate generalities and fallacious statistics the author proceeds on the assumption that benzpyrene is in fact, present in coal gas and does escape combustion when gas is burnt, and that consequently benzpyrene causes cancer. Arguments as plausible and as silly could be brought forward to show that electric stoves cause cancer. Thus ultra-violet radiations cause cancer, the electric stove may give off ultra-violet radiations, the use of electric stoves has increased during the last twenty years and cancer has also increased during the last twenty years, therefore electric stoves cause cancer.

It is surprising that a scientific man did not first of all determine definitely whether or not coal gas does contain benzpyrene and if it does, whether or not the benzpyrene is destroyed when coal gas is burnt. The reviewer has had this point determined for him by chemists, and the answer is that coal gas does not contain benzpyrene and that when benzpyrene is added artificially and the gas is burnt the benzpyrene is destroyed. The author of the book ought to have acquainted himself with the facts concerning benzpyrene as a carcinogenic agent, it is established beyond all doubt that application of benzpyrene to the skin causes skin cancer in some species of animals and injection subcutaneously causes sarcoma, but that ingestion of benzpyrene has no effect.

This book is likely to cause unnecessary fear and even alarm among the general population, already sufficiently oppressed by the dread of cancer.

### Notes on Books

In his pamphlet *The Evolution of Chronic Rheumatism with Impairment to Correspond* (H K Lewis and Co, 2s 6d) Dr R FORBES FOWLER makes a plea for a more rational treatment of this important condition. No one treatment is likely to be suitable at all stages of the disease for the patient changes not only his manifestations but also his reactions to remedies in the course of years. Obviously prevention is better than cure, and for this purpose the author pleads for the establishment of clinics at which frigid-sensitive people can be trained to react against changes of temperature by means of contrast baths.

Dr E PILLET's book *Analyse Physique des Calculs Urinaires et Biliaires* (Paris, Masson, 25 fr) presents the results of an entirely new form of study in relation to pathological material. The methods of the science of crystallography have been applied to the elucidation of the structure of crystals and calculi. The outcome is an enrichment of our knowledge in regard to intimate detail, though the basic conclusions which have already been formulated using the cruder methods of proximate

chemical analysis are not found to be in need of fundamental alteration. The volume is illustrated by a number of very striking photographs showing in minute detail the crystalline structure of various forms of calculi, both urinary and biliary.

*Studien über die Prognose der Okkulten Kindertuberkulose*, by Dr GILLIS HERLITZ is a reprint from *Acta Paediatrica* Volume XIX, Supplementum II, and is published at Uppsala by Almqvist and Wiksell. The author of these studies on the prognosis of occult tuberculosis in children re-examined 1,457 children under 15 years of age, of whom about half had been Pirquet-positive and the other half negative, after a lapse of some ten to fifteen years. He concludes, as the result of his investigation, that a child who is tuberculin-positive but free from tuberculous disease beyond a primary complex—that is, a child suffering from occult, not manifest, tuberculosis—under normal conditions is more likely than a tuberculin-negative child of the same age to acquire a manifest tuberculous disease within the following ten to fifteen years, and to die from it. This increased danger continues for the child suffering from occult tuberculosis after it has reached adolescence. And so it is a greater disadvantage, at least for the first two to three decades of life, to have been infected with the tubercle bacillus in childhood than if the infection occurs later on.

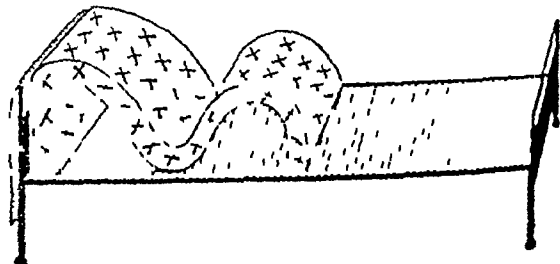
Reprints of papers on research work from the wards and laboratories of the London Hospital during 1937 have been bound together in paper covers and the volume is obtainable from Messrs H K Lewis and Co at 7s 6d.

### Preparations and Appliances

#### MATTRESS AND BLANKETS FOR FOWLER'S POSITION

Dr CHARLES C BREWIS (Mippowder, Dorset) writes: The accompanying rough sketch illustrates my idea of an easy, quick, and efficient way of obtaining and maintaining Fowler's position, so frequently required for the nursing of acute cases of many kinds. I can hardly hope that the idea is original, but I have not seen it used during my twenty-five years' experience, nor have the several doctors to whom I have explained it.

The mattress is arranged as illustrated and two blankets are used to keep it in position, one is laid the full length



of the bed and the second is partly draped over the head of the bed and partly laid over the first blanket. The second blanket is then drawn over the fold in the mattress at the head of the bed and the first blanket is turned back over the head of the bed. The second fold in the mattress is thus helped to keep it in position. The first blanket is indicated in the sketch by a lined area and the second one by the stippled or dotted area. The cavities are filled with pillows or sandbags and the free end of the mattress can be prevented from slipping by the addition of a biscuit or, in fact anything to make up the bed. Pillows can be arranged on either side as arm rests. The arrangement is a great improvement on the 'donkey', it is simple and it works.

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## RECREATION FOR THE WORKERS

The span from primitive magic to modern medicine covers not only a qualitative but a quantitative change. If it be true that environment exercises a profound effect on health through an almost bewildering range of physical and mental influences then it becomes a problem to define the limits of medicine in a highly complex world. As each new development takes place we find convincing evidence that health is affected for better or for worse. If health is affected medicine is involved. Where does it end? Are we deploying our forces over too wide a field? There is a limit to the interests that each of us can embrace without loss of efficiency in regard to the hard core of medical practice—namely alleviation of distress and assistance to the healing powers of Nature. But the limit is widely set and it must be admitted that few reach out fully to explore it. Those who do so find that the greater the mastery they acquire over fields of interest outside medicine the greater is their power to understand the forces that operate on their patients the greater becomes their power to advise and the more fully do they exercise the preventive and constructive sides of medicine. Disease must be cured if possible but after all disease is but the end result of a chain of physiological failures. It is the doctor's duty to prevent those failures if he can. That the complex social and economic structure of our time makes the field a large one is no excuse for a failure to extend the frontiers of medicine to cope with the growing need. The challenge is out and as a profession we accept it. If economic conditions affect food supplies if social changes lead to increased rents if industry uses more intricate solvents we are thereby brought into contact with the basic causes of the problems we have to solve. Medicine as a force on the constructive side of social life has to study the causes of clinical phenomena even if it carries us back through emotional factors to the very roots of peace and war and to the basis of individual and national fitness to survive.

If fitness means anything it means this: the fitting of human beings to fulfil their lives in a manner consistent with the fullest physical and mental development that innate qualities allow.

Further we have to improve those innate qualities. Medicine has become a function of social biology. How can we escape this challenge to the highest effort that has ever been demanded of a single group? We cannot and we do not desire to. In the welter of new forces that are at present impinging on society the doctor can no longer stand aside detached and concerned only with the care of the sick. He has a part to play in the evolution of new systems of living. In the *Supplements* of May 28 and June 4 Dr Karl Haedekamp has given us a glimpse of what the German doctor is doing. Dr Haedekamp remarks that the method must vary according to national characteristics but he has said and implied enough to make us all reconsider our position *vis-à-vis* the State. For us it is a question of whether we will mould the system or allow the system to mould us. In the National Fitness Council this country has a nucleus for a constructive effort which may produce great things and with the creation of a Medical Committee to advise it we hope the ground is now prepared for a drive in the advance of social medicine which could set in motion an urgently needed nation-wide scheme of constructive medicine to cope with the health aspects of the great trek that Western society has now embarked on. As an illustration one of many which could be chosen of the type of new interest medicine must embrace we can take the subject of recreation among the industrial population.

The Industrial Welfare Society has for many years advised employers to help in the creation of sports clubs for their employees. This sounds a simple and useful thing to do but looking through the Society's new booklet<sup>1</sup> one is immediately aware of a new significance possessed by the results of its pioneer work. A channel has been made but water in quite inadequate volume flows down it. The main obstacle is lack of space and equipment for the development of recreational activities by all workers and not merely those employed by the firms who are enlightened or fortunate enough to be able to provide facilities. The multiplicity of interests and the encouragement of small voluntary societies for the pursuit of private ends are healthy both for the community and for the individual. It is to be hoped that this informative and well-thought-out booklet will give added encouragement but when it comes to space and equipment it is surely a job for the National Fitness Council to see that on a basis that all can afford facilities are provided up and down the country so that clubs can keep their identity complete and develop freely with the use of equipment and grounds well laid

<sup>1</sup> *Recreation in Industry: A Guide to Existing Facilities*. Industrial Welfare Society, 1, Hobart Place, Westminster, S.W. 1 (post free).

out and economically maintained on a large scale by the community. In other words, let us have a public service of facilities for healthy recreation in its widest sense. It would be a capital investment yielding a self-supporting return from fees paid by private individuals or by clubs and societies formed within industry. The medical profession struggled hard to create such public utility undertakings as public sanitation and safe water supplies. It operates a vast health insurance scheme. It now reaches out to see whether it cannot enable bodies like the Industrial Welfare Society to increase their usefulness by the creation of self-supporting public undertakings in recreational facilities so designed that schools, universities, industry, and the general public would have the best return from an economically well-managed and well-laid-out series of centres where, among other things, the social mingling of different groups would be facilitated. We would press for Sunday opening, without which the scheme would be futile, and we would encourage all our men to play their games exposed to light and air, so that bronzed backs and pride of carriage should no longer be a Continental virtue.

This is one theme. There are many more. Unless, however, we as a profession are going to use our every endeavour to widen life and enrich health on its social side we shall let our influence slip away, and the rising generations, though they may seek our aid for the relief of pain, will cease to regard us as architects of health. The quack will flourish but true health decay. Moreover, the quest of a security for sound health lies at the root of violent political change. Change is good but violence is retrograde. Let us act in time and use our influence to effect with rapidity those developments which will minister to social welfare and progressive stability.

## NATURE AND NURTURE. THE STUDY OF TWINS

"It is maintained by Helvetius and his set that an infant of genius is quite the same as any other infant, only that certain surprisingly favourable influences accompany him through life especially through childhood, and expand him while others lie close-folded and continue dunces. Herein, say they consists the whole difference between an inspired Prophet and a double-barrelled Game preserver: the inner man of the one has been fostered into generous development, that of the other, crushed down perhaps by vigour of animal digestion and the like has evaded and evaporated or at best sleeps now irresuscitably stagnant at the bottom of his stomach.

With which opinion cries Teutelsdröckh. I should as soon agree as with this other that an acorn might by favourable or unfavourable influences of soil and climate be nursed into a cabbage, or the cabbage seed into an oak. Nevertheless, continues he. I too acknowledge the all but omnipotence of early culture and nurture, thereby we have either a doddering dwarf bush,

or a high-towering, wide shadowing tree, either a sick yellow cabbage, or an edible, luxuriant green one."

In the century since those words were written Francis Galton and his prophet Karl Pearson spread the gospel of Eugenics, of the paramount importance of Nature, which found acceptance among an educated minority and has inspired some legislation. But even those rulers who, like the German dictator, pay the largest legislative tribute to the principle of genetic purity attach the greatest practical importance to early culture and nurture. The accurate delimitation of the parts played by heredity and environment is still an uncompleted task. Drs Newman, Freeman, and Holzinger—a biologist, a psychologist, and a statistician—in a joint study of twins have made a valuable contribution to the subject.<sup>1</sup> The plan of the research which has been the task of ten years was this. In the first place fifty pairs of identical (monozygotic) and fifty pairs of fraternal (dizygotic) twins were to be studied. Here the members of the twin pairs were brought up together, so one could compare different correlates of genetic constitution under common environment. The subjects were physically measured in all appropriate ways and subjected to batteries of tests designed to explore the cognitive and conative sides of the psyche. In the second place, as the result of great pains and expense, nineteen pairs of identical twins were secured who had been separated early in life and brought up under different environmental conditions. These subjects were tested with the same minuteness as those of the first part of the research, and in each case a personal history and photograph are provided.

The results are set out with a wholly admirable modesty and precision. The statistical treatment is clear and not unduly technical, perhaps, even at the cost of lengthening the book, the general reader would have welcomed a full description of the educational and mental tests used, but these are of course available in many textbooks. It would be impossible to summarize adequately the findings in the space at our disposal. Perhaps this sentence from the general conclusions is the best attempt. "We feel in sympathy with Professor H. S. Jennings's dictum that what heredity can do environment can also do." But to leave it at that would create misconception. The evidence of the paramount importance of Nature (if under that term we include pre-natal environmental conditions) in creating differences when pairs under like environment are considered would have gratified such enthusiasts for "Nature" as Karl Pearson himself. From 75 to 90 per cent of the difference variance

<sup>1</sup> *Twins: A Study of Heredity and Environment*. By H. S. Newman, Frank N. Freeman and Karl J. Holzinger. Chicago Press. Cambridge Press. 1935.

is attributable to Nature for physical traits and on the average three quarters of the variance in intelligence also. But the study of separated twins brings out clearly enough the importance of environmental difference particularly in the cognitive aspects of the mind. Intelligence at any rate the manifestation of intelligence is very susceptible to nurture. "From the viewpoint of the educator it is important to note that extreme differences in educational and social environments are accompanied by significant changes in intelligence and educational achievement as measured by our tests." We have some hesitation in quoting isolated passages the authors are extremely careful reasoners and never lose sight of the difficulties of the work. They have risen wholly above the controversial plane on which Nature and nurture, heredity and environment are set in opposition. Indeed Carlyle a century ago or for that matter Francis Galton did not make that mistake.

### TREATMENT OF DISSEMINATED SCLEROSIS

Although disseminated sclerosis has been fully studied over many years in regard to its clinical symptomatology pathology and histology the primary cause and essential nature of the disease remain obscure. From time to time different theories and methods of treatment have been suggested. Their multiplicity indicates all too clearly the insecure scientific foundation upon which they have been built and the baffling nature of the problem. At present attention is focused on Putnam's vascular theory of the disease and this has led to renewed interest in Rovle's method of treatment of the disease by section of the thoracic sympathetic trunk. Wetherell has reported eight cases treated in this manner and in the present issue of this *Journal* Koch and de Savitsch have reported fifteen cases in ten of which varying degrees of improvement resulted from the operation of cervical dorsal sympathectomy. The essential feature in Putnam's theory is that the vascular changes found in the sclerotic plaque—namely the acute thrombi and fibrosis of the vessel walls—are the primary pathological changes giving rise to the characteristic lesion in the surrounding nervous tissue. He bases this on his observation that experimentally produced venous obstruction can give rise to pathological changes very similar to those of disseminated sclerosis. The aetiological factor of the disease therefore lies either in an altered coagulability of the blood or in a local vascular abnormality. It is not by any means accepted that the vascular changes which Putnam has produced experimentally are identical with those of the sclerotic plaque and he has not established the primary significance of the vascular abnormalities. It is doubtful therefore if a sound scientific basis for sympathectomy can be found in Putnam's work and it is not known what effect this operation would have on the venous channels. Apart altogether from Putnam's work sympathectomy

may be beneficial for other reasons and Wetherell rationalizes the procedure on the basis of an improved circulation and decreased sympathetic irritation of the cerebral blood vessels. Chemical factors however probably play a larger part than those of neural origin in the regulation of the cerebral blood vessels so that it is not by any means certain that a large and prolonged increase of blood flow through the sclerotic plaque will result from sympathectomy. This may however be the case but it is clear that this method of treatment must be justified in the present state of our knowledge only by the clinical results obtained and those carrying out the treatment should be very careful in assessing the results. As the operation is one requiring considerable skill and experience it would seem only to be justified by the certainty that considerable improvement in the patient's condition is to be expected. A practical difficulty also arises in that the thoracic and lumbar part of the spinal cord cannot be considered to be denervated as sympathetic fibres are still present along the radicular arteries. It seems clear at all events that patients with disseminated sclerosis can stand such an operative procedure without risk of aggravation of symptoms and the further history of the cases already treated will be awaited with interest.

### AETIOLOGY OF ICTERUS GRAVIS NEONATORUM

The symptomatology and familial association of icterus gravis neonatorum with hydrops foetalis universalis and congenital anaemia and the frequent demonstration of erythroblastosis in these conditions have formed the subject of numerous studies during the past few years. There has been no common agreement as to aetiology. Dr Ruth R. Darrow<sup>1</sup> has now made an extensive survey of the views that have been advanced up to the present time. With regard to the familial association with congenital oedema on the one hand and congenital anaemia on the other it is pointed out that a much more fulminating process is demonstrable pathologically in congenital oedema than in icterus gravis but that there are definite points of similarity. Thus the liver and spleen are likely to be enlarged in both conditions extra-medullary haemopoiesis is commonly seen in both and the placenta which is much enlarged in hydrops is sometimes slightly enlarged in icterus gravis. Similarly there may be localized oedema in cases of icterus gravis and oedema in cases of jaundice and anaemia may occur in either state. In one instance one twin showed oedema and the other developed icterus gravis. In the same way common factors and familial relationships are seen between icterus gravis and congenital anaemia. The author points out that any aetiological explanation must allow for the apparent absence of a hereditary factor that normal children may be born before those affected that the condition is often familial and the parents apparently healthy that the pre natal history seldom provides evidence of significant factors and that any theory of causation must correlate the association of jaundice oedema and anaemia of the

<sup>1</sup> *Arch. Pediat.* 1935 25 373

newborn, the clinical and post-mortem findings, and the erythroblastosis. The explanations advanced may be divided into those primarily implicating the mother and those in which the cause is sought solely within the child. Among the former nutritional disturbance due to defective maternal diet during pregnancy has been advanced to account for congenital anaemia but cannot be held responsible in many cases of icterus gravis, and in the same way maternal disease, particularly syphilis, can be excluded in most recorded cases. Toxaemia of pregnancy has been considered a cause by some authors, but again can only have been operative in a small proportion of cases. The views relating the condition primarily to the foetus are now generally based on the assumption that the jaundice is associated with an excessive destruction of erythrocytes, which is borne out by the observation of increased erythrophagocytosis and haemosiderosis in the liver and spleen. Gierke and others have regarded a primary constitutional anlage defect of the haemopoietic system as the most likely cause. The familial incidence is too large to make a Mendelian recessive character probable. Ruth Darrow considers the various possibilities of toxic action on the liver, and puts forward the hypothesis, as best explaining the facts, that passive sensitization to his own haemoglobin has been transferred to the foetus from the mother, primarily through the placenta during intra-uterine life and subsequently by her milk.

### BIO-ELECTRIC DETECTION OF CANCER

The search for a method of detecting cancer at an early stage never ceases, and efforts have lately been made to identify individuals susceptible to cancer. Recent work in this direction is recorded by Burr, Smith, and Strong<sup>1</sup> with the use of electrical methods the theoretical basis of which is by no means easy to grasp. Over a period of several years Burr has accumulated data from experiments on growth and regeneration in the nervous system, and "by integrating this data with Kappers's theory of neurobiotaxis, Ingvar's galvanotropism, and the studies of A. B. Mathews and E. T. Lund" he and Northrop<sup>2,3</sup> evolved an electrodynamic theory of life according to this all living organisms possess a "steady-state" electrodynamic field, which imposes a characteristic pattern on the development of the organism. On this theory cancer should produce a change in the electrical pattern of the organism, and in the hope of detecting it the potential differences between various points were measured in mice from two of Strong's inbred strains. The axial potentials were higher in the strain which does not develop spontaneous cancer than in the one in which the incidence was high, the differences between the two strains were 10.7 times the probable error. Repeated measurements on young mice of the susceptible strain revealed an increase in the potentials across the chest shortly before tumours were palpable. The increase reached a maximum soon after tumours became palpable and disappeared in two to four weeks. In old mice there

was no anticipatory rise, but a continuous rise from the appearance of the tumours until death, in mice of intermediate ages the results were irregular. The potential differences between tumours and normal tissues were rarely outside normal limits, and the measurements across the chest disclosed an effect of the tumour on the whole organism. Burr and his colleagues are hopeful that the method will eventually serve for the diagnosis of early cancer. It is harmless, and with the necessary machinery could be tested extensively on animals and man. The transitory character of the changes in some animals and the variation of the results with age are evident drawbacks in a diagnostic test. Indeed, when we read that "in general it may be said that in all probability potential differences in the organism are to some extent related to the age of the organism" we are persuaded that the position is not so clear as might appear at first glance.

### JOURNAL OF SOCIAL OPHTHALMOLOGY

The *Journal of Social Ophthalmology* is a new venture of the International Association for the Prevention of Blindness. There is a foreword by Mr. Bishop Harman, who states that blindness is one of the worst, perhaps the worst, of the physical disabilities of humanity. He also points out what an economic disability arises from blindness, both to the sufferer and also to the society or State of which he is a member, both by reason of the cost of the care of the blind person and of the wastage of effective labour. He maintains that it is more economical to spend money on the prevention of blindness than on the care of the blind. There follows a statement of the aims of the new journal by the editor, and an account of the proceeding of the general assembly of the International Association held in Egypt in December, 1937, at the same time as the fifteenth International Ophthalmological Congress. Two subjects were under discussion and are here reported. The first was a national prevention of blindness programme in a tropical country, in which Mr. A. F. MacCallan (Great Britain), Dr. T. Sadek (Egypt), Dr. P. Toulant (N. Africa), Colonel Wright (India), and Professor Wey (Dutch E. Indies) took part. Stress was laid on the need for the effective control of trachoma. The second subject was the social aspect of the prevention of blindness, opened by Dr. Park Lewis of the U.S.A., who said, "Let us unite in fighting the common enemies disease and poverty, and we shall no longer need to build up defences against each other." Dr. P. Baillart of Paris showed what effective service could be got by associating social workers with the ophthalmological clinics established in the hospitals. The new journal is in no sense one of clinical ophthalmology. Its aim makes it an entirely new venture. It is issued with the one purpose of keeping the need for continuous social service before the minds of those upon whom the responsibility for the health of the several countries devolves. The first number is printed in English and French in parallel columns. As occasion suggests other languages may be employed. The journal is sent free to subscribers to the Association, 66, Boulevard Saint-Michel, Paris.

<sup>1</sup> *Amer. J. Cancer* 1938, 32, 2-30.

<sup>2</sup> *Quart. Rev. Biol.* 1935, 10, 322.

<sup>3</sup> *Growth* 1937, 1, 78.

### EFFECT OF OESTRIN ON THE BASAL METABOLIC RATE

The generally beneficial and often spectacular effects of oestrin in the treatment of various menstrual and menopausal disorders have naturally resulted in its almost universal administration in these and allied conditions. With so little experimental evidence as a guide it is natural that dosage should be purely empirical and that there should be the widest variations in the quantities prescribed for the same degree of deficiency. Further though the general tendency of late has been to reduce the dosage to the original rather small amounts, many authorities believe these to be useless and advise the regular injection of quantities of from 10 000 to 1 000 000 units. There is a good deal of evidence for the symptomatic value of these larger doses but the question of possible harmful effects has never yet been satisfactorily settled. The cancerogenic bogey has been fairly completely laid but the possibility of other toxic sequelae remains uncertain. To elucidate this problem Dr. Mary Collett and her co-workers<sup>1</sup> have studied the effect of the therapeutic administration of oestrin on the basal metabolic rate. They found that single intramuscular injections of 1 000 international units caused a fluctuation in the B.M.R. varying from minus 8 to plus 14 per cent. of the original level with a greater and more lasting alteration following consecutive doses. In addition the effects of oral administration persist longer than if equivalent amounts of the hormone are given by injection over a shorter period. These metabolic effects are interesting for while reflex thyroid stimulation has been generally recognized few clinicians have appreciated its possible extent and Dr. Collett's figures serve particularly to emphasize the importance of close metabolic observations when prescribing large doses of oestrin to patients suspected of incipient hyperthyroidism.

### CONTROL OF MALARIA IN HONG KONG

The annual report for 1936 of the Director of Medical and Sanitary Services Hong Kong records an increase in the crude death rate from 22.9 to 26.6 per 1 000. As in previous years respiratory diseases were responsible for some 40 per cent. of the total deaths a state of affairs attributable to overcrowding, poverty and the expectorating habits of the population. It is stated that malaria from which Hong Kong originally derived its reputation for unhealthiness has now practically disappeared from the populous centres of Victoria and Kowloon. As a result of the work of the malariologist and his staff it is now known what species of anophelines exist in the colony where they breed and on what they feed. The colony now possesses all the knowledge necessary to successfully combat malaria. Any particular area can be freed from the menace of mosquitoes and kept free provided there be the power to act, the machinery to carry out the necessary measures and the means to pay the cost. It is stated that the number of deaths attributable to malaria during the year under review was 503 giving a death rate of 0.5

per 1 000. This may be regarded as a remarkably low figure. The report records a severe epidemic of Shiga dysentery. The outbreak started in the month of November when twelve European children developed symptoms so severe that seven of them subsequently died. Within eleven days there were forty-seven cases, all but four being European children under 10 years of age. The only further death however was that of a Chinese infant, the son of a servant employed in a house where two of the original victims of the outbreak had died. Investigation showed that the common causative factor appeared to be a special brand of high-grade milk. Although however the stools of 113 workers were examined no Shiga bacilli were isolated from any of them and it was impossible to incriminate a carrier.

### COMMISSION OF PHARMACOPOEIAL EXPERTS

The Technical Commission of Pharmacopoeial Experts appointed by the Council of the League of Nations at its meeting in January last met at Geneva in May. The Commission's task was to prepare a programme of studies, choose suitable drugs for examination and determine a uniform method of analysis and preparation of the drugs selected. The necessity for such work arises from the difficulties encountered by pharmacists in dispensing prescriptions for travellers from foreign countries and in the replenishment of medicine chests or ships at ports of call. Unification would in addition be of great advantage to manufacturers and would facilitate commerce in drugs between nations. Further it would assist in the comparability of the results of medical treatment in different countries. The Commission prepared a list of the more important drugs which it proposed to study and codify. Draft schemes for the preparation of monographs on the drugs were agreed upon and a number of general principles were settled. The list of drugs was divided amongst the members of the Commission for the purpose of study in collaboration with experts in their own countries.

### PROFESSOR FREUD IN ENGLAND

Professor Sigmund Freud accompanied by his wife and other members of his family arrived in London on June 6 from Vienna having travelled overnight from Paris. The Home Office has given him an unrestricted permit to live in this country and he has taken up residence in a house in Elsworthy Road, Hampstead. Professor Freud whose eighty-second birthday was on May 6 is visiting England for the first time for sixty-two years. His intention is to spend the remainder of his days here in study and research. The new German authorities in Austria have consented to allow his library and personal effects to be sent after him, but his publishing house in Vienna has been closed. Dr. Anna Freud on behalf of her father has denied rumours that he or any members of his family were under arrest in Vienna. The medical profession of Great Britain will feel proud that their country has offered an asylum to Professor Freud and that he has chosen it as his new home.

<sup>1</sup> *Amer. J. Obst. Gynec.* 1937, 34, 639.

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## TONSILLECTOMY

BY

LIONEL COLLEDGE, F.R.C.S.

The indications for tonsillectomy present a problem of daily occurrence varying widely with individual patients, and in practice we must sometimes depart from general rules laid down in academic discussions. Once the question of tonsillectomy has been raised in a particular case there is a tendency towards the view that it can do no harm and always does good by freeing the patient from a focus of sepsis, either actual or potential, and from attacks of tonsillitis, and therefore the sooner the operation is done the better. This doctrine may apply to many patients, but it is far from true in relation to children, to whom it has often been ruthlessly applied. A certain vagueness and difference of opinion on this point is inevitable in the absence of an exact knowledge of the physiology and functional activity of the tonsil in childhood, although various unproved theories have been advanced, but clinical study provides some practical information.

### When to Perform Tonsillectomy

Frequently, if not normally, the tonsils in the early years of childhood become enlarged, and this enlargement has been regarded as an indication, with more right as a justification, for removing them. It should in fact be considered primarily as an indication for preserving them, unless the enlargement is so great as to produce mechanically obstructive symptoms, which is quite rare. The nature of the needs in response to which the enlargement occurs is unknown, but these needs are probably nutritional or arise from some defect in nutrition, which will be revealed by research, for it is much commoner in children brought up in poor circumstances than in those for whom an abundant supply of suitable food, fresh air, and light is available. If this hypothesis is correct tonsillar enlargement in early childhood is compensatory in character, and should be treated by improvement in hygiene rather than by extirpation, and this view has the practical support of the observation that recurrence by enlargement of the lingual tonsil and adenoid tissue in the nasopharynx is a common post-operative sequel. It is therefore wise, unless urgent indications are present—and this is rare—to defer any operation until at least the age of 5 and preferably until 7 or even later. It must also be made clear what advantage the child gains if the operation is performed between the ages of 4 and 10 years. Kaiser studied this question in two large groups of children, using one as a control.

Two groups, each comprising 2,200 children, were observed over a period of ten years. In one group the operation of tonsillectomy was performed, and in the other it was recommended but not performed. The benefits obtained in the first three years became less conspicuous in later years, so that the clinical condition of the members in the two groups became more alike. Thus the immediate freedom from sore throats was not maintained and seven years later 10 per cent in the first group were found to be still subject to them. The incidence of rheumatic fever proved to be 33 per cent less in those

children whose tonsils had been removed, but the operation has no influence in preventing recurrent attacks of rheumatism when performed after the initial attack. It does not protect against rheumatic carditis, nor does it affect the incidence of chorea. It gives some slight protection against scarlet fever, but reduces its incidence by less than 50 per cent. The influence of tonsillectomy on the incidence of diphtheria is more pronounced. Consequently, in recommending the operation on relative indications certain benefits to the child may be legitimately claimed, but these can be easily exaggerated.

Frequently recurring sore throats and enlargement of the cervical lymphatic glands are absolute indications for tonsillectomy in children. Nasal obstruction and otorrhoea in the absence of caries of the middle ear are indications for the removal of adenoids but not necessarily of tonsils, and in small children preservation of the latter is the best guarantee against recurrence of adenoids. In bigger children, in whom the physiological need for lymphoid tissue is diminishing, it is customary to combine the two operations, and this usually gives a satisfactory result without great risk of recurrence.

In older persons the tonsils may be removed on account of recurrent sore throats or quinsies, on account of persistent enlargement or infection in a tonsil which has been the site of tonsillitis, or to eliminate a source of focal sepsis which is causing remote symptoms such as rheumatism, arthritis, neuritis, iritis, cardiac irregularities, and digestive disorders. In the first group the indication is an absolute one provided that no general contraindication to surgical intervention is present, in the second group the indication is relative, and a reasonable connexion must be established before recommending tonsillectomy, but in well-chosen cases the elimination of a septic focus has a strikingly beneficial effect on a remote lesion. The age of the patient is not of much consequence provided that definite indications are present, and tonsillectomy is sometimes of great benefit to old people, but in the absence of clearly defined indications the result is apt to be disappointing in elderly persons.

Before recommending tonsillectomy for focal sepsis it is necessary to demonstrate that the tonsils are grossly infected, and this is not always quite simple, because in such cases the tonsils are often small, are concealed by the faucial pillars, and at first glance may appear to be absent. Two small tongue depressors should be used, with one of these the back of the tongue is depressed, and with the other the anterior pillar is pressed aside, exposing the underlying tonsil. By this manoeuvre a gush of sour foul smelling pus can often be expressed from the crypta magna or supratonsillar fossa. A crimson patch on the anterior pillar is an indication of this condition underneath.

### Technique

In the matter of technique a variety of different opinions and details of procedure are current in the operation for removal of the tonsils. In children it may be done with the guillotine or by dissection, but it is a good general rule not to use the guillotine after the age of 15 and many surgeons now prefer the operation by dissection for patients of all ages. The soft friable tonsils, which tear readily, are more easily removed with the guillotine than



by dissection. The guillotine method has also the advantage of rapidity but some practice is necessary to acquire sufficient dexterity. Compared with the dissection method however it has the disadvantage that the deep surface of the tonsil not always being smooth an outlying part projecting through the capsule may be shaved off and remain in the tonsil bed and again occasionally a vein in the tonsil bed is buttonholed and being unable to retract continues to bleed through the lateral opening. The portions of tonsil are sometimes left behind after the guillotine operation if not skilfully performed is insufficient ground to condemn it because the same thing may occur after dissection.

Whichever method is employed the aim of the operator should be to remove the whole tonsil without injury to the faucial pillars or to the palate. Healing then takes

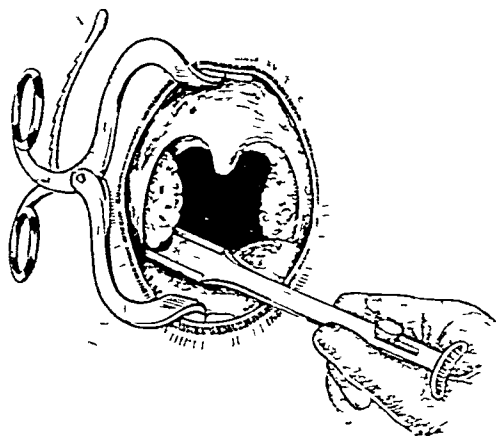


FIG 1

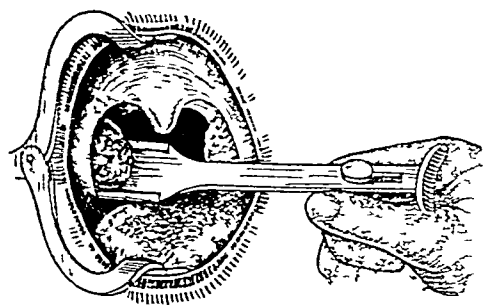


FIG 2

place with the minimum of scar tissue—and distortion. If the uvula is accidentally included in the ring of the guillotine or the pillars are torn during dissection gross deformity of the fauces and soft palate may be produced.

#### Enucleation by the Guillotine

The operation can be performed under a short anaesthetic with ethyl chloride but a more deliberate procedure under ether is preferable. The patient lies on the back with the shoulder slightly raised on a low pillow or a folded towel. The anaesthetist stands at the head of the table and the operator on the right hand side of the patient. The mouth is opened with a Doven's gag but not so widely as to stretch the pillars of the fauces. The tongue is depressed and the ring of the guillotine passed under the lower pole of the right tonsil with the handle of the instrument pointing to the left of the patient

(Fig. 1). The hand is now depressed so that the tonsil is forced forward by the instrument on to the alveolar eminence of the mandible (Fig. 2). This eminence is formed by the projection of the last molar tooth at the end of the mandibular ridge. The handle of the instrument now lies across the left cheek of the patient. The left forefinger is then removed from the corner of the mouth and pressed against the anterior faucial pillar so that the entire tonsil is gently pushed through the ring of the guillotine (Fig. 3). The tonsil can be felt to slip through the ring and the blade is then closed by the thumb of the right hand with the cutting edge between the anterior pillar and the tonsil. The hand is now pronated and the tonsil lifted out held on the lower surface of the guillotine (Fig. 4). To remove the left tonsil the hands must be used in the reverse way. The guillotine being held in the left hand or alternatively the operator must move to the head of the table and stand behind the patient. In this way the tonsil is removed complete, including the supratoronsillar fossa.

The smallest guillotine which will allow the entire tonsil to pass through the ring should be used, and the blade

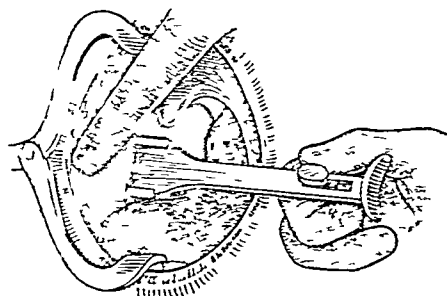


FIG 3

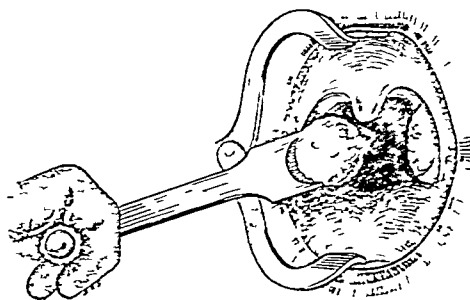


FIG 4

should be slightly blunted so that it will follow the line between the capsule of the tonsil and the side of the pharynx without cutting into the substance of the tonsil. The blade also crushes the blood vessels supplying the tonsil but must not be too blunt otherwise that organ is torn out of its bed instead of being cut away.

#### Enucleation by Dissection

For the operation by dissection either a local or a general anaesthetic may be used but the former is only suitable for adults. For local anaesthesia the patient is placed in the sitting position and a little 5 per cent cocaine is applied to the fauces. An injection of 2 per cent novocain with 1 in 10,000 adrenaline is then made with a long needle in five spots in the fauces around each tonsil—one above two behind and two in front. If general anaesthesia is employed the patient is usually



placed on the back with the head well extended, so that blood runs down into the nasopharynx. The mouth is opened with a Doyen gag and the tongue drawn forward, or a Davis gag which holds down the back of the tongue

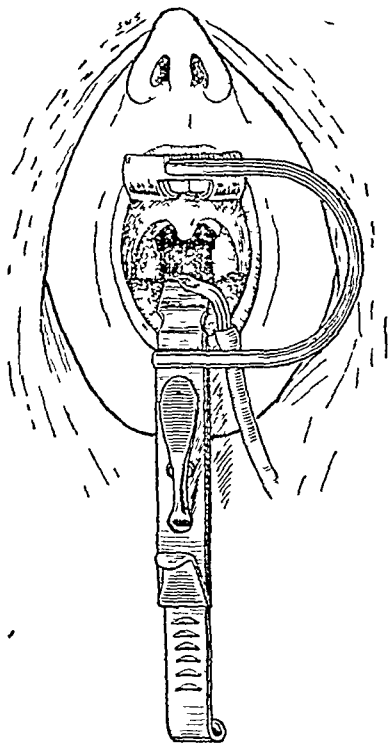


FIG 5

and at the same time draws it forward, may be used (Fig 5). The latter gag is popular and is much employed, but it is complicated and easily put out of order, and is not necessary. It is quite as satisfactory to use the position recommended by Butlin, in which the patient is turned on to the right shoulder. With the mouth gagged

even for a nervous subject. Simple general anaesthesia by inhalation and insufflation is the safest and most satisfactory method. The operator either sits at the head of the table or stands on the right-hand side, according to the patient's position, and he should wear a head-light. The tonsil is seized with forceps and the mucous membrane divided at its reflection from the anterior pillar or to the tonsil. The mucous membrane is thus divided well behind the free edge of the pillar, which is kept covered with an intact surface of mucous membrane. This opening can be made with the point of a knife or closed fine dissecting forceps, and the white smooth capsule of the tonsil is exposed, showing that the dissection is proceeding in the right layer (Fig 6). If there has been a previous operation the tonsil is often surrounded by an annular scar, and the anterior pillar must be picked up and the incision made underneath it to expose the capsule before the tonsil can be grasped. This is a satisfactory routine method of beginning the dissection. By blunt dissection close to the capsule with long-handled scissors and dissecting forceps the tonsil is then shelled out of its bed, the mucous membrane being divided all round the periphery (Fig 7). The lower pole is often well defined, but in many cases it merges into the lingual tonsil and must be divided with scissors (Fig 8)—a more satisfactory method than the use of a snare, as the division can be made with greater precision, without the risk of leaving a part of the lower pole behind. The tonsil is not in direct relation to the superior constrictor of the pharynx, but is separated from it by the palatopharyngeus. This muscle spreads out, sending a slip that is attached to the capsule of the tonsil just below the middle, and accounts for the frequency with which muscle fibres are found on the capsule of excised tonsils.

The blood vessels torn across by the blunt dissection stop bleeding quickly as a rule if gauze swabs are applied, or, if this fails, pledgets of cotton-wool often succeed. Any persistent bleeding usually comes from a vessel about the middle of the tonsil bed, less commonly at the lower end near the tongue.

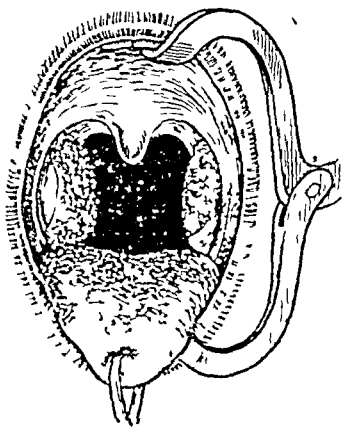


FIG 6

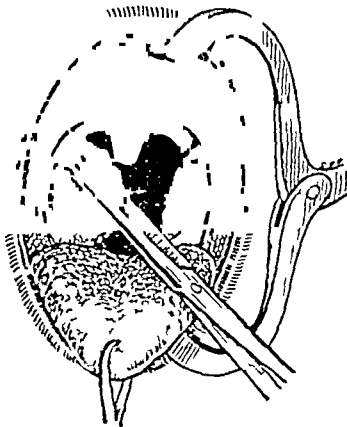


FIG 7

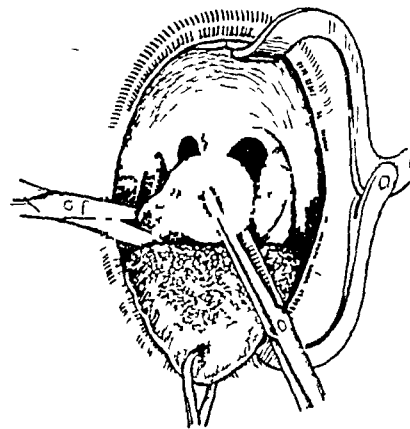


FIG 8

open and the tongue drawn forwards, blood collects in the cheek and runs out of the corner of the mouth.

Intratracheal anaesthesia with gas-oxygen and ether is often employed, but it causes increased bleeding, though it has the advantage that the entrance to the larynx can be packed off round the intratracheal tube. Preliminary medication with avertin, paraldehyde or barbiturate compounds is also often used with the object of allaying the apprehensions of the patient, but much post-operative anxiety is thus caused and it lacks any real justification.

Many instruments have been devised to apply ligatures to bleeding-points. The simplest and most certain method is to pick up the bleeding vessel with long forceps and to under-run and tie it with a silk ligature on a Reverdin needle. This leaves the faucial pillars quite intact. In the few cases where this fails the Reverdin needle can be used to transfix and suture the pillars together with silk threads. This obliterates the raw tonsil bed, but it causes scarring and the sutures should be divided on the following day.

If reactionary haemorrhage occurs within the first two hours and does not cease very quickly it is better to give the patient a second anæsthetic and secure the bleeding point. Secondary haemorrhage occasionally appears about the sixth day after the operation when the slough which forms over the raw surface separates. This seldom causes any serious trouble but to avoid it the patient should remain quiet wherever the operation is done until the seventh or eighth day.

#### Adenoids

When adenoids require removal at the same operation it is usual to do this after the tonsillectomy has been completed. The palate is drawn forwards with a finger or with a palate retractor, the adenoid curette is inserted into the nasopharynx until the beak touches the vomer and is then swept firmly round following the curve of the nasopharyngeal vault. After the operation the patient should be watched carefully for any reactionary bleeding as this may be concealed if the blood is swallowed instead of ejected. Powdered aspirin or aspirin gargle usually suffices to relieve pain but for adults an injection of morphine is permissible on the evening after the operation. Cold soft food may be taken the following day. Ice cream is welcomed by children. A purge is usually indicated within the first forty-eight hours to rid the bowel of swallowed blood. Castor oil is suitable but salines should be avoided as they are very painful to swallow.

#### After-treatment

A rare but tiresome complication is temporary paresis of the soft palate due to infiltration and swelling of the muscles. This causes difficulty in swallowing and regurgitation particularly of fluids through the nose which may last for about ten days. Some additional care is then necessary in the choice of suitable soft food such as scrambled eggs, porridge with cream or mashed potatoes, meat, toast, biscuits and cheese are particularly difficult to swallow in this condition and are accordingly to be avoided. The difficulty in taking fluid may be overcome to some extent by suction through a tube or a straw.

## ANTI-VENEREAL MEASURES IN SCANDINAVIA

### COMMISSION'S REPORT

Should venereal disease be dealt with compulsorily in this country or not? This question was raised before the Trevethin Committee in 1923 in Parliament by the Edinburgh Corporation in 1928 and on a number of other occasions by various bodies and individuals. Many arguments have been put forward for and against such a policy and with a view to obtaining some definite evidence of its value or otherwise the British Social Hygiene Council in June 1936 urged the Minister of Health to send a commission of experts to Denmark, Sweden, Norway and Holland to study conditions in these countries. The commission which consisted of Colonel L. W. Harrison and Mr. Dudley C. L. Ward of the Ministry of Health, Dr. T. Ferguson of the Department of Health for Scotland and Dr. Margaret Rorke of the Royal Free Hospital, London has just issued its report.\*

#### For and Against Compulsion

Before considering this report it may be instructive to consider some of the arguments which have been advanced

\* *Venereal Measures in Certain Scandinavian Countries*, 1st and 2nd Reports on Public Health and Medical Subjects No. 83, H.M. Stationery Office (2s. 6d.). A general article on the Commission's visit to Scandinavia appeared in the *Journal* of June 4.

for and against a policy of compulsory treatment. Those in favour of such a policy point out that (1) many persons infected with venereal disease in a contagious form never come under medical care and thereby spread infection (these are chiefly women); (2) large numbers of patients at V.D. clinics default before they have completed treatment and/or become non-contagious; and (3) parents frequently fail through ignorance or unwillingness to have their congenitally syphilitic children treated adequately and therefore prejudice their chances of growing up to become healthy and useful citizens.

Those against point out that compulsory measures (1) may induce the infected to conceal their disease from fear of exposure; (2) are not easy to apply in such a densely populated country as this on account of the difficulty of tracing those who try to avoid the law; (3) may open the way to blackmail; and (4) are not consistent with the British idea of the liberty of the subject.

The Trevethin Committee appear to have considered compulsory measures impracticable and inadvisable and the Edinburgh Corporation Bill was defeated in the House of Commons on its second reading by 126 votes to 93 so that it would seem that general opinion in this country is against compulsory treatment. On the other hand there are those who point to the remarkably low incidence of syphilis in three countries which have adopted compulsion in order to form an opinion as to how far conditions are comparable between the countries mentioned and Great Britain it may be useful to consider each country in turn.

#### Denmark

Denmark has an area of 16,575 square miles and a population of 2,664,919 giving a density of 224 per square mile which is about one-third of that of England and Wales. Copenhagen has a population of 666,269 and of the eight and nine provincial towns only two have a population of more than 10,000, nine even having less than 10,000. The population is the more rural than in this country but ports are numerous and communication by sea very free, the former is admitted to lead to a low incidence of venereal disease while the latter allows of its importation.

The standard of education and intelligence of the population are high and public health administration is advanced. Medical education is thorough and occupies a minimum of seven years; a specialist has to spend several years more studying his own and other subjects. The result is that the medical profession has a very high standing and patients attach much weight to the opinions of their doctors.

Legislation for the control of venereal diseases dates back to 1874 and at the present time the law of 1906 is in force. Under this every person suffering from a venereal disease is entitled to free treatment but is obliged to submit to it, concealment and conveying of infection are punishable by imprisonment up to four years; doctors must make a return of their cases, though notification of individual cases is not necessary; a defaulter may be punished and compelled to attend for treatment if necessary by the police; a certificate of freedom from venereal disease is required for marriage and if either party at the time of consummation was suffering from a venereal disease in a communicable form a judicial separation or a divorce may be obtained.

#### TREATMENT AND INCIDENCE

Free treatment is available for all; there are seven centres in Copenhagen and in most other places treatment is carried out by district health offices or specially authorized local practitioners. Ample bed accommodation is provided. The cost is about one million kroner per annum. Serum tests for the whole country are carried out at the State Serum Institute and by this means there has been established a unique institution for the statistical study of syphilitic infection. Some 110,000 blood samples are received each year.

It is considered that very few persons evade the law or compulsory treatment. The police have rarely to be called

† About 2-4% per annum.

in and false certificates by unscrupulous doctors are almost unknown

The incidence of venereal disease is not easy to ascertain—though it is well known that there has been a substantial reduction during recent years—owing to the fact that reports do not distinguish between fresh and old infections. After reviewing all the facts the commission came to the conclusion that in 1936 new infections with syphilis were about 600 per annum or 1.6 per 10,000 of the population for the whole country and about 6 per 10,000 for Copenhagen alone. These figures may be compared with 14 and 52 in 1919, and 7 and 26 in 1926. There has been no comparable reduction in the incidence of gonorrhoea: the rate for Copenhagen fell from 119 in 1919 to 76 in 1936 while for the whole country the rates were 48 and 28 respectively. On the other hand the rate for the whole country was approximately the same in 1936 as it was in 1906 though during this period it had fallen from 112 to 76 in Copenhagen alone.

### Sweden

Sweden has an area of 173,547 square miles and a population of 6,249,489, with a density of 39.5 per square mile—about one eighteenth of that of England and Wales. There are only forty towns with a population over 10,000 but sea communications are very free. Standards of education, both lay and medical are high and comparable with those of Denmark.

In the eighteenth century the west coast was one of the principal sources of venereal infection and since 1787 various measures have been drafted to combat this. In January 1919 the *lex venenis* came into force. This makes treatment compulsory till the patient is non-infectious; free treatment is available for all cases must be reported but not by name; transmission of infection is punishable by imprisonment; marriage certificates are necessary; defaulters are reported, sought out and if necessary compulsorily removed to hospital; and the treatment of venereal disease by unqualified persons is prohibited. Treatment facilities are available in polyclinics in all towns with a population of 20,000 or over; in the country treatment is carried out by municipal and rural district medical officers employed by the State. The cost is about 500,000 kronor per annum.

The Swede is very amenable to the law and few patients require coercion. It is computed that less than 10 per cent of cases have to be reported as defaulters and of these only 20 to 25 per cent cannot be traced though on the other hand a considerable proportion of sources of infection (in 1934 107 out of 175) cannot be found. The incidence of syphilis in all Sweden was 10.2 per 10,000 in 1919, 1.2 in 1925 and 0.67 in 1935; the corresponding rates for Stockholm being 44.46 and 1.8 respectively. As regards gonorrhoea in Stockholm the maximum of 203.7 per 10,000 in 1918 fell to half this figure in 1922 and to 65.0 in 1935; for the whole country the figures were 28.18 and 1.8 respectively.

### Norway

Norway has an area of 124,588 square miles and a population of 2,881,514 with a density of about 23 per square mile; about 69 per cent of the population is rural. Oslo (253,124) is the only town with a population over 100,000, and there are eighteen principal towns. Communication by sea is very free but otherwise geographical and social conditions favour a low incidence of venereal disease. Education is of the same high standard as in Denmark and Sweden.

As regards legislation venereal diseases are dealt with under the laws relating to all infectious diseases principally those of 1860 and 1927. Under these a doctor must report cases to the local health officer and furnish a summary of all cases every year and patients suffering from a venereal disease must submit to treatment in hospital if required to do so. Licensed houses were abolished in 1880. Persons knowing themselves to be suffering from a contagious disease render themselves liable to imprisonment if they expose others to infection and it is illegal to place a syphilitic child under the care of another

person, or to enter a household as domestic servant in similar circumstances. Marriage is also barred whilst a person is contagious. Further measures were contemplated in 1923, such as free examination and treatment, compulsory treatment, and compulsory notification, all at the expense of the State but these were not adopted however merchant seamen are treated free, and free arsphenamine is to be supplied.

Under present conditions indigent persons may obtain free treatment, and syphilis and gonorrhoea come within the scope of the compulsory health insurance scheme otherwise the patient must bear the cost. The peak of the incidence of syphilis in Oslo occurred in 1919, when the rate was 36.2 per 10,000, this fell to 19.5 in 1926 and to 7.5 in 1935 though it was only half this in 1934, for the whole country the figures were 6.6 in 1919, 3.7 in 1926, and 1.6 in 1935. As regards gonorrhoea Oslo showed a rate of 77 per 10,000 population in 1919 rising to over 110 in 1927 and falling to 67 in 1935; the corresponding rates for all Norway were 22, 25, and 19 respectively.

### Holland

Holland has an area of 12,692 square miles and a population of 8,474,506, giving a density of 667.7 per square mile. It has three towns with populations of over 400,000 and sixteen other large towns. It is therefore much more densely populated than Denmark, Norway, or Sweden, and this fact together with its heavy traffic by sea or river would be expected to render it more vulnerable to venereal infection. The standard of general education is high and the medical curriculum lasts for a minimum of seven years. The arrangements for the control of venereal disease depend largely on voluntary effort, free treatment except for merchant seamen is not provided, there is no notification or compulsory treatment and prostitution is not State regulated. A system of social service has, however, been set up in nine of the eleven provinces under the auspices of the Green Cross, White Cross, and White-Yellow Cross Societies subsidized to some extent by the Ministry of Health. In the circumstances no statistics are available but some figures have been collected relating to the year 1935. The incidence of syphilis is stated to be 1.06 and of gonorrhoea 5.6 per 10,000 of population; the former figure is probably near the mark, but the latter too low.

### Conclusion

The Commission found that, in general, compulsory measures do not meet with serious opposition, the general public is co-operative, and extreme measures are seldom necessary. In the Scandinavian countries certain factors prevail which make for the smooth working of anti-venereal disease measures. These are briefly (1) homogeneous populations, (2) a high sense of communal responsibility, (3) implicit trust in a highly trained medical profession largely State-paid, (4) uniformity of medical practice, and (5) the venereal diseases are not looked upon as shameful. Notification appears to be efficient in Sweden, incomplete in Denmark and even more so in Norway.

The effects of anti-venereal measures on fresh syphilis have been very great in both Denmark and Sweden where treatment is compulsory, but the fact that in Holland and England and Wales, where reliance is placed mainly on persuasion, they have been almost equally successful makes it doubtful whether this is due directly to compulsion. As regards fresh gonorrhoea the same seems to hold, since Sweden and Denmark, where compulsory treatment is in force, show rates of 17.9 and 27 per 10,000 as against 8.7 for England and Wales and 5.6 for Holland where treatment is voluntary, even though the last two figures are probably on the low side.

As a result of its inquiries the Commission came to the conclusion that compulsion did not lead to the control of disease in Denmark and Sweden, mainly on account of national characteristics; on the other hand Holland and England and Wales were able to show almost equally good results in reducing the incidence of syphilis.

None of the five countries can point to any great success in reducing the incidence of gonorrhoea and the explanation for this is not altogether clear. It would appear that syphilis is more easily and more quickly rendered non-contagious while it is probable that the general public regards it as a much more serious disease than gonorrhoea and therefore is more inquisitive to secure treatment.

The main desiderata for an anti-venereal diseases campaign therefore appear to be adequate facilities for free treatment for all an enlightened law abiding public and the removal of the odium attached to these diseases. The comparative failure in the campaign against gonorrhoea suggests that much more research—and the necessary funds for carrying this out—is required before a reduction comparable with that in syphilis is likely to be obtained though treatment by sulphanilamide holds out some hope of success.

## NATIONAL INSURANCE IN AUSTRALIA

Last week the Australian House of Representatives passed the second reading of a Bill for an Act to provide for insurance against certain contingencies affecting employees and the wives, children, widows and orphans of employees and for other purposes. The complete text of the Bill has only now come to hand in England and its provisions are described in the present article. In the course of the debate in the House of Representatives the Australian Government announced that it was prepared to make some extensions of the Bill, and made certain statements as to its action thereunder. The most important of these will be given after the proposals as set out in the Bill have been described but any comment upon these and other controversial points and upon the reaction to these proposals of the medical profession in Australia may be more conveniently reserved until fuller details have reached this country.

### Scope of the Bill

The Bill deals both with national health insurance and with pensions. It does not touch the subject of unemployment insurance but Mr Lyons the Prime Minister announced that a measure with regard to this would be introduced though he could not say at what date this would be. On the other two matters it is known that the Federal Government has been making wide and careful inquiry for at least two years past and that it has had very material help in such inquiry from the Ministry of Health in London. It is not surprising therefore, to find that the provisions of the Bill in general follow with some closeness those embodied in similar legislation in Great Britain nor that the Bill is a long and complicated one and contains a number of clauses of exact significance of which it is not easy to determine and which indeed, must be largely conditioned by the terms of rules and regulations that will be made hereafter. There are 188 sections and four schedules.

After an important clause of definitions the Bill provides that there shall be set up a National Insurance Commission consisting of three commissioners appointed by the Governor General but there is to be a deputy commissioner for each State who shall have such powers and functions as the Commission directs. Moreover, the Commission may delegate any of its powers and functions in relation to any matters or class of matters or to any particular State or part of the Commonwealth so that the delegated powers and functions may be exercised by the delegate with reference to the matters or class of matters specified or the State or part of the Commonwealth specified in the instrument of delegation. These powers of delegation and the functions assigned to a deputy commissioner are very important for the respective spheres of the Commonwealth and of the several States may possibly give rise to difficulty or dispute. It is understood that the States have control of health legisla-

tion and administration within their own areas, and that it is only because the present Bill is regarded as insurance legislation that it becomes a Federal matter. In such a wide and intricate service as is proposed the spirit in which it is administered and its general uniformity of administration are of the first importance and it is possible that the subsection which says that every delegation by the Commission shall be revocable in writing at will may not prove unnecessary.

Aboriginal natives of Australia or of the Pacific Islands are not included in the scheme at all. The persons to be insured are of four classes: (1) all employed persons (with certain exceptions on much the same lines as in Great Britain) between the age of 16 years and the age of 65 for men and 60 for women; (2) voluntary contributors below these maximum ages who have been insured as employed contributors for two years and who have ceased to be employed; (3) juvenile contributors employed persons between 14 and 16 years of age, insured for medical benefit only; (4) special voluntary contributors married women previously insured for not less than five years who may elect to contribute for old age pension only. Except for this special provision, a married woman who is not insured by virtue of her own insurable employment does not come within the scheme at all. With regard to medical benefit a voluntary contributor whose total income from all sources exceeds £365 a year is not entitled thereto. On the other hand an insured person who is so entitled and who attains the maximum age or becomes entitled to receive an old age pension remains entitled to medical benefit during the remainder of his life. Persons employed otherwise than by way of manual labour whose rate of remuneration exceeds £365 a year are not included as insured persons.

### Payment of Contributions

The amounts of the weekly contributions to be paid are as follows: (1) By and in respect of employed contributors and by voluntary contributors entitled to medical benefit—1s 3d in respect of health insurance and 1s 9d for the pensions fund for males 1s 2d and 10d respectively for females. (2) By voluntary contributors not entitled to medical benefit males 11d and 1s 9d females, 10d and 10d. (3) Special voluntary contributors 1s. All voluntary contributors pay themselves the whole of the contribution. Employers pay a portion of the contribution in respect of their employees but the proportion imposed upon them is not stated, nor is the amount to be paid by and in respect of juvenile contributors stated but the whole of this contribution goes to the Health Insurance Fund. Presumably these unspecified amounts are to be determined from time to time under a section which states: Contributions at the rates declared by the Parliament shall be levied and paid by the persons by whom the contributions are so declared to be payable. The employer is made responsible for paying the contribution in the first instance but he may recover the employee's share by deduction from his wages or other remuneration. The rates of contribution of voluntary contributors are to be increased by sixpence a week after five years and by a further sixpence in the case of males only after a further five years—that is, from the year 1949. The method of payment is by stamps affixed to cards or books or in such other manner as is prescribed.

The benefits are enumerated thus: medical sickness, disablement additional old age pension widows pensions orphan's pension, dependent child's allowance. There is an important provision that where the Commission has certified that on account of remoteness or any other circumstance related to the locality or nature of any employment the effective administration of any benefits which are specified in the certificate is impracticable the insurance shall be only for benefits other than those specified. Provision is also made for certain free insurance periods corresponding to those in the system in Great Britain.

### Medical Benefit

Medical benefit is defined in almost the exact terms of the English Acts. It comprises general medical practitioner and pharmacist services only, and includes certification. The Commission will make arrangements and enter into contracts or agreements for these services, and regional medical lists will be published. Every registered medical practitioner has the right to have his name included and there is to be free choice by both doctor and patient within the usual limits. However, if the Commission is satisfied that in any State or district such an arrangement is unsatisfactory or inadequate it may make such other arrangement for the supply of the services as it thinks fit. There is to be set up a central medical benefit council consisting of persons representing medical practitioners, pharmacists, employers, and insured persons, and others selected by the Minister in charge of the service. This council is to give advice to the Commission with respect to any matter relating to medical benefit referred to it and will have such other powers and duties as are prescribed. District medical benefit committees are also to be established, with such powers and duties in relation to complaints by insured persons, medical practitioners, pharmaceutical chemists, and approved societies in connexion with medical benefit in the district for which it is appointed as may be prescribed by regulations. If representative committees of medical practitioners and of pharmacists respectively are constituted they may be recognized by the Commission and appropriately used. Any relevant representations made by such committees must be considered by the Commission.

### Cash Benefits and Finance

With regard to the cash benefits, to be administered mainly by approved societies as in Great Britain, the weekly rates of pay are thus set out: (1) Sickness benefit: (a) adults and married minors, males 20s, females 15s, (b) unmarried minors insured for two years, males 15s, females 12s 6d, (c) unmarried minors insured for a less period, males 12s, females 10s. (2) Disablement benefit: (a) adults and married minors, males 15s, females 12s 6d, (b) unmarried minors, males 12s, females 10s. (3) Old age pension: males 20s, females 15s. (4) Widow's pension 12s 6d, later 15s. (5) Orphan's pension 7s 6d. (6) Dependent child's allowance 3s 6d. Sickness benefit, however, commences only on the seventh day of incapacity and not until six months after entry into insurance. The incidental provisions regarding sickness and disablement benefits are much the same as in the English Acts. Additional benefits too are defined as in those Acts. The old age pension begins at the maximum age for insurance—males 65 years, females 60 years. There are a considerable number of clauses safeguarding these various pensions or allowances in appropriate ways.

Part VI of the Bill deals with central finance and Part VII with the constitution, conduct and finance of approved societies. Part VIII contains miscellaneous provisions relating mainly to legal matters regarding disputes, offences, and penalties. There is to be a Board of Trustees for national insurance funds consisting of the chairman of the Commission (who is to be the chairman of the Board), the Solicitor General of the Commonwealth, the Secretary to the Treasury, the Governor of the Commonwealth Bank of Australia, the Commonwealth Statistician, and the Commonwealth Actuary. The Health Insurance Fund and the Pensions Insurance Fund are to be kept separate, and the Medical Benefit Account is to be kept separately within the former. It is to be constituted at the rate of 10s in respect of males and 17s 6d in respect of females for the total number of persons insured in respect thereto. The Government payments to the National Insurance Trust account are to be as follows: (a) an annual amount of £100,000 to the cost of the Commission in the administration of health benefits, (b) an amount of 10s per member to approved societies (other than juveniles) in

respect of reserve values till these are extinguished, (c) an annual amount of one million pounds for the first five years thereafter rising by half a million each year till it reaches a maximum of ten millions, then continuing each year at this maximum.

### Medical Capitation Fee

It is understood that on matters relating to medical benefit the Commonwealth Government has been in negotiation with the Federal Council of the British Medical Association, and that the capitation fee suggested for medical practitioners who enter the service is 11s. This has not been accepted by the profession, and further information is awaited. The two most important statements made on behalf of the Government in the course of the debate in the House of Representatives have been reported thus: (1) medical benefit may be extended to the dependants of "insured males who have voluntarily contributed to existing benefit organizations which will be subsidized by the Government. More than 700,000 families are affected", and (2) there is no intention of "appointing doctors to permanent positions under the Bill if the profession declined to work the scheme on account of disagreement about the capitation fee. Both these statements await elucidation.

## Reports of Societies

### PLACENTAL INFECTION IN MALARIA

A meeting of the Royal Society of Tropical Medicine and Hygiene was held on May 19 at Manson House, Portland Place. Lieutenant-Colonel S. P. JAMES was in the chair and Dr P. C. C. GARNHAM read a paper on the placenta in malaria, with special reference to reticulo-endothelial immunity.

Dr Garnham said that a fruitful line of study in present-day malariology was undoubtedly the determination of the process whereby the indigenous inhabitant of a malarial country overcame his infection. The reticulo-endothelium constituted the chief weapon of defence, and hitherto, in man, the study of this system had been largely undertaken in fatal cases of the disease. The placenta appeared to offer much greater facilities for detailed observations, and by the examination of over 500 placentas all phases of the disease had been carefully studied. The placenta, too, was unique, in that in its intervillous spaces parasites and reticulo-endothelial cells alone were present and the inter-reaction of the two could be easily observed.

The well-known picture of schizonts, phagocytes, etc., was found to be absent in the youngest placenta in malaria and to occur only after the fourth month of pregnancy, it was present only in subtertian infections and was absent in quartan. Examination of placenta obtained from cases in different phases of the disease revealed that at the beginning of a new infection no reticulo-endothelial cells were present though schizonts were extremely numerous. The placenta of a patient who had had malaria for a week showed however, a marked reticulo-endothelial response. In relapses, on the other hand many reticulo-endothelial cells were found practically from the start, presumably because there was a sensitized apparatus still extant from the original attack. In cerebral malaria there was, surprisingly enough, no intrinsic failure of the cellular mechanism. In chronic malaria the intervillous spaces were occupied almost entirely by myriads of reticulo-endothelial cells and lymphocytes. All stages in the transformation of lymphocytes into the former cells by way of the polyblast of Maximow were seen and there was little doubt that this represented their mode of origin. This finding, in human beings corroborated the recent work of T. H. Stæffer, Cannon and Mulligan on the derivation of the splenic macrophages in bird and monkey malaria.

### Origin of Placental Phagocytes

The possibility of an origin for the placental phagocytes from local fixed cells was excluded (a) on histological evidence and (b) as the result of *intra vitam* trypan blue experiments. This dye was absorbed only by the fixed histiocytes and none was ever present in the macrophages. Other authors had shown the remarkable lack of affinity for trypan blue of the monocytes of the spleen. For this reason it was suggested that certain blockade experiments in malaria had been wrongly interpreted based as they were upon the assumption that trypan blue was absorbed by the malarial macrophage. Trypan blue was shown to have a beneficial effect in chronic malaria. A remarkable feature was the periodicity of its excretion in the urine, a periodicity lasting for weeks and occupying the hours from about 5 a.m. to noon each day.

To see if congenital malaria occurred 404 cases were examined. A quarter of these showed positive placental films. The blood of the infants was examined at birth and after seven days, always with negative results. It must not be forgotten that these cases came from hyper-endemic areas where immunity was high and acute malignant infections rare.

### Immunity and Cellular Changes

Major H. W. MULLIGAN in opening the discussion said considerable advances in our knowledge of the immunology of malaria had resulted from the study of experimental avian and simian malaria and of malaria induced for therapeutic purposes in general paralysis of the insane. There was a striking correlation between the acquisition of immunity in malaria and the cellular changes which occurred in the organs. The disappearance of parasites at all stages of malarial infection could be directly correlated with the activity of the differentiated macrophages of the spleen and liver and to a less extent of the bone marrow. In the initial attack the macrophages were comparatively sluggish and there was a variable destruction of parasites (natural immunity) depending on their virulence, progressive lymphoid hyperplasia ensued, but in the terminal phases of the disease there was great destruction of the lymphocytes. In fatal infections with *P. knowlesi* in monkeys and *P. falciparum* in man no immunity was acquired. In *P. vivax* infections in man and *P. cynomolgi* infections in monkeys the termination of the initial attack (crisis), the subsequent low grade ("developed") infection and the immunity to homologous superinfection were associated with acquired immunity characterized by a greatly enhanced activity of the macrophages and consequent destruction of parasites.

In acquired immunity the macrophages which incidentally originated from lymphocytes were greatly increased both in numbers and activity. This occurred especially in those organs such as the liver, spleen and bone marrow which were strategically placed for the removal of haematogenous material where the blood circulated comparatively slowly. The highly specific nature of acquired immunity pointed to the interaction of specific antibodies in the defence reaction—probably of the nature of opsonins. Attempts to demonstrate these hypothetical antibodies had however proved inconclusive. Talaferro had suggested this was because they were produced in a concentration only sufficient to be operative in certain internal organs such as the spleen. Dr Garnham's paper presented new problems. There were unique facilities in the placental sinuses for contact between the blood elements and macrophage cells out as macrophages were not normally present in the placenta, polyblasts of the lymphocytic-macrophage series must come from outside. The absence of mitosis suggested they did not develop from local deposits of haematogenous lymphocytes and monocytes. Dr Garnham had suggested that expulsion of the placenta removed from the body an appreciable proportion of its cellular defence

with resultant occurrence of parasitaemia and fever which were so common after childbirth. But fatigue and loss of blood also induced attacks in latent malaria and were more probably the precipitant factors.

Dr GREEN ARMYTAGE pointed out that the anatomy of the placenta afforded no real reason why congenital malaria should not be extremely common. Apart from the degenerating syncytial membrane there was trauma which must ultimately break to the continuity of the cotyledon. In this way congenital malaria might occur through infection from the maternal blood in the sinuses. He had seen only one case of congenital malaria in a European baby in Calcutta. In his opinion it was the loss of the placenta with its content of macrophages which was responsible for malarial relapses following delivery and not the effects of fatigue and haemorrhage.

### The Humoral Factor

Colonel J. A. SEXTON pointed out that Dr Garnham's work dealt mainly with the cellular factor in malarial immunity, but there was also the humoral factor. In cerebral malaria Dr Garnham concluded that death did not result from any intrinsic failure of the cellular mechanism but he noted that unphagocytosed parasitized red cells were of great frequency and only a proportion of the reticulo-endothelial cells contained pigment. In the speaker's opinion this suggested that even a hypertrophied reticulo-endothelial system was relatively ineffective in the absence of some specific antibody or specific sensitization of the macrophages. As suggested by Clark in 1915 he considered the expulsion of the placenta by ridding the body of parasites as a factor beneficial to the patient. It was not analogous to the effect of splenectomy in experimental malaria since in the spleen originated the major portion of the protective macrophages of the body. Recently Barber and Clark had reported in highly endemic areas like Macedonia and Panama that the parasite rate in babies up to 2 months of age was comparatively low. This suggested a temporary immunity due to the passage through the placenta of some inhibitory substance from the mother to the child or some substance of an immunizing character acquired during lactation. Another possibility was the passage of hypothetical malaria toxin through the placenta resulting in an active rather than a passive immunity.

### General Discussion

Dr G. W. M. FINDLAY said that though the young fibrocytes of the placenta in Dr Garnham's sections contained trypan-blue this dye was strikingly absent from the placental macrophages. Their cytoplasm stained blue with litmus and readily took up Indian ink and Dr Garnham suggested that failure to take up trypan blue was due to their alkaline reaction. Dr Garnham's results with vital staining were at variance with those of other investigators which indicated that an acid and not an alkaline reaction of the cytoplasm of the macrophages would determine the non-appearance of the dye. The reaction of the somatic macrophages to trypan blue and litmus was very different from that of the placental macrophages as described by Dr Garnham. In his observations were correct it was impossible to deduce from the behaviour of the placental macrophages anything in connection with the behaviour of the somatic macrophages toward trypan blue or to assert that blockade of the somatic macrophages by this dye was impossible.

Dr C. M. WENYON said he found it difficult to believe that in chronic malaria the placenta would take over the work of other organs like the spleen, liver and bone marrow and that these organs would suddenly resume it when the placenta was expelled at the end of pregnancy. The placenta was a sort of angioma with maternal sinuses through which the blood moved slowly. Malarial parasites circulating in small numbers came into these sinuses, stagnated there more or less and began to develop as they might have done in a culture tube. They reproduced by schizogony quite apart

from the ordinary process elsewhere in the body. Lymphocytes and macrophages came in of course and began phagocytosing infected corpuscles. But though malarial infection of the placenta might be induced it did not reflect itself in the number of parasites in the peripheral blood, in this it differed from cerebral malaria. It would appear that what went on in the placenta did not protect the rest of the body against malaria. The immunizing process was going on in the spleen and the removal of the placenta was actually removing a great nidus of parasites and not something which was immunizing against parasites elsewhere in the body.

In reply Dr GARNHAM pointed out that if macrophages were being conveyed from the spleen as Major Mulligan suggested one would expect the peripheral blood to show those cells in greatly increased numbers, but only the lymphocytes were increased in the peripheral blood. Colonel Sinton had suggested that infants did not develop malaria until 2 or 3 months old. In Kenya he found it a fortnight after birth and by 2 months at least 30 per cent of the babies were infected. Splenomegaly in Kenya due to subtertian malaria was a comparative rarity. When found it was nearly always associated with quartan or benign tertian malaria. He agreed with Dr Wenyon's conception of the placenta as an extraneous tumour affording conditions similar to the culture tube: there was certainly a much greater concentration of parasites in the placenta than in the peripheral blood.

## Local News

### ENGLAND AND WALES

#### Birmingham United Hospital

The Birmingham United Hospital, consisting of the General Hospital founded in 1766 and the Queen's Hospital founded in 1840, has issued its third annual report. The annual income from all sources rose during 1937 and amounted to £161,705, of which £22,721 represented subscriptions and donations. The ordinary expenditure was £168,265, and reckoning in certain extraordinary receipts and expenditures, the working deficiency for the year comes out at £3,803. In explaining a rise of £10,000 in expenditure the compilers of the report point out that additional departments have been inaugurated and developed and research facilities extended. In the General Hospital a new department for radium-beam therapy has been opened, Lord Austin and Lieutenant-Commander Engelbach generously providing one gramme of radium and necessary apparatus, and the National Radium Commission lending a further gramme. Lord Austin has also provided a fourth deep x-ray apparatus. At the Queen's Hospital one outstanding development in 1937 was the establishment of a department of plastic surgery. Birmingham is on the threshold of important hospital developments, and the new hospital at Edgbaston is the subject of a progress report. There will be no unnecessary delay in the assumption by the United Hospital of the responsibilities for the new buildings and service with the largest possible number of beds for which nursing and domestic staffs can be obtained. From then onwards expansion will take place as quickly as possible but it is pointed out that to provide an entirely new and complete organization to full capacity will take some time, especially with a hospital of such modern design and containing all the numerous departments connected with the special needs of a medical school.

#### A Pharmaceutical Jubilee

A luncheon to celebrate the jubilee of Boots Pure Drug Company was held at the Savoy Hotel on June 2. The chairman was Lord Trent, and the company included the

Minister of Health (Dr Walter Elliot), Lord Horder, and several representatives of the medical and pharmaceutical professions. The chairman said that the word "romance" was often misused, but its use was surely justified in describing the progress of the business which was started by his father, Jesse Boot, in Nottingham in 1838. The one small druggists' shop had been multiplied to close upon 1,200, and the one boy assistant had become a staff of 22,000, of whom 7,000 were employed in the factories that supplied the shops. Lord Trent added that the chief pride of his firm was to regard itself as a servant of the community in all matters pertaining to health and cleanliness, and, in its dealings with its workpeople, a modest contributor to that unprecedented social progress which had coincided with its own history. Dr Elliot, replying to the toast of "His Majesty's Ministers," said that the enterprise conceived in the back street of a provincial town had exemplified many of the qualities which had made the English people great. The country was enormously indebted to the pioneers of industry like the late Jesse Boot, first Lord Trent. Goose Gate, Nottingham, had proved the gate of the goose which laid the golden eggs, and, of course, the Government in the person of the Chancellor of the Exchequer welcomed all such prolific fowl. But such firms were also to be congratulated because they gave the example and set the pace for social developments which in due time the Government adopted for the whole community. A real tribute was due to Jesse Boot as a prince of shopkeepers. Dr Elliot went on to speak of the vast extent of the pharmacy business and the skill and care of dispensers. Viscount Wolmer proposed the health of "The Guests," and especially welcomed the presence of the President of the Pharmaceutical Society and the Lord Mayor of Nottingham. A response was made by Mr W. J. Jordan, High Commissioner for New Zealand.

### SCOTLAND

#### Revision of School Health Records

The Department of Health for Scotland has revised the system of school medical inspection and preparation of school health records, and the new scheme is to come into operation in Scotland at the beginning of the next school session. In a circular which the Department has issued to education authorities explaining the new procedure it is pointed out that, while under the existing arrangements much interesting and valuable information has been made available, experience has shown that there are various ways in which improvements can be made. It is not possible under the present system to make full use of the data obtained from school medical examinations because the results are summarized in terms of defects and do not indicate the number of children involved. The new scheme will provide for information being furnished with the object of reviewing from year to year the progress of children with remediable defects. It will also give a clearer picture than has previously been obtainable of the actual physical state of the school population.

#### Recruitment and Conditions of Service of Nurses

The committee which is inquiring into the recruitment and conditions of service of nurses in Scotland has held two further meetings at which evidence was given by representatives of Aberdeen Royal Infirmary, the Victoria Infirmary of Glasgow, the Educational Institute of Scotland, the Medical Women's Federation, the Royal Medical Psychological Association, the General Nursing Council for Scotland, and the Royal College of Physicians of



Edinburgh This completes the oral evidence which the committee is likely to receive and the committee is now engaged on the preparation of its report

### Presentation to Cupar Doctor

Dr John Macdonald, who has practised in Cupar for forty six years, was presented on May 27 with an inscribed silver salver and a cheque for 250 guineas on behalf of patients in the district and colleagues in the profession Dr Macdonald who is a native of Tobs-mory, graduated M.B., C.M. at Edinburgh in 1885, and after spending some time in London and in assistantships settled in Cupar in 1892 where he became one of the best known practitioners and rendered valuable services to the district in the establishment of the Adamson Hospital

## Correspondence

### Planning of Maternity Hospitals

SIR,—I am in complete agreement with your eulogy of Queen Charlotte's Hospital, and I am sorry if anything which I have written has given the impression that I have overlooked the work of Drs Colebrook and Fry and the other members of the splendid research organization at Hammersmith. The application of much of the knowledge which they have given us is now part of the daily routine work of hospital administrators as well as of obstetricians. I do not think there is any serious risk that such an institution will perish of inanition but hospitals such as this are not going to be built in every little town, and I suggest that we should keep the discussion to the question whether additional new accommodation should be provided in connexion with general hospitals or in independent special hospitals. The "ideological" consideration which prompted my original letter was the desire to see established in the country a service which will meet the needs of all women during pregnancy and in childbirth and not merely care for a selection of the normal cases.

Little special maternity hospitals may be very beautiful institutions but like pirate buses, they skim the cream of the traffic and by so doing they increase the difficulties of those who have to provide a service for what is left. It is true that the normal maternity patient is not a sick woman but a proportion of sick women become pregnant and of pregnant women become sick. If they are not to be admitted to maternity hospitals where are they to go? Must they be nursed at home, or will they be sent to a general hospital, where presumably there will not be a staff qualified to care for such cases?

Whether there should be separate domiciliary accommodation for the nursing staff attending maternity cases is a matter on which there is a difference of opinion. If it is of vital importance, what is to be done about the housing of the nurses who attend the morbid cases which occasionally occur in the best maternity hospitals?

To take the points of your criticism in order

(1) I agree that the great bulk of the work of a maternity hospital concerns normal cases. The total maternal mortality is a very small percentage but I am sure you do not suggest that it is not important.

(2) The medical and surgical complications of pregnancy and labour are relatively uncommon, but it is foolish to

ignore them. In Walton Hospital in 1937 there were 2,958 confinements. Among the cases admitted were 222 in which there was some complicating condition apart from the ordinary toxæmia of pregnancy and the complications of labour. This figure included cardiac disease 46, pneumonia 18, pulmonary tuberculosis 16, acute appendicitis 2, terminal ileitis 1, ovarian cyst 3, erysipelas and cellulitis 3, renal calculus 2, chorea 3, mental disturbance of various forms 6. In addition there were 406 abortions. The principal special maternity hospitals may number among their staffs men qualified to treat these cases but will there be such staffs in the countless little hospitals which will be built if the policy which you advocate is carried out?

(3) The emergencies of a maternity hospital are not invariably obscure.

(4) In many maternity hospitals the pathological investigation of the bodies of those who die or are stillborn is very incomplete. In a general hospital this work comes in the routine of the pathological department and a keen obstetrical resident is not tempted to make an examination himself.

(5) There are advantages in treating cases of puerperal sepsis in a ward attached to a medical unit. Hardly any hospitals have a sufficient number of cases of puerperal septic infection to keep a staff of nurses employed exclusively on this work. The variations in the numbers lead to wide fluctuations in the amount of work to be done but if in the same unit there is a medical ward to which selected medical cases are admitted there is sufficient alternative work to keep the nursing staff together. The nurses can be given special training they make no contact with normal maternity cases yet they remain under the direction of the staff of the maternity department. In my experience this arrangement gives the patients the best chance of recovery.

It does not appear to me to be more difficult to build a department of fifty to sixty beds in connexion with a general hospital than as a special hospital. It will certainly be more expensive to build and administer the special hospital. The insignificant size of the maternity units of many of the important general hospitals is due to the fact that the good will energy and money that might have made them larger have been diverted to special maternity hospitals. I hope that this mistake will not be made on a large scale in the developing municipal service.

The point in your annotation to which I wished to draw attention was the statement that the recommendation of the Departmental Committee was not in accordance with the lessons of experience. The issue under discussion is of great practical importance and I hope it will not be decided on inadequate evidence—I am, etc.

Liverpool May 30

HENRY H. MACWILLIAM

### Regional Enteritis

SIR—I read with interest Mr W. H. Ogilvie's exciting forecast of surgical things to come and with attention his comment on regional enteritis (*Journal* June 4 p. 1193). I have had an opportunity of dealing with three of these cases. The first was one of terminal ileitis at the time of operation I was unfamiliar with the condition but judged it to be inflammatory and more likely to settle down than to do anything else. I left it alone. The second displayed that very curious segmental distribution of the enteritis which has been described by several writers. I left this alone too. Interference to have been effective would need to have been very extensive. The third case I encountered a few months ago. It involved the upper jejunum, but in other respects conformed to the first. It was threatening to become obstructive so I did a short-circuiting operation.



All these patients made rapid and uninterrupted recoveries. Only in the last were the symptoms at all menacing, and anastomosis seemed to be all that was required to put them right. Unfortunately it has been impossible to follow up the first two, and the last has been too recently operated on to be considered out of the wood. She is returning to hospital in a few months for a hysterectomy which had been arranged for before she developed the enteritis and there will be an opportunity of examining the bowel. At least it can be said that in none of these cases did the disease "continue to spread," and it can be surmised that resection is not the only line of treatment especially when it involves such an extensive procedure as removal of caecum and ascending colon as well as small intestine.

Unexplained enteric stenosis is not an uncommon finding. I have seen a multiple stenosis of the ileum which might be explained as an end-result of a segmental ileitis and another localized stenosis of the descending colon which might have had a similar explanation. Is it possible that fibrosis is the most probable outcome of this type of inflammation and that it is best facilitated as well as anticipated by anastomosis?—I am, etc

London W 1 June 4

STEPHEN POWER

### Excision of the Patella

SIR—Does Mr A C F Halford (*Journal* May 28, p 1179) desire to put the standard of bone surgery back to the level at which it was sixty years ago? In the days when Lord Lister worked it might have been considered a severe test to open a knee-joint, but, thanks to the results of his work, to open up knee-joints without introducing sepsis is now the everyday lot of a busy orthopaedic surgeon. In the time of Lord Lister fibrous union, malalignment, or late arthritis may have been accepted as the inevitable, or unfortunate, sequel to fracture of the patella. The operation of removal is an attempt to make the function of the knee-joint perfect even after this fracture.

Damaged tissue can be saved by the antiseptic method. What does this mean? A fracture of the patella may be wired with perfect antiseptic technique, yet aseptic necrosis may give rise to fibrous union. Tilting of the fragments may still take place, leading to friction arthritis, introduced infection is not the usual cause of non union. Apparently one must learn to accept the fact that the patella, like the appendix, is superfluous—a recessive structure. Mr Brooke, in his article in the *British Journal of Surgery* (1937, 24, 733), traces this recession in animals. Fast moving animals do not require a patella either as part of a lever system or as a protector to the joint. In man, except for kicks or bangs with a hockey stick the knee does not sustain sufficient direct minor traumata to need a shield for protection. In kneeling which is probably the most simple common trauma, the patella takes no part, it recedes up into the intercondylar notch of the femur. Patients do not miss the bone after its removal. One of my early and very successful cases was that of a roof plumber: his patella was removed for a comminuted fracture. He now climbs up his ladders with full power of extension, and then crawls about on the slates. In the arthritis cases the loss of protection that may result from removal of the patella is small compared with the relief of pain that follows, since there is no friction between the patella and the intercondylar notch of the femur.—I am etc

London W 1 May 29

G O THURPETT

### Treatment of Carbuncles

SIR,—Carbuncles and their first cousins, boils, have afflicted humanity since the beginnings of time. Was not Job cognizant of the agony of boils (Job ii, 7)? They are mentioned in Exodus ix, 9–11, 2 Kings vi, 7, and Isaiah xlviii, 21. They affect indiscriminately men and women, the adolescent and the aged, the poor and the rich, the robust and the debilitated, men largely predominating. Like the common "cold," their treatment has been most unsatisfactory, as witness the "cures," which are vast in numbers.

One procedure in treatment is definitely bad—namely incision. No pus is evacuated, and spaces are opened for infection to spread both locally and systemically. Sir James Paget was the first to deprecate interference. He once had a patient who, according to Sir D Arcy Power, refused operation and surprised Sir James by getting better without, and with less disfiguration than those upon whom an operation had been performed. One of the oldest treatments (still practised in rural areas) was the plentiful application of hot fresh cow dung. This was apparently as efficacious as it was painful. In spite of its disgusting nature this treatment is not without interest. The dung, on caking provided complete physiological rest, a condition so beloved by Hilton the author of that classic *Rest and Pain*. It also exerted a certain degree of suction increasing the barrier action of the solid oedema associated with these conditions.

The treatment I bring forward is a modification of that of Dr J C Lyth, advocated in his thoughtful and instructive article in your columns. Since its publication I have used it on five occasions—two on the back of the neck, one on the arm, one on the eyebrow, and one on the thigh.

It consists of the application of a small pad of gauze soaked in saturated sodium sulphate on the carbuncle and then hermetically sealing the whole area and for some distance beyond, with elastoplast and leaving for three days when it is found that the site is elevated by a collection of blood and pus. The slough is then in most cases lying free in its base, ready for removal with forceps. In four of the cases the surprising feature was the entire absence of pain, in these the skin had disappeared. In the fifth case the pain was described as terrible, but the slough had separated in three days. In this case the skin was not broken. Dressings are continued every three days until healing has occurred. There is little excoriation, which is a common feature in these cases, and the final scar is very satisfactory.

Since Dr Lyth's article (1935) appeared there have been two very interesting papers by Sir David Wilkie (1936) and Dr G Ovens (1937) recommending elastoplast. There is no question but that the treatment by elastoplast, pure and simple, is on sound lines, giving as it does physiological rest and traction. To my mind, however, the objection lies in the fact that pressure is exerted everywhere including the carbuncle where pressure should be avoided. In the method described the gauze takes the pressure off the site of the carbuncle. What is far more important the osmotic pressure of the hypertonic sodium sulphate is enormous compared with that of the elastoplast and this acts in the opposite direction.

The modifications to Dr Lyth's method lie in the fact that the dressing is left on for three days instead of being changed every twelve hours and in the use of elastoplast as a *sine qua non*. The idea of allowing the carbuncle to stew in its own juice, bathed in laudable fix for three days is not new. I was informed that in Buenos Aires which has always been up to date it was customary

as long ago as 1923 to keep compound fractures to 4 or even weeks without changing the dressings in the basement of the hospital. In spite of the stench many cases did remarkably well. There is to-day a definite swing of the pendulum in favour of less frequent dressing.

Another interesting feature of sodium sulphate solutions is their freedom from the development of moulds such as readily grow on the commonly used glycerin and magnesium sulphate. As I understand there are moulds which grow on almost anything including concentrated sulphuric acid it would appear that Dr Lyth has discovered an almost ideal anti-septic. As a matter of interest I have had some sodium sulphate for three years which is only now showing mould formation. Surely further practical uses can be made of this unique property—I am, etc.

London W 1 June 2 A. P. BERTWISTLE F.R.C.S.E.D.

## BIBLIOGRAPHY

- Donald C. (19 5) *Brit. Med. J. Jour.* 1 967  
 Lyth J. C. (19 5) *Ibid.* 2 503  
 Orens G. (19 57) *Lancet* 2 16  
 Wankle Sir David (19 6) *Practitioner* 137 359

### Multiple Benign Sarcoid and Tuberculous Ulceration

SIR—The ultimate diagnosis of the case described under the above heading on March 26 (p. 673) was derived from Dr J. M. H. MacLeod's statement that "microscopical examination showed an architecture which was typical of the multiple benign sarcoid of Boeck" and as Dr MacLeod not only carried out microscopical examination of the lesions but also had clinical charge of the case during part of the patient's stay in hospital the alternative diagnoses suggested by Dr John T. Ingram in his letter in the *Journal* of April 16 (p. 872) were hardly likely to be overlooked. As mere reporter of the case I feel that it would be presumptuous of me to question the specialist opinion of Dr MacLeod and equally presumptuous to wave aside the criticism born of experience, of Dr Ingram.

I regret that I have little information to add to that already published, particularly as I do not have my original notes with me in this country. X-ray examination of the chest was performed but revealed nothing of significance. The Mantoux reaction was not investigated. As reported none of the therapeutic measures employed had any appreciable effect upon the skin condition, although the leg showed some improvement and after some weeks the patient left hospital and was not available for observation in the out-patient department—I am, etc.,

Glasgow June 2

R. HOWITT WISEMAN M.D.

### Nasal Sinusitis in Childhood

SIR—May I be allowed to make one or two comments on the treatment of allergic sinusitis so interestingly discussed by Mr J. Bernstein in the *Journal* of May 28 (p. 1180). First is there such a condition as allergic sinusitis except as a result of secondary infection? There can be no more acute allergy of the nose than occurs during hay fever at its height when the nose is entirely occluded and the orifices of the sinuses blocked but can there be said to be sinusitis? In more chronic conditions where the air-borne protein as house dust is ever present true sinusitis may occur from a secondary infection as happens sooner or later to all patients with allergic asthma, the cedematous urticarial condition of the mucous

mucous membrane favouring this. Group testing with proteins should always be followed by testing for the individual proteins—dust and dog hair etc—otherwise there may be a slaughtering of innocents that is quite unnecessary. The avoidance of house dust is impossible and desensitization should always be carried out and is remarkably effective.

I do not follow why the patient should sleep with the head uncovered nor the necessity for a basal diet avoiding salt, wheat and wheat products, eggs, milk, and pork in any form. Surely the dermal reactions can straighten the sinuses out and avoid such wholesale restrictions as are practically impossible for the hospital class to carry out. While mucopus usually suggests the presence of micro-organisms its absence is not proof that the cause of the paroxysmal rhinitis is not of a microbic nature and discordable with a post-nasal swab. In short I believe the treatment of these cases of paroxysmal rhinitis is even simpler than Mr Bernstein suggests. The proteins to which the patient is sensitive can be discovered and effective desensitization is available. The offending micro-organisms can be isolated and the correct vaccine used. The necessity for calcium, vitamins, and especially ephedrine is then avoided. Where the mucous membrane is excessively tender zinc ionization is extremely effective. Lastly, there will always be a few cases in adult patients that will remain unbenefited by all endeavours. It is in these cases that the removal of spurs and other intranasal deformities at the hands of the rhinologists proves so effective—I am, etc.

London W 1 May 30

FRANK COKE

### Hearing Aids

SIR—I have been impressed with Mr. Cleminson's article on this subject in the *Journal* of May 21 and I feel it desirable that the medical profession should realize what can be done to assist the deaf and should be able to advise their patients regarding a suitable aid. In the past these matters have been dealt with mostly by certain firms who advertise widely and we all know of people who have been persuaded to buy expensive instruments that have proved of little use.

I have suffered from increasing deafness for the past fifteen years. The simple type of electrical aid proved of comparatively little assistance and although I practise a specialty in which hearing is not of primary importance I was becoming embarrassing to my colleagues and a trial to my friends. The development of the valve aid has revolutionized the whole position. At medical meetings, dinners, etc. with fifty to one hundred people present, I am now able to hear nearly every word of the discussion speeches etc.

I would refer particularly to Mr. Cleminson's remarks on the subject of bone conduction. The Medical Research Council's report No. 219 was issued at a time when there was no firm who made a valve aid fitted with this type of receiver. That is not so to-day. For nearly six months I have used one of the aids illustrated in Mr. Cleminson's article. I have become so dependent on it that I have bought a second instrument as a spare because I should feel completely lost without it. I should like to point out that people with middle ear deafness frequently have good bone conduction, a fact which is often not appreciated by firms who make quite excellent air-conduction aids and tend to overlook the usefulness in these cases of bone-conduction aids—I am, etc.

Ipswich May 27

C. H. C. DALTON

**"Cyclopropane Erythema"**

SIR—I was very interested in Dr Victor J Keating's report concerning the above (*Journal*, June 4, p 1235), as I have recently seen an exactly similar case—namely, a rash closely resembling "ether erythema," but rather more rapid in onset and more evanescent, occurring in a female under 30 who had received as premedication omnopon and scopolamine. She was of rather fair colouring, the type which one associates with odd reactions. I have used cyclopropane pretty extensively, but have only once observed the occurrence of any rash—I am, etc,

June 6

H W LOFTUS DALE  
Honorary Anaesthetist, Royal  
Buckinghamshire Hospital

**Sterilization of Syringes**

SIR—I should like to emphasize that if, as referred to by Mr Delisle Gray in the *Journal* of June 4 (p 1237), the syringe and needle are thoroughly cleaned immediately after use then all that need be done is to wash through the syringe and needle with water, spirit, and then ether, after which they can be dismantled and dried by shaking in the air. Before use, assemble and wash through with ether, spirit, and boiled water, and then they are ready for use.

My experience is that some medical men think that once they have put down a syringe somebody will clean it for them, and I have even seen a needle full of blood dropped into spirit. This is not I assume a rare thing for a locum or a partner to find, nor is it uncommon to hear that 'a syringe has become stuck,' in most cases due to the presence of old blood clot—I am, etc,

Fitcham June 6

RICHARD A MANCLARK

**Assistance to Medical Students from Austria**

SIR—As the matter is one which concerns the profession as a whole, I enclose hereunder a letter which has been circulated to the Deans of the Medical Schools in the British Isles. If a medical education from the first year could be assured for a group of students in the manner indicated, lives at present deprived of hope and prospects would again have meaning. Homes would also be needed, but it is not to be doubted that medical men and others in a position to do so would be gladly forthcoming as adopters. I hope and believe that the example of the London Hospital will be followed elsewhere.

We are all very naturally exercised about the treatment and unhappy prospects of our colleagues in Austria. I think there is general agreement in the profession that there is no longer room for any great increase in the number of foreign doctors allowed to practise in this country and that the best we can do where possible is to offer asylum to individuals.

The question of the medical student seems to some of us to be in a rather different category, and I am wondering whether we might not make some concerted effort to provide opportunities for a limited number of Austrian medical students in the British Isles for whom racial origins or political views have made life in their own country no longer possible.

The London Hospital I understand from Dr Clark-Kennedy the Dean has generously undertaken to take one student free of charge for the whole of his medical curriculum on the understanding that his board and lodging can be privately provided.

I would like to offer the suggestion that each medical school should undertake the free education of one student in this way and on these conditions. You will appreciate that this is a very different thing from allowing dilution with Austrian Jewish practitioners who obtain a quick qualification at a university in this country. By the time he is qualified

a student entered from the beginning of his course would be eligible for naturalization. By that time, also, we may anticipate that the high figures of entry into the profession will in all probability have fallen off.

'I shall be most grateful if you could bring this suggestion to the notice of your school council.'

—I am, etc,

Cambridge, May 30

JOHN A RYLE

**The Kettle Memorial Fund**

SIR,—In the issue of your *Journal* dated May 28, 1937, an appeal was made to the friends and admirers of the late Professor E H Kettle, FRS, for subscriptions towards a Memorial Fund. There has been a generous response to this appeal and a total sum of £730 18s 6d has been received. This sum has been invested in 3 per cent Redemption Stock 1986/96, and a trust fund has been established, with the following trustees: Professor J H Dible, Dr W E Gye, FRS, Professor G Hadfield, Professor W D Newcomb, and Colonel A H Proctor.

It was decided by the Committee that the best method of commemorating Professor Kettle would be by an annual lecture to be delivered in rotation at the medical schools with which Professor Kettle had been associated—that is, the British Postgraduate Medical School, St Bartholomew's Hospital Medical School, the Welsh National School of Medicine, and St Mary's Hospital Medical School, and that the choice of lecturers and arrangements for the lecture in any year should be made by the school at which the lecture was to be delivered.

We are informed that the British Postgraduate Medical School have invited Professor W W C Topley, FRS, to deliver the inaugural lecture. He has agreed to do so and the lecture will be delivered in the autumn—I am, etc,

London, W, June 1

A H PROCTOR,  
Secretary of the Memorial  
Committee

**The M.R.C.P. and Psychiatry**

SIR—A point which perhaps did not receive sufficient emphasis in the letter of 'A M O' (*Journal*, May 14, p 1071) is that insistence on possession of the M.R.C.P. as a necessary step to promotion appears to be a policy not general throughout the service of the London County Council, but confined to its mental hospitals department. That it is not demanded by the Hospitals and Medical Services Committee may be inferred from a scrutiny of the list of recent promotions to senior ranks in that service, but why this difference in two departments of one public authority should exist is not easy to understand. On the whole, medical superintendents of mental hospitals enjoy salaries and emoluments on a scale lower than those of London County Council hospitals comparable in size but under the control of the Hospitals and Medical Services Committee, so that, though their responsibilities are presumably considered to be less than those of their confreres in general hospitals, they are none the less expected to attain a higher standard of medical education. Furthermore, in the mental hospitals service not only is the junior medical officer expected to qualify for promotion by passing this stiff examination, but he is also asked to undertake original work, and that he does not do so to the extent which facilities for research in the service offer is to be attributed very largely to the absorption of all his spare time in study and attendance at classes over a long period. In other words, this insistence on possession of the M.R.C.P. by medical officers seeking promotion has nearly succeeded in killing research in the mental hospitals of the London County Council. Is this progress?—I am, etc

May 26

"MEDICAL SUPERINTENDENT"

## Medical Notes in Parliament

The Intoxicants Bill, which has passed the House of Lords, was read a second time in the House of Commons on May 31 and has been referred to a Select Committee. The Prevention and Treatment of Blindness (Scotland) Bill and the Young Persons (Employment) Bill were read a second time in the House of Lords on June 2. The Mental Deficiency Bill is down for further consideration in the House of Commons on June 16.

The Government will introduce and hopes to pass this session a Bill empowering Trade Boards and Agricultural Wages Committees to provide for holidays with pay and enabling the machinery of the Ministry of Labour to be used in the administration of holiday schemes. The Government will consider later the question of general legislation on this subject.

On June 2 Lord Horder moved the second reading of the Funeral Directors (Registration) Bill to set up a register of undertakers or funeral directors with a board of control over those carrying on this business. The Earl of Munster, speaking for the Government said there was no cogent medical reason for the Bill. The Public Health Act 1936 gave powers to local authorities. Lord Horder then withdrew his motion for second reading.

### Detention of Mental Defectives

In the House of Commons on May 30 Dr ELLIOT moved the second reading of the Mental Deficiency Bill. He said that the necessity for the Bill arose from a decision of the Court of Appeal. The case turned on the question of the interpretation of Section II of the Mental Deficiency Act 1913. The Act said that an order should expire at the end of one year unless continued under certain procedure and the Board of Control considered they had a right to regulate their procedure. Before the Board of Control could continue an order they had to investigate the documents concerned and the Board acting on legal advice had proceeded for many years on the view in general that provided the consideration of the special reports and certificates had been concluded by the Board and they had satisfied themselves in due time that the continuation of the order was required, the final sealing and issuing of the order might be done administratively with such reasonable delay as was unavoidable. That view was upheld by a Divisional Court of the High Court but the decision was reversed by the Court of Appeal. The Government had come to the conclusion that the reasonable latitude of one month should be allowed. The Bill also validated orders which had been invalidated by the previous assumption.

### POWERS OF BOARD OF CONTROL

Mr RHYS DAVIES said that the Opposition did not intend to oppose the Bill. At the same time he thought that Subsection (2) of Clause 1 went very much further than giving an extension of one month to the twelve months provided by Section II of the Act of 1913 and there was some apprehension that the subsection would do more than indemnify the Board of Control against errors which had been committed probably in good faith. He asked if the subsection did not increase the power of the Board of Control to detain persons in institutions and enabled the Board to do things which they could not do at present.

Were they right in the assumption looking at the increased figures of mental defectives in this country that the increase was natural or did it result from a closer diagnosis and a certainment of cases? The figures were appalling. The number of mental defectives under care at the end of 1936 was 82,726 and there was an increase of 3,983 under care in 1936 over 1935. Not all these cases would be affected by the Bill but

a considerable number would be so affected. He was rather alarmed to find that the total of imbeciles, idiots and mental defectives apart altogether from lunatics in this country was over 120,000 representing 2.88 per 1,000 of the total population.

Mr MORENO said there was a tendency now with regard to juvenile delinquents to take the view that the erring of the individual was due to mental deficiency and such persons were treated under the Mental Deficiency Act instead of being handed over to the jurisdiction of magistrates. That was having an increasing effect on the number of persons being certified for treatment under the Act.

### THE EXTRA MONTH OPPOSED

Mr LOGAN said that he had seen some of these cases lately and in the majority of them the Board of Control were doing a wonderful work. He was doubtful however whether the Board exercised the supervision essential for the welfare of the individuals placed under their care. He did not think that the Board of Control should have any extension of the period. The individual who was taken into a mental institution could stage by stage have his condition certified and at the end of the twelve months it should be possible to know exactly what his condition was. Twelve months was long enough to detain anybody without certification.

Sir FRANCIS FREMANTLE pointed out to Mr Logan in regard to patients being sent to an institution always for a year that there was a definite provision that the Board of Control might direct the order to expire on the quarter day next after the admission. If the Board were carefully watching as he believed they were over these cases they had the power although they might not always find it advisable to use it to limit detention to three months. Every provision was made by which patients should be detained only after the twelve months when there was a medical certificate by two practitioners including one who at the request of the defective or his parent or guardian or any relative or friend had made a medical examination and considered that it was in the interests of the patient that the order should be made. Therefore it was not a case of wrongful detention under the present law so long as the Board of Control were doing their job. The Bill was an administrative requirement. It was quite natural that the administration might from time to time overstep the mark at the end of the twelve months and in such cases it was advisable to allow the further month. This would not interfere in any way with the patient's release.

Mr EDF said it was very undesirable that anything should be done which might make the period of detention any longer. It would be better for the Board of Control to collect the papers earlier so that the decision might be announced within the period for which the certificate ran.

Sir DONALD SOMERVILLE said the Government had thought it best in the interests of the patient to extend rather than to shorten the time for the medical officers' reports required for the annual review. If the date were put back the medical officer would have to submit the report roughly a month sooner. Under the present scheme the Board would have a certain latitude for the exceptional cases and for the final making of orders. The reports of the medical officers would come in after the Bill was passed on exactly the same dates as at present, so that in normal cases the whole thing could be disposed of before the end of the quarter day. There was no intention of postponing that procedure.

There was no reason why a patient who should be released on his report would not be released as soon after the Bill was passed as he would now. There might be a case where on the original report they would want to refer back for some further report or because of administrative difficulties the order could not be got out before the quarter day. In such a case it was important to have the extra month. If there were a case in which the Board of Control thought that further inquiries should be made the Bill gave time to consider all possible questions that might arise. It was better to give the extra month which the Board had no intention of using for delay to enable the Board to deal with exceptional cases and give them time for the necessary administrative procedure.

Replying to Mr Logan Sir Donald Somervell added that the Board had full power to discharge at any intermediate date. Clause 25 (2) of the Bill said: Any commissioner shall have power to discharge at any time any person detained in a certified institution or a certified house or under guardianship under this Act. There was the further safeguard, in addition to the annual and quinquennial reviews, that every case was reviewed by the visiting justices at the age of 21. Where there was a possibility of recovery and the medical officer or visitor under the local authority so advised there was no reason to believe that that position could not be considered and acted on as promptly after this Bill as before.

Replying to Sir Robert Tasker Sir Donald Somervell said that at every step the Board of Control acted on medical advice.

The Bill was read a second time.

### Nursing Homes in Scotland

The Standing Committee on Scottish Bills sitting at the House of Commons on May 31 considered the Nursing Homes Registration (Scotland) Bill. On Clause 5 (Inspection of nursing homes) Sir DOUGLAS THOMSON moved to leave out the words "who is not a registered medical practitioner" from the subsection which as originally introduced provided that nothing in this Act shall be deemed to authorize any such officer who is not a registered medical practitioner to inspect any medical record relating to any patient in a nursing home. He said that under the Bill as it stood it would be possible for any local authority inspector or Department of Health officer who was a medical practitioner to inspect the confidential records of any patient in a nursing home. That was not desirable. Patients should be able to go into a home with the feeling that their case records were confidential. The provision in the English Act was the same as in the clause as he proposed to amend it. The committee agreed to the amendment and after further discussion of the inspection of nursing homes for other purposes the clause as amended was approved.

On Clause 6 (Power to exempt certain institutions) Mr PETHICK LAWRENCE asked what was intended to be covered by the provision. Sir DOUGLAS THOMSON said it was anticipated that the type of institution which would be exempted would be the large hospitals that were not carried on for profit but were not constituted by special Act of Parliament or by special charter. A local authority was not obliged to leave any of these out and was entitled to refuse an exemption or to grant conditions to the exemption. The clause was approved.

Sir DOUGLAS THOMSON brought forward a new clause (Power to exempt Christian Science homes). He said it was exactly in the same form as a clause in the Nursing Homes Registration Act of 1927 and was now incorporated in the Public Health Act 1936. Christian Scientists were obliged to have a doctor in to attend their children when they were ill and also to notify the authorities of infectious and contagious diseases. Exemption could be withdrawn when the Department of Health was not satisfied that the home was properly carried on and supervised. After discussion the clause was withdrawn. The Bill as amended was then ordered to be reported to the House.

### Medical Examination of Mental Defectives

On May 11 Mr T. HENDERS asked the Secretary of State for Scotland if he was aware that the Scottish Board of Control refused the right of the parents of a person certified by the Board as a mental deficient and an inmate of an institution under the authority of the Board to have an independent medical examination of such certified person and if he would instruct the Board to grant an independent examination on application being made.

Colonel COLVILLE replied that defectives were not certified by the General Board of Control but the Board had a statutory duty to review at stated intervals the cases of all certified defectives. On such occasions the Board might obtain a report by one or more independent medical men.

They were bound to order the discharge of a patient at any time if they were of opinion that he was not, or no longer was, a mental defective. A parent or guardian might apply in writing to the Board for the discharge of any defective on the ground that his mental condition did not justify further detention, and the Board might if they thought fit require the applicant to produce a medical certificate in support of the application. He was not aware of any case in which the Board had refused to comply with the statutory provisions.

### Outbreaks of Anthrax in Angus

On May 31 Mr RAMSBOTHAM replying to Mr Westwood said that during 1937 twenty-two outbreaks of anthrax in Angus, in which twenty-nine animals were affected, were reported by the county authority. In the first quarter of 1938 twelve outbreaks, affecting thirteen animals were reported. Eight of the 1937 outbreaks, and three in the March quarter of 1938 were probably due to the farms having been infected on previous occasions. The source of infection in the other cases was not definitely traced, but it might possibly have been associated with the use on these farms of artificial feeding stuffs which in fourteen cases were known to have been imported from abroad.

### Hospitals in Time of Air Attack

Sir SAMUEL HOARE in the House of Commons on June 1, moved a Vote for the expenses of air raid precaution services. He said that about 400,000 men and women had volunteered their services. So far as training and first aid and anti-gas training were concerned, 11,000 doctors, 13,000 dentists and 22,000 nurses had passed air raid precaution courses. The Ministry of Health had undertaken a survey of the hospital accommodation of the country with a view to air raid precautions. That survey was not complete, but had tended to show that the old distinction between casualty hospitals and base hospitals could not in the conditions of air warfare be fully maintained. It showed that in the organization of the hospital system for air raid precautions the Ministry of Health should be the responsible department. It had been suggested that casualties, instead of being dealt with, say, in the London area, ought to be taken as quickly as possible outside the area of the London attacks, which might be so formidable that it would be difficult for the staff and the doctors of the hospitals to carry on their work. It was also suggested that casualty hospitals ought to be formed on the periphery of London on the lines of the tented hospitals in Etaples during the war, and that as soon as casualties could be moved they ought to be taken to a greater distance. The Government had already tentatively suggested to the Universities of Oxford and Cambridge that they might place the Colleges of the Universities at its disposal.

That was one of several proposals upon which they now wished to come to a quicker conclusion and to have the opinion of experts in the hospitals outside Whitehall. Accordingly he had asked a number of hospital experts to look at this proposal and several other proposals of the same kind and to indicate which they thought most practicable. Those whose opinions he had asked were Sir Charles Wilson, Dean of St Mary's, Mr Girling Ball of St Bartholomew's, General MacArthur, Director General of Medical Services at the War Office, Sir Frederick Menzies of the L.C.C. and the principal medical experts at the Home Office and the Ministry of Health. As to the protection of hospital personnel against air raids and the precautions to be taken by the boards of management of hospitals, the Home Office would issue directions in the next few days which should be extremely useful to committees and boards of management throughout the country.

Mr NOEL BAKER moved the reduction of the Vote. He criticized the proposals of the Government as inadequate.

### CONTROL OF HOSPITAL SERVICES

Dr HADEN GUEST said the first aid posts must be very close together because unless people who had mustard gas

on their clothing reached the post in fifteen minutes or if the liquid were on their hands in five minutes they would suffer as mustard gas casualties. To neglect the mustard gas problem would be foolish. He thought the hospital committee was strong and useful but it should have been appointed long ago. There was not only the question of providing hospital accommodation but the question of how that accommodation was to be controlled. How were the control and organization of the hospital system in London to be shared between the London County Council and the voluntary hospitals, and in what way was the hospital organization outside the London area to be controlled? There was something to be said for making the control of the hospital services of the country into a national service. The committee appointed by the Home Secretary must consider how the hospital service required for air raid precautions was to be co-ordinated with the hospital services required for civilian and for the Army, Navy and Air Force. During the war the whole of this country was covered with a network of hospitals to which men were distributed when brought back from the front in France. What extra provision would be required under the conditions of a modern war? Judging by what had occurred in Barcelona one bomb dropped in a big centre of population in this country might cause casualties equivalent to those caused in a first-class action in the war. Was there any question of increasing the number of hospitals?

Mr GEOFFREY LLOYD replying to the debate said that by the regulations casualty hospitals would be the responsibility of local authorities, while base hospitals were a central Government responsibility.

Colonel NATHAN asked it that applied to voluntary hospitals and municipal hospitals and Mr LLOYD said that it applied to all hospitals. On the question of the possible evacuation of the population from London Mr LLOYD said that it had been worked out with the railway companies that 2,500,000 could be moved fifty miles or more out of London by rail in seventy-two hours.

The Vote for air raid precaution services was then carried by 174 to 95.

*General Medical Service for the Nation*—On June 2 Dr ELLIOT told Mr Gallacher that consideration was being given to the proposals of the British Medical Association in connexion with national health insurance including increases in medical and surgical benefits. He was not yet in a position to indicate the attitude of the Government.

## Obituary

We regret to announce the death of Dr ROBERT STEWART MOWAT which took place suddenly in Edinburgh on May 24. Graduating M.B. Ch.B. in 1894 he obtained the DPH of St Andrews in 1901 and the M.D. in 1909. He was appointed assistant to the lecturer in medical jurisprudence at University College Dundee and subsequently resident medical assistant at Dundee Royal Infirmary. He then returned to Edinburgh and for forty years carried on a large and successful practice. Dr Mowat had been a member of the British Medical Association since 1895. A modest genial kindly man of great personal charm, and gifted with a keen sense of humour he was very conscientious and enthusiastic about his work and ever willing to give sound advice and assistance to a young man commencing practice. Dr Mowat was familiar with all that is best in our literature. He loved our countryside and there without ostentation he revealed his expert knowledge of botany and natural history. A large number of patients, friends and colleagues paid affectionate tribute to his memory at the funeral service on May 27. He leaves a widow and one daughter to whom much sympathy will be extended.

The death took place at his residence in St. Andrews Drive Glasgow on May 28 after several weeks of illness of Dr GEORGE GRAY BUCHANAN, medical officer of health for the county of Renfrew. Dr Buchanan was born at Kilmarnock in 1881 and after graduating M.B. Ch.B. at Edinburgh in 1902 and taking the degree of B.Sc. in public health in 1904 he became assistant to the professor of public health in Edinburgh University. Later he was appointed assistant to the medical officer of health for Midlothian and shortly before the war became medical officer of health for East Lothian. After serving in France and India with the R.A.M.C. during the war he returned to his post in East Lothian and in 1919 was appointed to the position of county medical officer for Renfrewshire. Dr Buchanan was a popular and efficient administrator and took special interest in current methods of disinfection. He is survived by his wife, a daughter and two sons of whom one is a medical practitioner in Glasgow.

## Universities and Colleges

### UNIVERSITY OF CAMBRIDGE

On June 1 Professor H. R. Dean, M.D., Master of Trinity Hall, was re-elected to the office of Vice-Chancellor for the academic year 1938-9.

At a congregation held on May 28 the following medical degrees were conferred:

M.D.—A. W. Williams, R. M. Bolam, J. H. C. Gray,  
M.B. B.Chir.—M. C. Hourstield, D. C. Laverder, G. R. C.  
Peachard, R. D. Holloway,  
M.B.—G. D. Wedd.

\* B. P. Fox

### UNIVERSITY OF LONDON

The Senate on May 18 awarded the degree of Ph.D. in Bacteriology (non-clinical) to F. Himmelweit (St. Mary's Hospital Medical School) and the degree of Ph.D. in Psychology to G. W. Goodall (London School of Hygiene and Tropical Medicine).

### UNIVERSITY OF MANCHESTER

Dr A. D. Macdonald Leach, Professor in Materia Medica, Therapeutics and Pharmacology in the University, has been appointed Dean of the Medical School from July 31 in succession to Professor H. B. Matland.

Dr R. W. Fairbrother has resigned the post of lecturer in bacteriology.

Dr Raymond Whitehead, lecturer in pathology, has been elected to a Rockefeller Fellowship and has been granted leave of absence or the session 1938-9 while working at the School of Medicine and Dentistry of the University of Rochester, New York.

### UNIVERSITY OF ABERDEEN

Professor C. Heymans of the University of Ghent will deliver two lectures in the physiology lecture room, Mansel College, Aberdeen University, on Monday and Tuesday, June 13 and 14 at 5 p.m. On June 13 he will speak on 'Some Aspects of Blood Pressure Regulation and Experimental Arterial Hypertension' and on June 14 he will discuss 'The Role of the Aortic and Carotid Sinus Pressors and Chemoreceptors in the Reflex Control of Respiration'. Professor E. W. H. Cruickshank will be in the chair. The lectures are open to students of the University and others interested in the subject.

### UNIVERSITY OF EDINBURGH

Professor B. P. Babkin, M.D., of the department of physiology, McGill University, Montreal, will deliver two lectures in the anatomy lecture theatre, University New Building, Teviot Place, Edinburgh, on Tuesday and Wednesday, June 21 and 22 at 5 p.m. In the first lecture Professor Babkin will deal with 'The Regulation of the Secretory Activity of the Gastric Glands' and in the second he will discuss 'Conditioned Reflexes'. Their significance in the light of recent work. Students and graduates are invited to attend the lectures.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended May 28, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease are for (a) The 126 (123 in 1937) great towns in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever	26	5	13	—	—	24	6	9	2	2		
Deaths		1	2				—	1				
Diphtheria	1 002	128	177	37	16	916	121	174	52	20	908	145
Deaths	29	5	6	6	1	25	4	8	2	1		
Dysentery	50	13	102	—	—	26	7	4	—	—		
Deaths												
Encephalitis lethargica, acute	3	—	1	—	—	5	—	—	—	—		
Deaths												
Enteric (typhoid and paratyphoid) fever	17	2	14	6	—	28	—	6	2	2	30	—
Deaths	—	—	1	—	—	2	—	1	—	—		
Erysipelas		1	80	10	4		—	51	7	3		
Deaths												
Infective enteritis or diarrhoea under 2 years												
Deaths	31	9	17	6	—	60	15	9	5	1		
Measles			380		5*			175		1		
Deaths	16	6	11	1	1	16	—	1	—	—		
Ophthalmia neonatorum	102	11	28		—	94	9	20		1		
Deaths												
Pneumonia influenzae	1 082	82	9	4	4	765	74	12	2	4	910	74
Deaths (from influenza)	39	9	5	—	—	22	5	3	1	3		
Pneumonia primary		24	246	6	13		13	196	12	9		
Deaths				11					11			
Polio encephalitis acute	—	—				1	—					
Deaths												
Poliomyelitis acute	5	1	—		—	9	—	—		—		
Deaths												
Puerperal fever	4†	4	10		1	39	8	8	1	2		
Deaths		1‡					2‡					
Puerperal pyrexia	176	17	21		1	138	19	22		3		
Deaths												
Relapsing fever	—	—			—	—	—	—		—		
Deaths												
Scarlet fever	2 048	218	362	112	114	1 477	144	392	131	39	1 869	245
Deaths	3	1	—	—	—	4	1	2	—	—		
Small pox	—	—	—	—	—	—	—	—	—	—		
Deaths												
Typhus fever	—	—	—	—	—	—	—	—	—	—		
Deaths												
Whooping cough			80		16			241		5		
Deaths	11	3	2	1	5	11	4	10	1	—		
Deaths (0-1 year)	324	59	67	29	16	351	53	76	25	12		
Infant mortality rate (per 1 000 live births)	54	48				58	44					
Deaths (excluding stillbirths)	4 689	927	680	209	141	4 545	844	627	196	116		
Annual death rate (per 1 000 persons living)	11.5	11.8	13.9	14.1	12.5	11.3	10.5	12.8	13.4	11.1		
Live births	6 973	1 313	996	430	223	7 585	1 353	961	411	254		
Annual rate per 1 000 persons living	17.1	16.7	20.3	29.0	19.8	18.8	16.9	19.6	28.0	24.3		
Stillbirths	291	44				307	41					
Rate per 1 000 total births (including stillborn)	40	32				39	29					

\* Cases in the last year.  
† In Oct. of 1937 puerperal fever was made notifiable in the  
administrative counties of London

‡ Deaths from puerperal fever in London in primary form in figures for England and Wales (administrative counties) and Northern Ireland

## EPIDEMIOLOGICAL NOTES \*

## Enteric Fever

During the week under review there were 17 notifications of enteric fever in England and Wales compared with 15 in the previous week. 2 were in London—1 each in Fulham and Wandsworth. In Scotland 12 cases of typhoid fever were notified—9 in Roxburgh County belonging to the Hawick outbreak and 1 each in Dundee, Edinburgh and Glasgow where there was 1 death during the week. The source of the Hawick outbreak has now been traced: an employee of the local co-operative store has been found to be a carrier and has been isolated since May 17. It was shown that he handled foodstuffs which had been taken by practically every person who contracted typhoid in the outbreak. Although the water supplies were found to be above suspicion it was decided to continue chlorination in the meantime.

## Diphtheria and Scarlet Fever

In England and Wales notifications of diphtheria during the week dropped from 1110 to 1002 while in London they fell from 164 to 128. Small decreases were noted in Eire and Northern Ireland but an increase was reported for Scotland. Deaths in the 126 Great Towns of England and Wales rose from 26 to 29 and in London from 1 to 3. Of the 29 deaths recorded in England and Wales 2 each occurred in Darlington, Keighley and Liverpool. Of the 6 deaths recorded in Scotland there were 5 in Glasgow and 1 in Edinburgh. There was a slight rise in the notifications of scarlet fever in England and Wales in excess of the median value for the last nine years but in London they were considerably less. Notifications in Scotland dropped from 485 to 362 while in Northern Ireland they rose from 91 to 114 and in Eire they remained at 112 for both weeks.

## Primary and Influenzal Pneumonia

There was a definite fall in the notifications of primary and influenzal pneumonia in England and Wales and in London. The figures both for England and Wales and London remained in excess of the median values for the last nine years. Fewer deaths from influenza were reported in England and Wales, London, and Scotland. In the West Riding (Yorks) 140 (171) cases were notified of which 44 (64) were in Sheffield and 24 (27) in Leeds. In Warwickshire there were 61 (78) cases of which 36 (51) were in Birmingham. Of the 186 (210) cases reported in Lancashire 49 (49) were in Liverpool and 42 (62) in Manchester. Of the 39 deaths from influenza in the 126 Great Towns of England and Wales 5 (2) were in Kingston upon Hull and 2 each in Manchester (2), Stockport (1), Birmingham (4). In Scotland 246 cases of primary pneumonia were notified compared with 252 in the previous week; there were 9 cases of influenzal pneumonia (1 more than in the previous week) and 5 deaths of which 2 occurred in Dundee and 1 each in Edinburgh, Hamilton, and Falkirk. There were 11 deaths from pneumonia in Eire of which 9 were in Dublin and 2 in Limerick. There were 13 deaths from pneumonia (the same as last week) in the ten principal towns of Northern Ireland: 11 in Belfast, and 1 each in Londonderry and Portadown.

## Measles and Whooping-cough

In the 126 Great Towns there were 16 deaths from measles compared with 26 in the previous week. Of these, 6 (10) occurred in London, and 1 each in Kingston upon Hull (2), Leeds, Newcastle-upon-Tyne (2), Doncaster, Bolton, Southampton, West Ham, Preston, Sheffield, Coventry. During the week 949 cases were reported from the LCC elementary schools compared with 942 in the previous week. The average daily admissions to the

Except where otherwise mentioned figures in parentheses refer to the week preceding the one under review.

LCC fever hospitals were 46 compared with 30 in the previous week and the number of cases of measles under treatment in these hospitals on Friday May 27 was 1282 compared with 1364 on May 20. On the same day there were under treatment in the LCC fever hospitals 1009 (1070) cases of diphtheria, 841 (843) of scarlet fever and 22 (23) of whooping-cough. Notifications for the week ended May 28 in the eleven metropolitan boroughs in which measles is notifiable were 460 (348) distributed as follows: Battersea 4 (25), Bermondsey 20 (19), Finsbury 19 (19), Fulham 25 (25), Greenwich 104 (95), Hampstead 18 (13), Lambeth 45 (52), St. Pancras 74 (41), Shoreditch 20 (13), Southwark 23 (13), Stepney 21 (28). In Scotland 380 cases of measles were notified compared with 382 in the previous week; the figures for Glasgow were 123 (129), Dundee 6 (63), Lanark County 45 (38), Aberdeen 44 (41), Falkirk 38 (36), Kirkcaldy 37 (34), Edinburgh 124 (124). During the week there were 11 (10) deaths from measles in the 16 principal towns of Scotland; of these 5 (3) occurred in Dundee, 4 (5) in Glasgow, 2 (2) in Aberdeen. In Northern Ireland there was 1 death from measles in Londonderry County Borough and in Eire the case is in Dublin.

In England and Wales there were 11 (17) deaths from whooping-cough during the week under review of which 3 (11) occurred in London. In Scotland 80 cases of whooping-cough were notified compared with 59 in the previous week while the deaths remained at 2—1 each in Greenock and Motherwell and Wishaw. In Northern Ireland 16 (17) cases of whooping-cough were notified with 2 (2) deaths 3 of which were in Belfast.

## Cholera

During the week ended May 28 18 cases of cholera were notified in Shanghai. In the same week in Burma there were 6 cases with 4 deaths and in Indo-China there were 32 cases. During the previous week—that is week ended May 21—there were 125 cases with 47 deaths reported in Calcutta, 2 cases with 1 death in Bassein, 1 case with 1 death in Rangoon, 10 cases with 17 deaths in Delhi, 7 cases with 2 deaths in Cawnpore, and 1 case with 1 death in Allahabad.

## Plague

During the week ended May 28 there were in British India 3 cases of plague with 3 deaths (in Bassein), in Burma there were 5 cases with 3 deaths. On May 26 1 case of plague was reported in Egypt (in the province of Asyut). During the week ended May 21 18 cases of plague were reported in the Union of South Africa.

## Small pox

During the week ended May 28 5 cases of small pox were reported in Shanghai. During the same week 12 cases were notified in Burma, 2 in British India (1 each in Bassein and Rangoon). In the previous week 27 cases with 22 deaths were reported in Bombay, 27 cases with 12 deaths in Madras and 76 cases with 66 deaths in Calcutta.

## Typhus

During the week ended May 28 3 cases with 2 deaths were reported in Alexandria and 3 cases in Palestine (1 in Jaffa and 2 in the rural districts). In the previous week in Morocco there were reported 175 cases of typhus with 12 deaths mainly distributed as follows: Casablanca 48 cases, 3 deaths, Marrakesh 37 cases, 1 death, Oued Zem 32 cases, 6 deaths, Casablanca 18 cases, Agadir 10 cases, 7 each in Doukkala and Rabat. During the same week—that is week ended May 21—there were 8 cases with 1 death in Alexandria. In Shanghai there were 64 cases with 8 deaths in Palestine there were 8 cases. During the week ended May 7 100 cases of typhus with 3 deaths were reported in Poland mainly distributed by departments as follows: Stanislawow 15 cases, Nowogrodek 13 cases, 12 each in Lublin and Wolynia, 10 each in Lwow and Wilno, 5 each in Bialystok, Kielce and Tarnopol.



## Medical News

Dr T H Sanderson Wells has endowed an annual lecture ship at the Middlesex Hospital Medical School, expressing a wish that the subject to be dealt with should cover the field of the relations between rheumatism and dietetics. The inaugural lecture on Monday June 20 at 4 p.m., at the Middlesex Hospital, will be given by Dr Sanderson Wells, and the second lecture, in 1939, by Major-General Sir Robert McCarrison.

The Imperial Tuberculosis Bureau, in co-operation with the East India Association and the Over-Seas League, is sending out invitations to a lecture 'Tuberculosis: A Key Problem of India,' to be given by Major-General Sir John Megaw, Chief Medical Adviser to the Secretary of State for India, on Tuesday, June 21 at 4.30 p.m., at St Andrew's Hall, Over-Seas House St James's SW. The chair will be taken by the Marchioness of Linlithgow.

The German Society for Psychology will hold its sixteenth congress at Bayreuth from July 1 to 4, when the chief subject for discussion will be Character and Education. Further information can be obtained from Dr O Engelmayer, Hochschule für Lehrerbildung Bayreuth.

The eighth conference of the International Committee of Military Medicine will be held in Luxembourg from July 1 to 4. A simultaneous meeting on international law, organized by the International Law Association, will discuss legislative questions relating to aerial protection, and another will discuss the scientific study of aerial defence against war gases. Invitations to take part in the conference are given to all naval military, and air medical officers whether serving or retired at home or abroad in view of the wide range of the programme technicians are also invited. The fee for membership is 25 Belgian francs for all who are not official delegates of their Government. Reductions in travelling expenses are obtainable. Further information may be had from Colonel Voncken, Office International de Documentation de Médecine Militaire, Liège.

The next meeting of the German Ophthalmological Society will be held in Heidelberg from July 4 to 6 and the ninety-fifth congress of German naturalists and doctors in Stuttgart from September 18 to 21.

The third Congress of the Austrian Society for Roentgenology which was to have been held from September 23 to 25 and the Congress of the Austrian Urological Society arranged for June will not take place. The sixty-second international postgraduate course on the progress of medicine with special reference to treatment will be held in Vienna from September 26 to October 8.

The Croydon Town Council has decided not to allow fairs to be held in future on Bank Holidays at the Shirley Hills, which form part of the gathering ground for the Addington Well—the well from which infection in the recent outbreak of typhoid fever is believed to have spread. The council has also accepted the recommendation of its Typhoid Committee that a special advisory committee of six members of the Public Health Committee and four doctors should be appointed.

After a long discussion Salford City Council on June 1 approved a recommendation of its Finance Committee authorizing the Health Committee to spend an additional £3,825 during the current financial year to cover the cost of the introduction as from July 1 of a 48-hour working week for nursing staffs under the control of the Health Committee.

The notification of undulant fever and psittacosis has recently been made compulsory in Argentina.

Dr Karl Koller of New York, a native of Vienna who introduced cocaine as an anæsthetic into operative ophthalmology, celebrated his eightieth birthday on December 3, 1937.

## Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

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## QUERIES AND ANSWERS

### Sterilization of Syringes

Dr N PINES (London E 1) writes: It seems to me from recent correspondence in the *Journal* that some members of the medical profession in this country and abroad are still vexed by this problem. I solved it many years ago to my complete satisfaction by adding some thymol to the methylated spirit in any proportion from 1 in 1,000 to 1 in 100. Thymol is readily soluble in alcohol, does not corrode the metal and is one of the most powerful disinfectants in existence. It is strongly irritant to the tissues, and therefore the syringe must be washed out with freshly boiled water before use.

## LETTERS, NOTES, ETC.

### Baby Week

The National Baby Week Council since its foundation in 1917, has worked to improve the maternity and child welfare services and to educate the public in the means of maintaining health during pregnancy and bringing up healthy children. Its efforts have of course received great impetus from the national movement for physical fitness. It is endeavouring to organize "Keep Fit" classes at all infant welfare centres, the object being to give expectant mothers instruction in suitable physical exercises in company with other women. It should be quite easy for classes similar to those arranged by the Women's League for Health and Beauty, the Margaret Morris Movement and the physical education classes organized by education committees to be conducted at maternity and child welfare centres. Weekly exercise would not be sufficient but the mothers would soon be enthusiastic enough to carry out at home the exercises they had learnt at the centre. Systematic exercises can also benefit the young child and the Council also advocates provision of playgrounds for toddlers. It suggests that women's institutes should offer their places, of meeting for "Keep Fit" classes, and that where a suitable hall is not available at the centre local co-operation can arrange for one elsewhere to be used. The Central Council for Recreative Physical Training is willing to provide qualified leaders as instructresses.

In the *Journal* of May 21 (p. 1120) we announced the constitution of the International Academy for Medical Postgraduate Work. The address of the Permanent Bureau is Robert Koch Platz 7 Berlin NW 7.

## EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

## 486 Basal Metabolism in Hyperpnoea

M. GEORGOPOULOS and N. TSAMBOULAS (*Disch. med. Wschr.* March 25 1938 p. 432) report from Athens their observations on the association of a high basal metabolism with a high blood pressure. They note that wide differences of opinion have been expressed on this alleged association since 1923 when Mannaberg published his account of it. The authors believe that the differences of opinion are partly at any rate due to lack of uniformity of technique and to the neglect of certain precautions in the measurement of the basal metabolism. They themselves take the precaution of measuring it only after prolonged rest in bed. They have found the basal metabolism normal in a long series of males suffering from various forms of hyperpnoea and the only male case in which the basal metabolism was raised was complicated by insufficiency of the aorta with continuous slight dyspnoea and nervousness. Less negative were the findings among women who had raised blood pressures and who were classified in three groups: (1) In twelve of fifteen cases occurring at the climacteric the basal metabolism was above normal up to as high as +45 per cent. (2) In all the sixteen cases of hyperpnoea in younger women whose ovaries had been removed by operation or who had been radiologically sterilized, the basal metabolism was much above normal, and considerably more so than in the first group. (3) In none of the fourteen cases seen in older women whose climacteric dated several years back was the basal metabolism above normal. The high basal metabolism in the first group could not be explained away merely as the result of nervousness for when measurements were taken during sleep under the influence of narcotics the basal metabolism was still above normal though lower than before. The same observation was made with the second group.

## 487 Intrapleural Gold Therapy in Phthisis

R. AMAT (*Arch. med. chir. Appar. resp.* 12 4 326) claims good results in the treatment of cases of phthisis in which collapse therapy has failed by the injection of gold compounds intrapleurally. The number of patients treated was thirty-eight. There were twenty-six successes with rapid recovery in fourteen and twelve failures. The treatment is most successful in early cases. Of the thirty-eight cases twenty-nine had a history of from three to six months illness and of these twenty-nine twelve recovered rapidly, twelve were improved and only five failed to benefit. Of the five failures four showed clinical cure after treatment by intrapleural injections of extracts of tubercle bacilli. In twenty-three cases gold chloride was used and in the rest either gold compounds alone or in conjunction with the chloride. The initial dose of the chloride was 0.01 to 0.05 gramme every five to ten days the dose being gradually increased in the absence of excessive reactions. The injections were followed by local and perifocal reactions and there might or might not be general reactions with pyrexia. The presence or absence of a general reaction did not seem to influence the result. In some cases the injections seemed to cause a lengthening or even a complete separation of adhesions either through an effusion raising the intrapleural pressure or because of some modification of the adherent tissues. The total dose of gold may be large. In one case 2.25 grammes of the chloride was administered in fifty injections during six months. The method is not advised in chronic cases where there are large cavities or dense fibrosis. In these cases it may cause pleuro-pulmonary perforation and purulent pleural effusions.

## Surgery

## 488 Sarcoma of the Prostate

L. D. DONAHUE (*Urol. cutan. Rev.* March 1938, p. 176) who records an illustrative case and has collected 144 others from the literature states that sarcoma of the prostate is primarily a condition found in youth. About a quarter of cases have occurred in men in the seventh and eighth decades. The youngest case reported was in a child aged 4 months and the oldest Donahue's case in a man aged 80. The onset is insidious and does not differ from that of other forms of prostatic hypertrophy. The radiation of pain is usually the same as in carcinoma of the prostate—namely through the pelvis and down the extremities. The tumour may interfere with defaecation and cause discomfort in the rectal region. Fifteen out of twenty patients subjected to operation showed recurrence in two or three months. The round-celled type or tumour is the most malignant and the spindle-celled type less so. In Donahue's case bladder symptoms had been present for about a year before operation was necessary for complete retention when transurethral resection was performed. Microscopical examination of the growth showed long spindle-shaped and hyperchromatic cells. Relief of symptoms was obtained but the issue of the case is not recorded.

## 489 Orthopaedic Principles

E. SEREGHY (*Zbl. Chir.* March 19 1938 p. 639) gives an outline of his principles in the treatment of fractures of the long bones. In his experience long-continued extension with small weights will not bring about correction of the displacement. This form of treatment is only used when it is desired to maintain a corrected position and even then the method may often fail. In suitable cases skin traction is used but the author's preference is for skeletal traction whenever displacement is marked. Open operation is only very rarely resorted to in recent fractures and plates or screws are never used for fixation. A thin bronze aluminium or steel wire (0.5 to 0.8 mm in diameter) is recommended. Compound fractures are treated by gradually increased skeletal traction reaching 8 to 10 kg on the tenth day. After two weeks reduction may be attempted if necessary and if indicated by a healthy state of the wound. Fractures with little displacement and fractures in which displacement has been corrected are fixed on plaster splints or in bivalve plaster-casts. The affected limb is kept elevated until the traumatic swelling has disappeared. After eight to ten days or such treatment patients with fractures of the leg may then be put into a walking plaster which is padded with zinc gelatin applied directly to the skin. Longitudinal bandages can be incorporated with the zinc gelatin to allow or traction being exerted during the application of the plaster.

## Therapeutics

## 492 Cod Liver Oil for Tuberculous Pharyngitis

According to A. L. BAXBY (*Arch. Otolaryng.* Chicago February 1938 p. 154) the curative action of cod liver oil is due to the presence of large amounts of vitamins A and D. Further, American cod liver oil contains more iodine than most ordinary foods. 10 ccm of high grade medicinal oil would supply the daily iodine requirement which is 20 to 100 microgrammes. A less well-known use of cod liver oil is as a local application in tuberculous pharyngitis and laryngitis. The author has made a careful

clinical study of the healing properties of cod-liver oil when used as a spray or as a dressing. A patient with lupus vulgaris was first selected for treatment. The disease was of six years' duration, and involved the face and the entire extent of the skin of the left arm. Small pieces of gauze soaked in cod-liver oil were applied to the involved areas twice a day. Complete healing resulted in eight months. Tuberculous lesions of the throat and larynx were treated by spraying the ulcerated areas with cod-liver oil three times a day. There were only a few patients who did not tolerate cod-liver oil because of its fishy taste. Pharyngeal and laryngeal ulcers showed rapid epithelialization and healing. Laryngeal tuberculosis with oedema was resistant to this treatment. The analysis of ninety-one patients who were treated for from two to eighteen months gave the following results: 26.3 per cent remained unimproved, eight of these patients dying during the course of the treatment; 46.2 per cent improved subjectively and objectively; 27.5 per cent were healed. In the majority of the last group the healing of the tuberculous lesions was established before the patient had recovered from the pulmonary tuberculosis. It is reasonable to assume that the healing was accomplished or accentuated by the local application of cod-liver oil.

#### 491 Hyperthyroidism

H. BERNHARDT (*Med. Klinik*, March 4, 1938, p. 285) discusses the medicinal treatment of hyperthyroidism. He believes that the number of patients suffering from hyperthyroidism has been on the increase during the last forty years. He recommends Plummer's pre-operative treatment. In cases in which iodine is badly tolerated he advises luminal, glucose, etc. In cases of coma, which is usually accompanied by nausea, vomiting, and diarrhoea, he gives iodine parenterally, in very severe cases he injects intravenously 2 c.c.m. of "endojodin" (corresponding to 0.22 gramme of iodine) diluted with 20 to 40 c.c.m. of a 30 per cent solution of glucose. The injection can safely be repeated two or three times during the day. In some cases calcium iodide seems to be better tolerated than potassium iodide. In a number of cases ammonium fluoride has been used successfully instead of iodine preparations. Good results have been obtained from ergotamine in the form of gynergen. The results of medicinal treatment are greatly enhanced by a lacto-vegetarian diet. Iodine therapy may be advantageously combined with the administration of arsenic.

## Radiology

#### 492 Encephalography of Subdural Haematomata

T. J. C. VON STORCH and D. MUNRO (*New Engl. J. Med.*, January 6, 1938, p. 6) have carried out three ventriculographies and thirty-two encephalographies in a series of thirty-five cases of subdural haematoma. All the exposures were made with the patient sitting erect throughout the procedure. The examinations proved that the value of encephalography in the diagnosis of fluid haematomata was negligible; it may however reveal large clots of long standing. Until further information is available it is unwise to lay too much stress upon the presence of unencysted air as an indication of the presence of subdural haematoma. On the other hand it has been proved that encephalography is a valuable adjunct in the diagnosis of thin solid subdural haematomata. Gross compression of one lateral ventricle with a shift of the whole ventricular system to the opposite side and homolateral obliteration of the sulcal shadows is suggestive of a large flat intra-cranial mass. Such a picture is found infrequently and then only in cases of large well-organized subdural haematoma. In the case of mixed and fluid varieties of haematoma the encephalographic picture is less frequently it shows little or nothing abnormal.

Certain signs, however, are of diagnostic importance. In order of their importance they are: (1) A slight but definite depression of the roof of one lateral ventricle with or without a shift of the ventricular system (and often of the falx) to the side opposite to the depressed ventricle; a slightly enlarged contralateral ventricle, variable contralateral hemispheric changes, and some decrease of the homolateral hemispheric markings. (2) Small multiple or large cystic areas of subdural hemispheric air associated with normal or moderately enlarged ventricles and variable subarachnoid hemispheric air. (3) No depression or distortion of the ventricle, but an absence of subarachnoid hemispheric air on one side associated with a contralateral ventricular enlargement. (4) Unilateral subdural hemispheric air with a contralateral ventricular enlargement. (5) Bilateral subdural hemispheric air with variable ventricular alterations, depending upon the amount and distribution of the air. In the final analysis, however, the authors conclude that a definite diagnosis of subdural haematoma can be made only by exploration.

#### 493 Healing of Peptic Ulcers

J. R. WYLIE (*Brit. J. Radiol.*, February, 1938, p. 90) divides gastric ulcers into superficial, anastomotic, deep, and penetrating, while in the evolution of duodenal ulcer he recognizes four stages, the last stage being that of penetration. The healing of the superficial gastric ulcer is indicated by a gradual disappearance of all obstruction, pain, and tenderness, and of the crater pool. During the healing of deep gastric ulcers the niche becomes gradually smaller until it finally disappears, converging rugae still remain and the pool disappears, while the tenderness gradually decreases. The spasm relaxes, although cicatricial hour-glass contraction persists. The penetrating gastric ulcer, in the author's experience, never heals under medical treatment. Carcinoma of the pancreas may develop in such cases, but the radiological recognition of this complication is extremely difficult. Deep or penetrating anastomotic ulcers heal very slowly. Berg's technique of gastroscopy should be especially useful in these cases both for the diagnosis and for the demonstration of the progress of healing. Healing will be indicated by the disappearance of the crater pool and the tenderness. The fistula does not close. The healing of deep or advanced duodenal ulcers is very slow, and the older the ulcer the more difficult is the healing. Healing is indicated by a gradual relaxation of the spastic deformity, a gradual disappearance of the pool and of the local tenderness, a restoration of shape of the duodenal cap except for some dimpling at the site of the ulcer, and finally by a gradual disappearance of all indirect evidence of ulceration. The penetrating ulcer never heals. It usually results in stenosis and is amenable only to surgical treatment.

#### 494 Osteomyelitis of the Vertebrae

J. R. McNURT (*Amer. J. Roentgenol.*, January, 1938, p. 52) reports five cases of osteomyelitis of the vertebrae and reviews the literature on the subject, of his own five cases three were acute and two chronic. The age incidence in a series of fifty-nine cases reported by Volkman was as follows: eighteen in the first decade, thirty-one in the second, seven in the third, one in the fourth and two in the fifth. 72 per cent of the cases were male. The organism in the vast majority of cases was the *Staphylococcus aureus* and in a large majority of cases the vertebral lesion was a metastatic infection from some discoverable source, such as a boil, carbuncle, etc. Fracture may be a predisposing factor. Osteomyelitis of the spine develops subperiosteally in adults and in young individuals as an epiphyseal sequestration. The tendency to new bone formation is characteristic and the lesion may first be noted on the radiograph as a rarefying or proliferative osteitis. The outline of a paravertebral abscess may be present early. The intervertebral disc may be

may not be involved although a uniform narrowing is often seen. The tendency to form new bone may prevent deformity of the spine but on the other hand in chronic mild cases with little pain marked deformity may occur before the patient seeks medical advice. The order of frequency of involvement of the different parts of the spine is lumbar dorsal, cervical and sacral. The posterior arches are more often involved than the body, except in the cervical region. The author discusses the differential diagnosis from tuberculous syphilitic and actinomycotic spondylitis, and gives the history of two typical cases.

495

## Klippel Feil Syndrome

A. H. LEMMERZ (*Med Welt* March 5, 1938 p 339) describes two cases of the Klippel Feil syndrome. The syndrome is caused by an arrested development of the middle part of the cervical spine, and is often associated with spina bifida torticollis or cranial and thoracic deformities. According to Feil the radiographic changes are produced by a trauma during gestation and the process is limited exclusively to the vertebrae. In one of the cases, that of a male aged 35, the first cervical vertebra was incomplete the second was hypertrophied the third and fourth were fused the fifth and sixth were small and the seventh was wide at its base and pointed in front. The bone structure of the affected vertebrae was irregular and osteoporotic. In the second case, that of a male aged 34 the posterior arch of the atlas remained open the axis was deformed and several other vertebrae were fused and rudimentary. The thoracic spine was scoliotic and there was incomplete fusion of the posterior arch of the seventh cervical vertebra. There was also a supernumerary rib at the transverse process of the first lumbar vertebra.

496

## Biological Measurement of X Rays

A. MARSHAK and J. C. HUDSON (*Radiology* December 1937 p 669) have investigated the effect of x rays of different voltages on the chromosomes of commercial onion seeds of the variety known as Ohio Yellow Globe. The seeds were allowed to germinate and seedlings with radicles of 1 cm. or longer were used for the experiments. They used three different kinds of irradiation—namely the first generated at 120 kV filtered through 5 mm of celluloid the second at 180 kV filtered through 0.5 mm of copper and 5 mm of celluloid and the third at 200 kV filtered through 5 mm of copper 0.9 mm of tin and 1 mm of aluminium. The ease of manipulation the low biological variability of the material used and the consistency of the response to irradiation make the method a very satisfactory one. The experiments have proved that the biological response per unit is independent of the wave length over the region studied. This is taken to indicate that the ion pair and not the quantum is the agent producing the effect observed.

497

## Treatment of Cancer

S. A. HEYERDAHL (*Norsk Mag Laegevidensk* April, 1938 p 395) gives an account of the activities of the Norwegian Radium Hospital since it was opened in May 1932, with accommodation for seventy one in patients. Of the in patients 62.6 per cent have been women 34.8 per cent men and 2.6 per cent children. The proportion of cases of benign tumours has risen from 7 per cent in 1932 to 15 per cent in 1937. The treatment has been by operation radium x rays or some combined method. In the two year period ending May 9 1934 1172 cases received treatment 1013 being cases of carcinoma. Twenty of the eighty three cases of sarcoma were symptom free more than three years after the institution of treatment. Of the 125 cases of cancer of the skin ninety were symptom free after three years and among the eighty three patients with cancer of the skin receiving treatment for the first time at this hospital there were as

many as seventy seven who were symptom free three years later. The results were practically as good for cases of cancer of the lip of which there were sixty five in all. Among the twenty six patients in this group who were treated for the first time at this hospital there were twenty-three who were symptom free three years later. Of the 183 cases of cancer of the breast forty three were symptom free after three years. The highest rate of recovery in this group was shown by the sixty-five patients treated by operation and then by x ray therapy after three years thirty six of them were still symptom free. Only five of the fifty four patients suffering from cancer of the rectum were symptom free after the same interval and not one of the eighteen patients with cancer of the prostate the eighteen with cancer of the oesophagus or the eleven with cancer of the stomach was symptom free after this interval.

498

## Arthropneumography

O. R. MAROTOLI and S. DE AZCUEAGA (*An Cirugia* December 1937 p 369) describe eight cases of injuries of the knee joint in which they adopted Bircher's technique of arthropneumography—that is x ray examination of the joint after the injection into the capsule of a positive (peribrodil etc.) or negative (oxgen nitrogen or air) contrast medium. This enables the cartilages and ligaments to be seen so that the condition may be diagnosed before operation. The injuries which include longitudinal and transverse tears or luxations of the internal or external semilunar cartilages were in five instances due to accidents on the football field.

499

## Irradiation of the Carotid Sinuses

F. VAN DOOREN and G. MELOT (*Arch Mal Cœur* February 1938 p 178) have applied x ray therapy to the carotid sinuses in a large number of patients suffering from high blood pressure. The irradiation of the sinuses gives rise to a general reaction. There is often a decrease of the maximal as well as of the minimal pressure, a slowing down of the blood flow and of the pulse and a vasodilatation. The biggest drop in the blood pressure occurs after the application of 30 r units but the effects of irradiation are only transitory.

500

## Profile Radiography of the Shoulder joint

H. POHL (*Scalpel Liege* February 26 1938 p 279) draws attention to the usefulness of the so called profile radiography of the shoulder joint for the differential diagnosis of the different traumatic affections of the shoulder. The radiographs are taken either from above the film lying in a curved cassette which is placed in the axilla between the arm and the thoracic wall or else from below the film resting horizontally on the shoulder. In either case a horizontal projection is obtained or the upper end of the humerus or the glenoid cavity of the acromion and of the coracoid process. In fractures of the surgical neck or of the diaphysis of the humerus the radiographs show the angulation and the overlapping of the fragments in the two planes and thus facilitate the reduction of the fracture. The radiographs may also show injuries to the coracoid process or to the tuberosities which may not be detected by the routine antero-posterior views.

501

## Biology of Fractional Dosage

J. BORAK (*Strahlentherapie* Berlin January 19 1938 p 63) discusses the biological foundation of the method of treatment of new growths with fractional doses of x rays. The epidermolysis observed after irradiation with fractional doses heals after a few weeks whereas the epidermolysis produced by a single large dose of x rays may lead to a necrosis of the irradiated tissues. In other words the difference between the radiosensitivity of the epithelium and the vascular endothelium is relatively

small when the irradiation consists of a single massive dose, but becomes very marked when the dose is divided into several fractions. The single epidermolytic dose is about 1 500 r units, but it may be increased two to two and a half times if given in fractions of 300 r units at intervals of twenty-four hours between successive applications. A dose three and a half times larger than the single epidermolytic dose leads to ulceration even when given in fractional applications. The histolytic dose for the vascular endothelium is about 2 500 r units as a single dose and two to two and a half times as large when given in fractional doses of 300 r units at intervals of twenty-four hours. According to Borak the tissues which behave like the skin epithelium belong to the 'multiform' tissues while the tissues which behave like the vascular endothelium belong to the 'uniform' tissues. To the first category belong the ovarian follicles, the seminal epithelium, the lymphopoietic system, the haematopoietic system, the hair follicles, the sebaceous glands, the epidermis and the stratified epithelia. In the group of 'uniform' tissues are included the vascular endothelium, the endothelium of the serous cavities, the fusiform connective tissue cells, the fixed connective tissue and glial cells, osseous and cartilaginous tissue, muscular tissue, nervous tissue and cylindrical epithelia. The tumour cells which originate from the 'multiform' tissues are on the whole radiosensitive. This group includes the lymphosarcomata, seminomata, basal cell carcinomata, trichopitheliomata, and epithelial carcinomata of the skin and mucous membranes. The tumour cells which originate from the 'uniform' tissues such as adenocarcinomata and the majority of sarcomata and of gliomata, are radio-resistant. Fractional doses are effective in the radio-sensitive tumours because the dose necessary to destroy the tumour cells is less than the dose which would damage irretrievably the vascular endothelium. Tumours which originate from the radio-resistant 'uniform' tissues, however, cannot be destroyed by x rays without simultaneous destruction of the blood vessels—that is, without producing necrosis.

## Obstetrics and Gynaecology

### 502 Treatment of Intra uterine Asphyxia

H. DORR (*Möchr Geburtsh Gynäk*, February 1938, p. 129) states that at Seitz's clinic the good effect of treatment of foetal asphyxia by pentamethylene-tetrazol (cardiazol) has been confirmed and no evidence found of an injurious effect due to premature stimulation of the foetal respiratory centre. Access to the foetal circulation is more quickly attained by intravenous injection in the mother than by direct injection into the foetal scalp or breech. Dorr found little or no effect from giving the mother intramuscular injections, or intravenous injections of less than 2 ccm. He records nine cases of severe impairment of foetal heart function (with notable slowing) in which intravenous administration of cardiazol was followed within twenty-five seconds by an improvement lasting four to five minutes and judged in some cases to have saved the child's life. There was no case of aspiration pneumonia.

### 503 Post-inflammatory Tubal Patency

C. DANIEL, D. MAURODIN and A. WANEFF (*Gynecologie*, January, 1938, p. 15) point out that tubal insufflation, which was first used as a diagnostic measure in sterility, is now applied, with success in 10 per cent of cases, as a therapeutic agent. The authors believe that correctly and cautiously used it is harmless even in acute and sub-acute inflammatory lesions; they did not find that insufflation disseminated infection into the peritoneum. Strict regard for a maximum pressure of 230 mm avoids the possibility of tubal rupture. The authors insufflated the

tubes of thirty-nine patients with inflammation of the adnexa in order to determine the proportion of cases in which permeability of the tubes remained. The operation was performed on the seventh to twelfth day after the end of menstruation in patients who had had inflammatory disease for from two weeks to six years. Permeability of the tubes was present in 43 per cent of the patients; it was present bilaterally in 14 per cent and unilaterally in 24 per cent. In 5 per cent insufflation effected patency of the tubes. In two cases of pelvic cellulitis following labour in one and abortion in the other, the tubes were found to be patent. The authors commend tubal insufflation in the diagnosis of sterility but advocate its use in conjunction with lipiodol injection and kymographic insufflation.

## Pathology

### 504

#### Sugar in Cerebrospinal Fluid

N. I. NISSEN (*Acta Psychiat Neurolog*, 1937, 12, 2, 173) discusses the value of estimation of the sugar in the cerebrospinal fluid in the diagnosis of meningitic conditions. Normally after the administration of 1 gramme of glucose per kilogramme of body weight the cerebrospinal fluid sugar rises by some 10 mg per 100 ccm after one and a half hours. In cases of acute infections and in meningitis this rise may be much greater, so that large doses of easily absorbed carbohydrates may be a source of error in the evaluation of cerebrospinal fluid sugar estimations. The normal value of sugar in the cerebrospinal fluid is approximately half that in the blood, and varies between 45 and 65 mg per 100 ccm. In cases of benign lymphocytic meningitis, acute anterior poliomyelitis, and encephalitis the values lie between 40 and 65 mg per 100 ccm or may be higher. In tuberculous meningitis lowered values are always found and only in the earliest stage may the sugar content be normal. In purulent meningitis the values are usually below 40 mg per 100 ccm. The changes in the cerebrospinal fluid sugar are quite independent of the size and type of the cell increase, and also of the total protein, but they are parallel to the changes in the chlorides. The mechanism of the fall in purulent meningitis is not known. It is not dependent on the cell increase; this may be considerable and the sugar normal, nor on the presence of bacteria. It may be due to increased sugar consumption by the inflamed meninges or to its failing to pass through the choroid plexus. High values for sugar in the cerebrospinal fluid do not arise from diseases of the central nervous system, but may be found in acute general infections, such as pneumonia.

### 505

#### Chemotropism of Normal Skin

D. SILVERMAN (*Arch Pathol*, January, 1938, p. 40) describes experiments demonstrating the presence of chemotropic substances in normal epidermal tissues. Pulp prepared from normal skin attracted leucocytes. If the skin were well extracted in hot water the pulp prepared from it had lost its chemotactic power, but this could be restored by soaking the extracted skin in the concentrated extract. Kaolin also could be made positively chemotactic by soaking it in the concentrated extract. The chemotropic substance was therefore water soluble and heat-stable; it did not contain carbohydrate or histamine but did give reactions for protein and free amino acid groups. Experiments with agar and kaolin showed that physico-chemical factors played no part in the chemotaxis. In non-infected injured skin chemotaxis of leucocytes therefore depends on substances such as those demonstrated. Since bacterial substances are also chemotactic, chemotropism in infected skin might depend partly on bacterial substances and partly on substances derived from the injured tissues.

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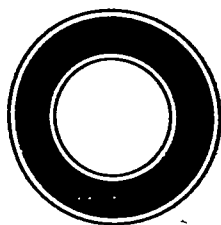
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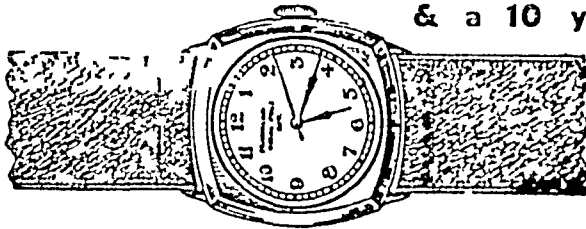
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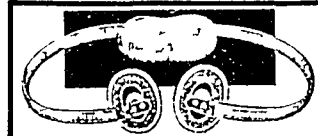
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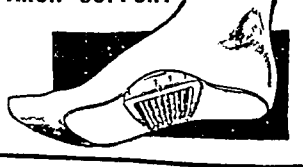
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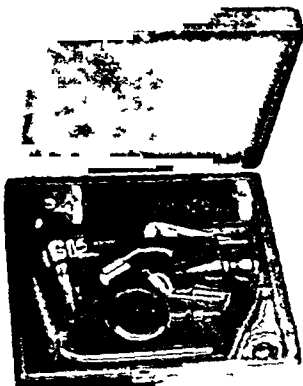
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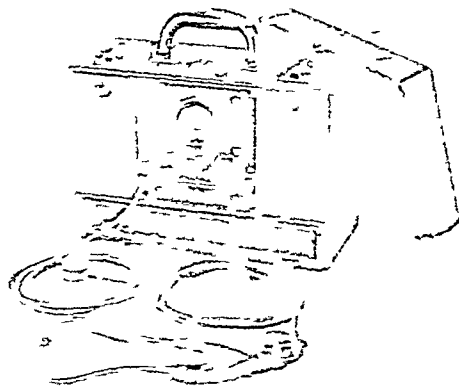
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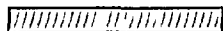


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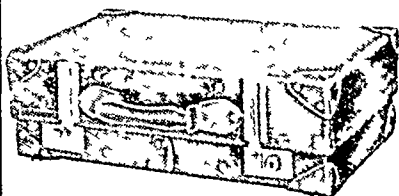
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## HARROGATE

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Page 20

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R.C.S.L.D. Apply Secretary The Cotswold Sanatorium Cheltenham Gloucester Tel. 51 and 52 WITCOMBE Glos. "HOTTEN, B'ZELF"



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(UNIVERSITY OF LONDON)

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JUNE 21st	The Diagnosis and Disposal of Fever Cases from the General Practitioner's Standpoint	Dr Andrew Topping TD MA MD DPH
JUNE 28th	Modern Methods in Diagnosis and Treatment of (a) Diphtheria (b) Scarlet Fever	Dr J S Anderson MA MD DPH
JULY 5th	Modern Methods in Diagnosis and Treatment of (a) Typhoid Fever (b) Measles (c) Puerperal Septic	Dr W Gunn MA MRCP DPH
JULY 12th	Modern Methods in Diagnosis and Treatment of (a) Whooping Cough (b) Enteritis and Dysentery (c) Cerebro spinal Fever (d) Acute Poliomyelitis	Dr M Mitman MD MRCP DPH
* JULY 19th at North-Western Hospital	Clinical Examination of Fever Cases and Demonstration of Modern Methods and Apparatus	Dr W Gunn MA MRCP DPH
* JULY 26th at North-Western Hospital	Modern Laboratory Methods in Diagnosis Therapy and Control of Acute Infectious Diseases	Dr R Cruikshank MD DPH

The lectures are for regular students of the School but a limited number of tickets is available to medical practitioners. Fee £1 11s 6d

Applications for tickets should be addressed to the Dean British Postgraduate Medical School Ducare Road Shepherd's Bush London W12

# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in September, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service, permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances

Opportunities are available for officers on the permanent list for post graduate study, to specialise, to take higher examinations and to obtain further qualifications

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers

Copies of the regulations for entry and conditions of service, including rates of pay, allowances and retired pay, may be obtained from the Medical Director-General of the Navy Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than 31st August, 1938



# GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

POST-GRADUATE TEACHING in Glasgow during the Summer of 1938 comprises principally

- A General Practitioner's Medical and Surgical Courses from July 18th to August 27th, and
- B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary, Post Graduate Medical Association, The University, Glasgow

## UNIVERSITY OF LONDON

### EXAMINERSHIPS, 1939

The Senate announce the following vacant Examinerships for the year 1939

*Final and Higher Examinations for Medical Degrees*

Applied Pharmacology and Therapeutics—four  
Medicine

Obstetrics and Gynaecology

Surgery

Oto Rhino Laryngology—two

First Examination for Medical Degrees

Chemistry

Second Examination for Medical Degrees

Anatomy

Chemistry

B Pharm. Examination

Pharmaceutical Chemistry

Pharmacognosy

### ASSOCIATE EXAMINERS

Applications will also be invited for Associate Examiners in Medicine, Obstetrics and Gynaecology, Pathology and Surgery, separate application form must be used for Associate Examinerships and the word Associate must be written on it.

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar.

Candidates must send in their names to the External Registrar A Clow Ford MBE B.A. with any attestation of their qualifications they may think desirable on or before Monday, July 4th 1938 (Envelopes should be marked Examinerships).

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership. The appointments will be made by the Senate in November. Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application.

HERBERT L EASON

Principal

University of London  
Senate House W C 1  
June 1938

## UNIVERSITY COLLEGE, LONDON

(University Centre for Medical Sciences)

### FACULTY OF MEDICAL SCIENCES

ANATOMY—J P Hill DSc FRS Professor of Embryology H H Woollard MD DSc FRS Professor of Anatomy

BIOCHEMISTRY—J C Drummond DSc Professor

BOTANY—T G Hill DSc ARCS Professor of Plant Physiology and E J Salisbury DSc FRS Quain Professor

CHEMISTRY—C K Ingold DSc FRS Professor S Sugden DSc FRS Professor

HISTORY OF MEDICINE—C Singer MD D Litt DSc IRCP Professor

PHARMACOLOGY—F R Winton MD Professor

PHYSICS—E N da C Andrade DSc Ph D FRS Quain Professor

PHYSIOLOGY—C Lovatt Evans LL D DSc FRCP FRS Jodrell Professor

ZOOLOGY AND COMPARATIVE ANATOMY—D M S Watson DSc FRS Jodrell Professor J B S Haldane MA FRS Professor (Biometry)

THE SESSION 1938-39 will COMMENCE on

MONDAY OCTOBER 3rd 1938

COURSES OF INSTRUCTION are arranged for the First Medical and the Second Medical Examinations of the University.

Facilities for Post Graduate and Research Work are provided in all departments named above. The Department of Anatomy provides also for research in Anthropology Embryology Histology and Neurology.

The Department of Anatomy has Cinematographic and Radiological equipment for the study of movement and growth.

Courses for the Primary Fellowship Examination RCS begin in September 1938 and March 1939

C O G DOUIE Secretary

University College London (Gower Street W C 1)

## UNIVERSITY OF LONDON KING'S COLLEGE

### FACULTY OF MEDICAL SCIENCE

The Medical Faculty at this College of the University gives instruction in the subjects of Medical Science for all the usual Pre-medical and Intermediate Examinations in Medicine, Surgery and Dentistry. Through the four associated hospitals, Students of the College have clinical facilities of over 1,000 beds.

The Medical Faculty of the College provides a general University education in touch with other faculties,atives of which medical students are permitted to attend. There are many College societies, clubs and functions in which student of all Faculties have opportunity of meeting each other. The College has an excellent athletic ground at Mitcham with a new and well equipped pavilion.

The first year subjects are taught in the large Department of the Faculty of Science and those of the Second and Third Years in the new Medical Department. This includes the Hammersmith Department of Anatomy and an extension to the Department of Physiology recently completed at a cost of £10,000. These new buildings and those of recent years provide the College with a completely new and modern Medical Department which embodies the newest ideas in laboratory construction and equipment.

Valuable scholarships and prizes are awarded on the results of examinations held annually.

The Hostel for men students (The Phoenix, Champion Hill S.E. 15) contains accommodation for 80 students. The Hostel for women students is at 55, Queensborough Terrace, Bayswater.

For detailed prospectus of the Medical and Dental Courses and for further information apply to the Dean of the Medical Faculty or to

S I SHOVELLON M.A.

Secretary

Strand W.C.

## UNIVERSITY OF GLASGOW

### FACULTY OF MEDICINE

NOTICE IS HEREBY GIVEN That the number of STUDENTS to be admitted to the FIRST YEAR COURSES in MEDICINE in OCTOBER 1938 will be LIMITED. Forms of Application for permission to commence the study of Medicine then may now be obtained from the Undersigned. These Forms must be returned by Applicants not later than July 1st 1938.

May 1938

ROBT BROUGH

Registrar

## SUDAN MEDICAL SERVICE

Applications are invited from MEDICAL MEN for the appointment to the SUDAN MEDICAL SERVICE. Candidates must be British born, single, under thirty years of age and must have held a Resident appointment in a large General Hospital.

Pay commences at £E720 (approximately £738 sterling) rising to £E1,200 (approximately £1,230 sterling) after thirteen years service. Senior posts are by selection. Three months leave is usually obtainable annually after the first tour abroad and all candidates on confirmation of their appointment are eligible for pensionable service.

Application forms and all information can be obtained from the Consulting Physician to the Sudan Government 93 Harley St London W 1.

## EAST AND WEST SUFFOLK COUNTY COUNCILS

ST AUDRY'S HOSPITAL (FOR MENTAL DISEASES) MELTON SUFFOLK

JUNIOR ASSISTANT MEDICAL OFFICER (male) required. Applicants should be single and under 40. Salary £350 rising by yearly increments of £25 to £450 with board, lodging, washing and attendance valued £100. The possession of a Diploma in Psychological Medicine entitles the holder to an extra £50 per annum. The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909.

Applications stating age and full particulars accompanied by copies of three recent testimonials should be sent to the Medical Superintendent as soon as possible.

## UNIVERSITY OF BRISTOL

### CHAIR OF PATHOLOGY and LECTURESHIP IN PATHOLOGY

The University invites applications for  
1 THE PROFESSORSHIP OF PATHOLOGY Salary £1,000 p.a.

2 A LECTURER IN PATHOLOGY Salary £400 to £600 p.a. according to qualifications and experience.

Application should reach the undersigned from whom further particulars may be obtained on or before June 20th 1938.

WINIFRED SHAPLAND

Secretary and Registrar

## BRITISH EMPIRE CANCER CAMPAIGN

### CLINICAL CANCER RESEARCH COMMITTEE

### APPOINTMENT OF MEDICAL SECRETARY AND REGISTRAR

Applications are invited from male British subjects with qualifications registered or registrable in the British Medical Register for the post of MEDICAL SECRETARY AND REGISTRAR to the Clinical Cancer Research Committee of the British Empire Cancer Campaign.

The appointment will be a whole time one and in the first instance for one year, eligible for re-election and hereafter subject to six months notice on either side. Preference will be given to candidates over the age of forty. Previous status and administrative experience a recommendation. Daily attendance at the Headquarters of the Campaign will be essential. Duties will include charge of the Records Department and responsibility for all Clinical Cancer Case Sheets.

At the beginning of the appointment the successful Candidate will be required to visit certain Clinics in the United States of America the expenses of which will be paid.

Remuneration will be at the rate of £500 per annum.

Applications accompanied by copies of three recent testimonials should reach the General Secretary of the Campaign at 11 Grosvenor Crescent London SW 1 not later than June 10th 1938 from whom further particulars may be obtained.

## WOLVERHAMPTON EDUCATION COMMITTEE

Applications invited for appointment from September 1st 1938 ASSISTANT MEDICAL OFFICER (full time) Salary £600 per annum rising by annual increments of £25 to a maximum of £700 per annum.

The person appointed will be required for duty mainly in connection with the medical inspection and treatment of school children. Applicants must possess special postgraduate experience in diseases of the eye and refractive work and diseases of children. A degree or diploma in public health will be an additional qualification and so will experience in general practice.

The person appointed will be on the staff of the Education Committee functioning through the Director of Education and the Medical Officer of Health who is also School Medical Officer.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Further particulars and conditions may be obtained on sending stamped addressed foolscap envelope to the undersigned to whom completed applications must be sent by June 18th 1938.

T A WARREN

Director of Education

Education Offices  
North Street Wolverhampton  
June 1938

## HOSPITAL FOR TROPICAL DISEASES

Gordon Street W C 1  
(Stamen's Hospital Society)

HOUSE PHYSICIAN (male) required for six months from July 1st 1938. Salary £10 per annum with board, residence and laundry. Applications with copies of three testimonials to be sent in on or before June 22nd 1938 to the undersigned.

F A LYON Secretary

Seamen's Hospital

Greenwich S E 10  
June 3rd 1938

# INDIAN MEDICAL SERVICE

## RECRUITMENT OF EUROPEAN OFFICERS

Applications are invited from Medical Men for Permanent Commissions in His Majesty's Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or of £2,500 after 12 years' service, together with free return passages, for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

British subjects of pure European descent who are under 25 years of age and who are registered under the Medical Acts in force in Great Britain and Northern Ireland are eligible to apply.

### CAREERS.

The Indian Medical Service offers a permanent career with wide opportunities of medical experience, including clinical, preventive, specialist and research work. At the beginning of his career an officer is employed on the military side, which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant Colonel and by selection to the ranks of Colonel and Major General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres, to provide for the medical needs of Civil Officials and for general medical administrative purposes, to specialist (for example public health and bacteriological) services, to research posts and to professorships at the Medical Schools.

### RATES OF PAY

Years of Service	Rank	Basic Pay Rs. per mensem	Overseas Pay £ per month	Total £ per annum
1	Lieutenant	450	15	£85
2		450	25	750
3		550	25	795
4		550	25	795
5	Captain	600	25	840
6		600	30	900
7		700	30	990
8		700	35	1040
9	Major	700	35	1040
10		800	35	1140
11		800	40	1200
12		800	40	1200
13	Lieut. Col.	800	40	1200
14		900	40	1335
15		900	40	1335
16		950	40	1370
17	Lieut. Col.	1100	40	1470
18		1100	40	1470
19		1350	40	1695
20		1350	40	1695
21	Major	1500	40	1830
22		1500	40	1830
23		1500	40	1830
24		1500	40	1830

\* A—(1) The rupee is at present stabilized at a rate equivalent to 1s. 6d.

(2) An officer promoted to the rank of Lieut.-Colonel before completion of 20 years' service will receive pay at the rate of Rs. 1.00 per mensem (basic) plus Rs. 0.40 per month overseas pay.

At the end of the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rate of pay are also attached to the numerous administrative appointments given to officers in both branches of the Service.

### ANTEDATED IN COMMISSION

Candidates possessing certain higher medical qualifications or holding the Diploma in Public Health may be granted an antedate in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate. Persons holding or about to hold resident posts at recognized

hospitals may be seconded in those posts for a period. The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to 18 months.

### OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £75 towards the cost of outfit.

### PRIVATE PRACTICE.

With the exception of Administrative Officer, military or civil and officers holding certain special appointment, officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

### LEAVE.

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed twelve months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a postgraduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom, £1 a day on the Continent of Europe and £1 10s. a day in the United States of America and Canada is granted to an officer in addition to ordinary rates of leave pay.

### PENSIONS.

The rates of pensions are as follows —

After 17 years' service for pension	Per annum
18	£372 0s.
19	£400 0s.
20	£428 0s.
21	£465 0s.
22	£502 0s.
23	£539 10s.
24	£576 10s.
25	£614 0s.
26	£651 0s.
27	£697 10s.
28	£744 0s.

There are additional pensions ranging from £65 to £200 per annum for officers who have held administrative appointments.

### PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India, subject to the payment of travelling charges. Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

### INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately three months prior to their embarkation for India on first appointment. Information as to the rates of pay and leave during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the UNDER SECRETARY OF STATE FOR INDIA, MILITARY DEPARTMENT, INDIA OFFICE, LONDON, SW 1. The Selection Committee will meet at the India Office about July 26th next, and the selected candidates unless seconded for hospital appointments, will be required to join a course of instruction commencing about September 1st prior to sailing for India in December 1938. Applications should reach the India Office as soon as possible.

# DERBYSHIRE COUNTY COUNCIL

## ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Assistant County Medical Officer of Health. Candidates must possess a qualification in Public Health have had both practical and administrative experience of the medical inspection of school children the organization of school clinics and infant welfare centres and have a sound knowledge of the provisions of the Midwives Act and the rules of the Central Midwives Board.

The Officer appointed will be required to devote the whole of his time to the duties of the office and to work under the direction of the County Medical Officer. The work will be largely administrative and office accommodation will be provided in the Central Office.

The salary will be £700 rising by annual increments of £25 to £900 a year together with travelling expenses in accordance with the County scale and the appointment will be subject to the approval of the Minister of Health and the Board of Education.

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act and the successful candidate will be required to pass a medical examination.

The appointment will be determinable by three months' notice on either side.

Applications stating age, qualifications and previous experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 25th 1938. Application forms are not provided.

County Offices W. M. V. S.H.  
Derby County Medical Officer of Health  
May 27th 1938

# COUNTY BOROUGH OF SUNDERLAND

## CONSULTANT OBSTETRICIAN

The Corporation invite applications for the above appointment from fully qualified persons who must hold the qualification of Membership of the College of Obstetrics and Gynaecology.

The person appointed will be required to reside in Sunderland and may engage in private consulting practice.

The Corporation will pay the sum of £500 per year for the first five years such payment to include for gynaecological work in connection with certain allotted beds at the Municipal Hospital.

The person appointed will be required to give the requisite lectures to Pupil Midwives at the Hospital and will be permitted to retain the fees received in connection therewith.

He will also be placed on the panel of doctors to be called in under the Puertural Pyrexia Regulations and to be available for consultation with other doctors for difficulties arising during pregnancy or at labour the fees for these will also be retained by the person appointed.

Full particulars can be obtained from the undersigned.

Applications endorsed Consultant Obstetrician must be addressed to the undersigned and received by him not later than Monday June 27th 1938.

Town Hall  
Sunderland  
May 24th 1938  
G. S. MCINTIRE Town Clerk

# COUNTY BOROUGH OF SUNDERLAND

## APPOINTMENT OF OBSTETRIC HOUSE SURGEON

Applications are invited for the appointment of a Resident Obstetric House Surgeon for the Municipal Hospital (463 beds) at a salary of £400 per annum rising by annual increments of £25 to £450 per annum.

Candidates must hold the Diploma of the College of Obstetrics and Gynaecology.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than Monday June 27th 1938.

Envelopes must be endorsed Obstetric House Surgeon  
Town Hall  
Sunderland  
G. S. MCINTIRE Town Clerk

# LONDON COUNTY COUNCIL

Applications invited from Medical Practitioners of at least one year's standing to undermentioned position. Experience in a resident appointment in a general hospital for at least six months desirable. Married quarters not available.

ASSISTANT MEDICAL OFFICER (Grade II) —Salary £250 a year together with board lodging in first instance (renewable for a second year under certain conditions).

COLINDALE HOSPITAL The Hyde Hendon N.W.9—Experience in pulmonary tuberculosis desirable. (There is no accommodation for a woman officer).

Application forms obtainable (stamped and addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2a County Hall S.E.1 returnable by June 20th. Canvassing disqualifies.

# CITY OF PLYMOUTH

## MEDICAL OFFICER OF HEALTH'S DEPARTMENT

### MOUNT GOLD ORTHOPAEDIC AND PULMONARY TUBERCULOSIS HOSPITAL (100 beds)

Applications are invited from duly qualified and registered unmarried medical men or women under 40 years of age for the post of Resident Medical Officer at the above named Hospital. The duties of the successful candidate will be in connection mainly with the orthopaedic section (120 beds) but the person appointed will be expected to undertake other duties as directed by the Medical Superintendent. Previous experience in orthopaedics and radiology will count as added qualifications and there are ample opportunities for experience in this type of work.

The appointment is for twelve months at a salary of £300 per annum plus full residential emoluments. The post is subject to the Local Government and Other Officers Superannuation Act 1922 and is terminable by one month's notice on either side. The successful candidate will be required to pass a medical examination. All fees received by the Officer other than the above must be refunded to the Council.

Forms of application are not provided and applications with copies of three recent testimonials must be sent to the undersigned not later than noon on Saturday June 25th.  
Town Hall  
Stonchouse  
Plymouth  
I. HIRSON  
Medical Officer of Health

# HEREFORDSHIRE COUNTY COUNCIL

## APPOINTMENT OF COUNTY MEDICAL OFFICER OF HEALTH

Applications are invited for the above appointment from Medical Men duly qualified for the appointment pursuant to the statutory provisions contained in the Local Government Act 1933 and the Regulations made by the Minister of Health thereunder and by virtue of the Public Health Act 1936.

The duties will include all statutory duties as County Medical Officer, Chief School Medical Officer and Chief Administrative Tuberculosis Officer work required under the Mental Deficiency, Maternity and Child Welfare and Midwives Acts together with duties in connection with the supervision of the work of the County School Dentists and Health Visitors, general supervision and control of Maternity and Child Welfare Centres and various Clinics and such other duties as may be prescribed.

Salary £1,000 per annum together with travelling allowance on the County Scale.

The appointment will be subject to the approval of the Government Departments concerned and to a satisfactory medical examination and will be terminable by three months' notice on either side.

A form of application may be obtained from the undersigned by whom applications must be received not later than June 30th 1938.

Canvassing either directly or indirectly will be considered a disqualification.

Shirehall  
Hereford  
June 3rd 1938  
R. C. HANSEN  
Clerk of the Council

# LANCASHIRE COUNTY COUNCIL

## SCHOOL MEDICAL AND CHILD WELFARE DEPARTMENT

### APPOINTMENT OF AN ASSISTANT COUNTY MEDICAL OFFICER

The Lancashire County Council invite applications from registered Medical Practitioners for the post of an Assistant County Medical Officer.

Applicants must not be over 40 years of age and must possess the Diploma in Public Health. The duties of the post include the Medical Inspection of school children work under the Maternity and Child Welfare Acts, general Public Health work and such other duties as may from time to time be imposed by the County Council.

The candidate appointed will be required to devote his whole time to the service of the County Council to pass a medical examination and to contribute to the Council's Superannuation Fund. The salary will be £500 a year rising subject to satisfactory service by annual increments of £50 to a maximum of £1,000 a year together with travelling expenses.

Applications must be made upon a form which can be obtained together with further particulars from the County Medical Officer of Health, School Medical and Child Welfare Department, County Offices, Preston to whom the completed forms should be returned not later than June 22nd 1938. All communications must be endorsed Assistant County Medical Officer.

Any form of canvassing is strictly forbidden and will disqualify.

GEORGE ETHFRTON  
Clerk of the County Council  
County Offices Preston  
June 1938

# COUNTY COUNCIL OF MIDDLESEX

## DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR TOTTENHAM WEST GREEN

Applications are invited from duly qualified Medical Practitioners for the undermentioned appointments—

DISTRICT MEDICAL OFFICER for the Tottenham West Green Medical Relief District. Salary £300 per annum plus the cost of expensive drugs and fees in respect of attendance at consultations and for the services of another medical practitioner to administer short anaesthetics for minor operations (e.g. septic liners abscesses).

The officer appointed will be required to carry out his duties in accordance with the Public Assistance Order 1930 of the Minister of Health to reside in the district unless the Council otherwise determines and to name to the Council some duly qualified Medical Practitioner who will in the case of his absence or other hindrance to his personal attendance act in his place.

PUBLIC VACCINATOR for the Tottenham West Green Vaccination District. The person appointed will be required to produce to the Council a certificate of proficiency in vaccination except in a case in which such certificate was required as a condition of obtaining any diploma, licence or degree which he possesses. He will be required also to enter into a contract with the Council in accordance with the Vaccination Order 1930 of the Minister of Health. The contract will provide for the payment of the scale of fees laid down by the County Council.

The person or persons engaged will not have any superannuation rights under the Council's superannuation scheme.

Applications stating date of birth, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 15th. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed District Medical Officer and/or Public Vaccinator as the case may be. Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE 2

Clerk of the County Council  
Middlesex Guildhall -  
Westminster S.W.1  
June 5th 1938

# CITY OF SALFORD

## HOPE HOSPITAL

Applications are invited for the post of RESIDENT OBSTETRIC OFFICER at Hope Hospital Salford to commence duty as soon as possible after July 1st 1938. Commencing salary £400 per annum maximum £500 per annum plus board, lodging, attendance and laundry. A deduction of 5 per cent will be made from salary and estimated value of emoluments for superannuation purposes.

The Hospital contains 1150 beds and is equipped with Pathological Laboratory, X-ray and Electrocardiograph and affords full facilities for clinical investigation.

The Resident Obstetric Officer is one of the three Senior Residents and will be responsible for work in the obstetric and gynaecological division. Candidates must have had recent extensive practical experience in obstetrics and in gynaecology and must possess the M.C.O.G. Diploma. Preference will be given to candidates who also possess one of the higher surgical qualifications.

Further particulars and application forms may be obtained from the Medical Officer of Health, 143 Regent Road, Salford 5 to whom they must be returned accompanied by copies of not more than three recent testimonials not later than Saturday June 15th 1938.

H. H. TOMSON Town Clerk

# HOLLAND (LINCOLNSHIRE) COUNTY COUNCIL

## ASSISTANT MEDICAL OFFICER OF HEALTH (Male)

Applications are invited from duly qualified and registered medical practitioners (under 40 years of age) for the above appointment.

The salary will be £600 per annum rising by annual increments of £25 to £700 per annum.

The duties of the post include school medical inspections the carrying out of work under the Maternity and Child Welfare and Tuberculosis schemes and such other duties as may be required by the Council.

The person appointed will devote the whole of his time to the duties of the office act under the direction and supervision of the County Medical Officer and reside in such part of the district as may be required.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of not more than three testimonials must be addressed to the County Medical Officer of Health, County Hall Boston Lincs and received by him not later than June 25th 1938.

W. G. ROOTH  
County Medical Officer of Health  
County Hall Boston  
June 6th 1938

# ADMINISTRATIVE COUNTY OF NORFOLK

## OFFICER OF HEALTH DISTRICT

The Norfolk County Council and the District Councils invite applications from medical practitioners who are fully qualified in public health and who are members of the Royal College of Physicians of London. Preference will be given to those who in addition hold the Certificate of Diploma of Medical Education of the United Kingdom.

The salary for the combined appointment will be £600 per annum with travelling expenses in accordance with the County Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

The Officer will act under the County Medical Officer as Assistant School Medical Officer or Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him by the County Council. As regards his duties as Medical Officer of Health he will be subject to the control of the District Councils concerned and be required to live at or near a specified centre in his district or to be available for duty at such centre.

Applications must be made on the prescribed form which can be obtained from the County Medical Officer, Public Health Department, 19, Broad Street, Norwich, to whom they should be sent, accompanied by copies of not more than three recent testimonials received by the applicant, not later than June 15th 1938. Canvasser in any form will be a disqualification.

H. C. DAVIES  
Clerk of the County Council

W. J. HYNER  
Clerk to the Downham Rural District Council  
W. J. HYNER  
Clerk to the Downham Rural District Council  
H. CARVER  
Clerk to the Marshland Rural District Council

# COUNTY BOROUGH OF MIDDLESBROUGH

## ASSISTANT MEDICAL OFFICER OF HEALTH MATERNITY AND CHILD WELFARE

The Corporation of Middlesbrough invite applications from fully qualified medical men and women for the post of Assistant Medical Officer of Health Maternity and Child Welfare. Applicants must have had experience in ante-natal, midwifery and diseases of children and at least three years postgraduate experience.

Commencement salary will be at the rate of £350 per annum with residence, board and laundry at £100 per annum £250 in all and increase to salaried officers by annual increments of £25 to a maximum of £500. The appointment is a full-time one under the Local Government Superannuation Act 1922. A medical examination will be required to be passed by candidates.

Successful candidates will be required to reside at the Municipal Maternity Hospital and to be available for his or her term to the duties of the post, and to act under the directions of the Medical Officer of Health.

Applications, stating a date and experience, to either of the three recent testimonials must be received by me not later than June 15th 1938.

PRESTON KITCHER  
Town Clerk

# LANCASHIRE MENTAL HOSPITALS BOARD

## COUNTY MENTAL HOSPITAL

### APPOINTMENT OF DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the whole-time post of Deputy Medical Superintendent at the County Mental Hospital. The salary is £750 per annum rising by annual increments of £25 to a maximum of £900 per annum. As a condition of appointment the successful candidate must possess a D. of Diploma in Psychiatric Medicine.

The appointment will be subject to the provisions of the Local Government Superannuation Act 1922. Applications are required to be submitted to the County Council and to be obtained from the County Council and to be obtained from the County Council and to be obtained from the County Council.

Applications should be sent to or received by me not later than 12 noon on July 15th 1938. Canvasser either directly or indirectly will be a disqualification.

GEORGE EHTERTON  
Clerk of the Board

# COUNTY COUNCIL OF MIDDLESEX

## RESIDENT ASSISTANT MEDICAL OFFICER

Central Medical Council Hospital  
Victoria Lane, Weybridge, N. 10

Applications are invited for the above appointment.

Candidates must be registered medical practitioners who have had postgraduate experience in public health and who are members of the Royal College of Physicians of London.

The salary for the appointment will be £600 per annum with travelling expenses in accordance with the County Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

The Officer will act under the County Medical Officer as Assistant School Medical Officer or Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him by the County Council. As regards his duties as Medical Officer of Health he will be subject to the control of the District Councils concerned and be required to live at or near a specified centre in his district or to be available for duty at such centre.

Applications must be made on the prescribed form which can be obtained from the County Medical Officer, Public Health Department, 19, Broad Street, Norwich, to whom they should be sent, accompanied by copies of not more than three recent testimonials received by the applicant, not later than June 15th 1938. Canvasser in any form will be a disqualification.

H. C. DAVIES  
Clerk of the County Council

# COUNTY COUNCIL OF MIDDLESEX

## JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Candidates must be registered medical practitioners who have had postgraduate experience in public health and who are members of the Royal College of Physicians of London.

The salary for the appointment will be £600 per annum with travelling expenses in accordance with the County Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

The Officer will act under the County Medical Officer as Assistant School Medical Officer or Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him by the County Council. As regards his duties as Medical Officer of Health he will be subject to the control of the District Councils concerned and be required to live at or near a specified centre in his district or to be available for duty at such centre.

Applications must be made on the prescribed form which can be obtained from the County Medical Officer, Public Health Department, 19, Broad Street, Norwich, to whom they should be sent, accompanied by copies of not more than three recent testimonials received by the applicant, not later than June 15th 1938. Canvasser in any form will be a disqualification.

H. C. DAVIES  
Clerk of the County Council

# BOROUGH OF HESTON AND ISLEWORTH

## EDUCATION COMMITTEE

### ASSISTANT DENTAL SURGEON

The Education Committee invite applications for the appointment of an Assistant Dental Surgeon for the Heston and Isleworth School. The salary is £750 per annum rising by annual increments of £25 to a maximum of £900 per annum. As a condition of appointment the successful candidate must possess a D. of Diploma in Dental Surgery.

The appointment will be subject to the provisions of the Local Government Superannuation Act 1922. Applications are required to be submitted to the Education Committee and to be obtained from the Education Committee and to be obtained from the Education Committee.

Applications should be sent to or received by me not later than 12 noon on July 15th 1938. Canvasser either directly or indirectly will be a disqualification.

W. WALL  
Secretary for Education

# CITY OF BIRMINGHAM

## DUDLEY ROAD HOSPITAL

### PHYSICIAN

Applications are invited for the above appointment from fully qualified and registered medical practitioners who have had postgraduate experience in public health and who are members of the Royal College of Physicians of London. Preference will be given to those who in addition hold the Certificate of Diploma of Medical Education of the United Kingdom.

The salary for the appointment will be £600 per annum with travelling expenses in accordance with the City Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

The Officer will act under the City Medical Officer as Assistant School Medical Officer or Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him by the City Council. As regards his duties as Medical Officer of Health he will be subject to the control of the District Councils concerned and be required to live at or near a specified centre in his district or to be available for duty at such centre.

Applications must be made on the prescribed form which can be obtained from the City Medical Officer, Public Health Department, 19, Broad Street, Norwich, to whom they should be sent, accompanied by copies of not more than three recent testimonials received by the applicant, not later than June 15th 1938. Canvasser in any form will be a disqualification.

# CITY OF BIRMINGHAM

## PUBLIC HEALTH DEPARTMENT

### AIR RAIDS PRECAUTIONS MEDICAL OFFICER FOR CASUALTY SERVICES

Applications are invited from retired medical officers for the above appointment. Candidates must be registered medical practitioners who have had postgraduate experience in public health and who are members of the Royal College of Physicians of London.

The salary for the appointment will be £600 per annum with travelling expenses in accordance with the City Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

The Officer will act under the City Medical Officer as Assistant School Medical Officer or Medical Officer to Infant Welfare Centres and will be required to perform such other duties as may be assigned to him by the City Council. As regards his duties as Medical Officer of Health he will be subject to the control of the District Councils concerned and be required to live at or near a specified centre in his district or to be available for duty at such centre.

Applications must be made on the prescribed form which can be obtained from the City Medical Officer, Public Health Department, 19, Broad Street, Norwich, to whom they should be sent, accompanied by copies of not more than three recent testimonials received by the applicant, not later than June 15th 1938. Canvasser in any form will be a disqualification.

# CITY OF BIRMINGHAM

## MATERNITY AND CHILD WELFARE DEPARTMENT

### TEMPORARY MEDICAL OFFICER

A temporary medical officer is required for the above appointment. Candidates must be registered medical practitioners who have had postgraduate experience in public health and who are members of the Royal College of Physicians of London.

The salary for the appointment will be £600 per annum with travelling expenses in accordance with the City Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

# BRISTOL ROYAL INFIRMARY

## BRISTOL GENERAL HOSPITAL

### JOINT FRACTURE AND ORTHOPAEDIC DEPARTMENT

Applications are invited for the above appointment from fully qualified and registered medical practitioners who have had postgraduate experience in public health and who are members of the Royal College of Physicians of London. Preference will be given to those who in addition hold the Certificate of Diploma of Medical Education of the United Kingdom.

The salary for the appointment will be £600 per annum with travelling expenses in accordance with the City Council scale. The salary will be subject to the statutory deductions for this purpose. The successful applicant will be required to pass a medical examination.

ELLIS C. SMITH F.C.S.  
Secretary for Education

## HOSPITAL OF ST CROSS RUGBY (120 Beds)

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (three R.M.O.s)

Salary to commence at the rate of £100 per annum for the first three months £125 per annum for second three months and at the rate of £150 per annum for subsequent months

Full board washing, etc. provided  
Six months appointment and eligible on completion of service for further extension of six months

Candidates must be prepared to commence duties as early as possible

The practice of the Hospital offers excellent opportunities for wide experience

Certificates and other fees shared by R.M.O.s

Applications stating age, nationality and full details with copies of three recent testimonials to be sent to the undersigned

(Signed) W. COCKBURN

Superintendent and Secretary

## KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL Maidstone (109 Beds)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON which post becomes vacant on July 1st 1938. The appointment is for six months but a senior post at a higher salary may be given after that period if mutually agreed upon

Candidates must be duly qualified and registered Medical Practitioners single and of British birth and nationality and should have experience of refractions. Salary at the rate of £200 per annum with board residence and laundry. The Hospital is recognized by the Examining Board for the D.O.M.S.

Applications stating age and qualifications together with copies of not more than three testimonials should be sent to the undersigned

JOHN W. STRICKLAND

Secretary

## MANCHESTER ROYAL INFIRMARY RESIDENT JUNIOR MEDICAL OFFICER at the BARNES CONVALESCENT HOSPITAL

The Board of Management of the Manchester Royal Infirmary invite applications for the above post

Applicants must hold a Medical and Surgical qualification and be registered and have held a hospital appointment

The appointment is for six months renewable for a further period of six months subject to the provisions of the By-laws as to notice etc. Salary at the rate of £150 per annum with board residence and allowance for laundry

Applications stating age with testimonials to be sent to the Chairman of the Medical Board not later than June 16th 1938

By Order

May 27th 1938 F. J. CABLE Gen Supt and Secretary

## THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION Gloucester (232 Beds—Five Residents)

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary at the rate of £150 per annum with board residence and laundry

The appointment is for six months which may be extended for similar periods by re-election from time to time

Applications stating age, qualifications, experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than Wednesday June 15th

The elected candidate will be required to enter upon his duties on June 24th

May 26th 1938 F. J. SYMONS Secretary

## THE ROYAL INFIRMARY BRADFORD

ASSISTANT RADIUM OFFICER (Resident) male wanted for August 1st. Twelve months appointment. Candidates must be single and legally qualified

Salary £175 per annum with board residence and washing. Applications stating age, qualifications and previous experience (not necessarily in Radio Therapy) with copies of recent testimonials should be sent to the undersigned by June 27th 1938

June 2nd 1938 H. TRUSSON House Governor and Secretary

## BURTON ON-TRENT GENERAL INFIRMARY

Applications are invited for the position of CASUALTY OFFICER AND HOUSE PHYSICIAN salary at the rate of £150 per annum with board residence and laundry. Duties to commence July 1st 1938

Applications giving age, qualifications and nationality together with copies of testimonials to be sent to E. W. THORNTON Secretary

## ROYAL VICTORIA INFIRMARY Newcastle upon Tyne (755 Beds)

### MEDICAL REGISTRARS—Open Appointment

Applications are invited for the post of Medical Registrars (two vacancies) to take up duty on August 1st 1938

Candidates must be registered in Medicine and in Surgery

The salary is at the rate of £250 per annum (non resident)

Further particulars regarding duties, times of attendance etc. may be obtained from the House Governor and Secretary to whom applications with copies of not more than three testimonials should be sent not later than June 25th 1938

S. DUNSTAN

House Governor and Secretary

June 3rd 1938

## THE BIRMINGHAM UNITED HOSPITAL

PSYCHOLOGIST required for duty at the Nerve Hospital, Birmingham

This Hospital is associated with and staffed by the Queen's Hospital unit of the Birmingham United Hospital

Candidates must be qualified Medical Practitioners and will be required to produce evidence of special experience in Psychology. Salary to commence £500 per annum decreasing by £100 annually

The successful applicant will be required to attend five afternoon and two evening clinics per week

Private practice will be allowed

Applications should be marked "Psychologist" and addressed to the Secretary, Midland Nerve Hospital, Bath Row, Birmingham 15 to reach him not later than June 15th 1938

May 27th 1938

## THE BOLTON ROYAL INFIRMARY (315 Bed including two Auxiliary Hospitals)

Applications are invited from Gentlemen for the post of ASSISTANT RESIDENT SURGICAL OFFICER

The duties comprise responsibility for the whole of the Casualty and Orthopaedic Departments and to deputise for the R.S.O. in his absence

The post is recognized by the Royal College of Surgeons of England for the Final Fellowship Examination

Salary £200 per annum with board residence and laundry

Applications stating age, nationality and experience together with copies of testimonials should be forwarded to the undersigned as soon as possible

Duty will commence on July 1st 1938

H. CORLESS

Secretary

## THE BOLTON ROYAL INFIRMARY (315 Beds including two Auxiliary Hospitals)

Applications are invited from ladies and gentlemen for the posts of TWO HOUSE SURGEONS

The duties of one post includes ear, nose and throat work and gynaecology

Salary £150 per annum with board residence and laundry

Applications for the posts stating age, nationality and experience together with copies of testimonials should be forwarded to the undersigned as soon as possible

Duty will commence on July 1st 1938

H. CORLESS

Secretary

## THE LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Mount Pleasant Liverpool

Applications are invited for a FULLTIME RESIDENT MEDICAL OFFICER to the Hospital for Consumption and Diseases of the Chest. Previous Hospital experience desirable. Both medical and surgical treatment of Pulmonary Tuberculosis are undertaken at this Hospital

The appointment will be for a period of one year

Salary £150 per annum with board and residence

Applications stating age, nationality, qualifications and experience together with copies of three recent testimonials or names of two local referees to be sent to the Secretary not later than June 22nd 1938

## THE WESTERN INFIRMARY OF GLASGOW (Incorporated)

The Managers invite applications for a FULLTIME ASSISTANT IN THE RADIUM DEPARTMENT with opportunities for experience in X-ray therapy and diagnosis. The salary is £400 per annum

Fifteen applications with copies of at least two testimonials with each application to be lodged with the subscriber on or before Thursday June 16th

Canvassing not permitted

J. MATHESON JOHNSTON

87 Union Street Glasgow Secretary and Treasurer

June 1938

## THE ROYAL HOSPITAL Wolverhampton (Incorporated under Charter)

### RESIDENT ANAESTHETIST

Applications are invited for the post of Resident Anaesthetist. The appointment will be for six months renewable and the salary £200 per annum with board and residence

The Hospital contains 300 beds at present being enlarged to 400 beds and is approved by the General Medical Council for part of the requisite attendance on Medical and Surgical Practice

Applicants should provide evidence of their experience in modern anaesthetic method applications should be sent to the undersigned

Wolverhampton W. H. HARPER

June 4th 1938 House Governor

## THE ROYAL HOSPITAL Wolverhampton (Incorporated under Charter)

HOUSE SURGEON required (General Surgery)

Duties to commence July 1st. The Hospital contains 300 beds includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice

Candidates must be registered under the Medical Acts and unmarried

The appointment is for six months. Salary at the rate of £100 per annum. Board furnished rooms and laundry provided

Applications with copies of testimonials, to be forwarded to the undersigned

Wolverhampton W. H. HARPER

May 30th 1938 House Governor

## THE ROYAL HOSPITAL Wolverhampton (Incorporated under Charter)

HOUSE PHYSICIAN required. Duties to commence July 1st. The Hospital contains 300 beds includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice

Candidates must be registered under the Medical Acts and unmarried

The appointment is for six months. Salary at the rate of £100 per annum. Board furnished rooms and laundry provided

Applications with copies of testimonials to be forwarded to the undersigned

Wolverhampton W. H. HARPER

May 30th 1938 House Governor

## WITHELL URBAN DISTRICT COUNCIL MEDICAL OFFICER OF HEALTH

Applications are invited for the position of Medical Officer of Health (part time) to the above Council for the period ending March 31st 1939. Salary from the date of appointment at the rate of £50 per annum (inclusive)

Applications should be forwarded to the undersigned to arrive not later than Monday June 13th 1938

25 Railway Road H. D. HOLLAND

Darwin Clerk

## WEST SUFFOLK GENERAL HOSPITAL Bury St Edmunds (112 Beds)

Applications are invited for the following posts: HOUSE PHYSICIAN. Duties include charge of the Medical Beds, Maternity Ward and Casualty and Administration of Anaesthetics. Salary £150 per annum with board lodging and laundry

Vacancy June 30th 1938

Applicants for the post must be registered Practitioners. Applications stating age, experience and nationality with copies of three recent testimonials to be sent to the Secretary. The appointment is for six months

May 30th 1938

## WESTON SUPER MARE HOSPITAL (80 Beds)

### HOUSE PHYSICIAN

Applications are invited for the post of Resident House Physician at this Hospital. Salary at the rate of £150 per annum with board rooms and laundry. Duties commencing July 15th next

Applications stating age, qualifications and enclosing copies of testimonials should be addressed to the undersigned

LESLIE J. FURSLAND

Secretary

## YORK COUNTY HOSPITAL (204 Beds)

Applications are invited for the post of RESIDENT ANAESTHETIST and SECOND HOUSE SURGEON. Salary £150 per annum with board residence and laundry

Applications stating age and previous experience together with copies of not more than three recent testimonials to be sent to the undersigned immediately

J. R. MACKRILL

Secretary

**EAST SUSSEX COUNTY COUNCIL**

**SOUTHLANDS HOSPITAL**  
St. Leonards-on-Sea

**ASSISTANT RESIDENT MEDICAL OFFICER**

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of Assistant Resident Medical Officer at Southlands Hospital, St. Leonards-on-Sea. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

**HUGH J. T. McILVEEN**  
County Clerk of the County Council  
Leves, June 3rd 1938

**KENT AND CANTERBURY HOSPITAL**  
Canterbury (153 Beds)

**THE ROYAL VICTORIA HOSPITAL**  
Folkestone (145 Beds)

Applications are invited for the **JOINT APPOINTMENT OF DIRECTOR OF PATHOLOGY** to the above-named Hospitals. A salary of £600 per annum will be paid. The Director will be in charge of the pathology department of both hospitals. The Director will be in charge of the pathology department of both hospitals. The Director will be in charge of the pathology department of both hospitals.

**J. F. KENT**  
Superintendent and Secretary  
Kent and Canterbury Hospital  
Folkestone, also on behalf of the  
Royal Victoria Hospital Folkestone

**MANCHESTER ROYAL INFIRMARY**

**ASSISTANT MEDICAL OFFICER TO THE DERMATOLOGICAL DEPARTMENT**

The Board of Management of the Manchester Royal Infirmary invite applications for the above post which will become vacant on 1st July 1938.

The successful candidate must be a qualified Medical Officer (non-graduate) and must have completed two further periods of one year each in the provision of the By-Laws.

The salary is £135 per annum with board and laundry. The salary is £135 per annum with board and laundry. The salary is £135 per annum with board and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**F. J. CABLE**  
General Superintendent and Secretary

**CLAYTON HOSPITAL, WAKEFIELD**

Applications are invited immediately for the post of **HOUSE SURGEON** for six months (renewable). The successful candidate will be a qualified Medical Officer (non-graduate) and must have completed two further periods of one year each in the provision of the By-Laws.

The salary is £100 per annum with board and laundry. The salary is £100 per annum with board and laundry. The salary is £100 per annum with board and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**T. F. W. MACKGOWN**  
Supt and Secy

**DONCASTER ROYAL INFIRMARY**  
(185 Beds)

**CASUALTY HOUSE SURGEON (male)**  
Salary at the rate of £100 per annum with board and laundry. The salary is £100 per annum with board and laundry. The salary is £100 per annum with board and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**R. LANCASTER**  
Secretary Superintendent

**DURHAM COUNTY AND SUNDERLAND EYE INFIRMARY**

**HOUSE SURGEON** required immediately. Salary £30 per annum with board and laundry. The salary is £30 per annum with board and laundry. The salary is £30 per annum with board and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**NEWCASTLE TYPE EYE HOSPITAL**  
HONORARY OPHTHALMIC SURGEON

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of Honorary Ophthalmic Surgeon at Newcastle Type Eye Hospital. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

**CHARLES A. UFFON**  
Eye Hospital St. Mary's  
Newcastle-on-Tyne

**NORTH RIDING INFIRMARY**  
(General Hospital 14 Beds)

**Wanted SENIOR HOUSE SURGEON**

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of Senior House Surgeon at North Riding Infirmary. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**GERALD A. KENYON**  
Secretary Superintendent

**NORTH RIDING INFIRMARY**  
(General Hospital 14 Beds)

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of **HOUSE SURGEON** at North Riding Infirmary. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**GERALD A. KENYON**  
Secretary Superintendent

**ROYAL MANCHESTER CHILDREN'S HOSPITAL PENDELBURY**

Applications are invited for the post of **NON-RESIDENT ASSISTANT MEDICAL OFFICER** at the Outpatient Department. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**H. HEARDMAN**  
Secretary

**MONTAGU HOSPITAL, MEXBOROUGH**  
(113 Beds)

Applications are invited for the post of **RESIDENT HOUSE PHYSICIAN (lady)**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**M. MONTAGU**  
Secretary Superintendent

**ROTHERHAM HOSPITAL**

Applications are invited for the post of **CASUALTY HOUSE SURGEON (male)**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**G. W. ROBERTS**  
Secretary Superintendent

**COUNTY MENTAL HOSPITAL**  
RAINHILL LANCs

**Wanted ASSISTANT MEDICAL OFFICER**

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of Assistant Medical Officer at County Mental Hospital. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**JOHN C. PETERS**  
Secretary

**YORK DISPENSARY**

Applications are invited for the post of **RESIDENT MEDICAL OFFICER (female)**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**JOHN C. PETERS**  
Secretary

**BIRMINGHAM AND MIDLAND EYE HOSPITAL (114 Beds)**

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of **HOUSE SURGEON** at the above Hospital. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**J. W. PEARCE**  
General Superintendent

**ROYAL EAST SUSSEX HOSPITAL**

Applications are invited for the post of **SENIOR HOUSE SURGEON (female)**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**WILFRED G. NEMSLEY**  
Secretary

**ABERDEEN ROYAL MENTAL HOSPITAL**

Applications are invited from fully qualified Medical Practitioners (unmarried) for the post of **ASSISTANT PHYSICIAN (male)**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**ARTHUR GIFFITHS**  
Secretary

**EAST SUFFOLK AND IPSWICH HOSPITAL**  
(33 Beds)

Applications are invited for the post of **HOUSE SURGEON (male)**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

**ARTHUR GIFFITHS**  
Secretary

**THE CITY MENTAL HOSPITAL**  
Canterbury

Applications are invited for the post of **LOCUM TENENS ASSISTANT MEDICAL OFFICER**. The appointment is for one year, salary £1,000 per annum with board, residence and laundry. The successful candidate will be one of the candidates who have been recommended by the Local Medical Committee. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital. The duties of the post will be to assist the Resident Medical Officer in the management of the hospital.

The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry. The salary is £1,000 per annum with board, residence and laundry.

Applications must be accompanied by a curriculum vitae and testimonials and sent to the Secretary of the Board of Management.

# WEST RIDING OF YORKSHIRE MENTAL HOSPITALS BOARD

## APPOINTMENT OF MEDICAL SUPERINTENDENT

### STORTHES HALL MENTAL HOSPITAL Kirkburton near Huddersfield

The West Riding of Yorkshire Mental Hospitals Board invite applications from duly qualified medical practitioners for the appointment of a Medical Superintendent in their service at the Storthes Hall Mental Hospital Kirkburton near Huddersfield.

Candidates must have had previous experience as the Medical Superintendent or Senior Medical Officer of a Mental Hospital.

The person appointed will be required to devote his whole time to the duties of the office and to act in conformity with the provisions of the Lunacy and Mental Treatment Acts and the general rules and regulations of the West Riding of Yorkshire Mental Hospitals Board.

The minimum and maximum salaries fixed for the position are £1000 and £1400 the annual increments being £50. The commencing salary to be paid will within these limits be according to qualifications and experience and is entirely at the discretion of the Board.

The person appointed will be provided with an unfurnished house which will be deemed to be valued for superannuation purposes at the sum of £50 per annum. There are no other emoluments attached to the position. The salary and value of the unfurnished house will be subject to deductions under the Asylums Officers Superannuation Act 1909.

Application must be made on a form which can be obtained together with any other particulars from the undersigned to whom the completed forms should be returned not later than June 30th 1938. Canvassing in any form will be a disqualification.

Board Offices G LESLIE BANNER  
Victoria Chambers Clerk of the Board  
Wood Street  
Wakefield (P.O. Box No. 23)

### DEVONSHIRE ROYAL HOSPITAL Buxton Derbyshire (300 Beds) (A National Hospital for Rheumatism and Allied Diseases)

HOUSE PHYSICIAN (male). Salary £150 rising to £175 after three months service (and prospects of promotion to Resident Medical Officer) with board residence and laundry.

Candidates must be fully qualified and registered. The appointment is for a minimum period of six months and may be extended for a further period of six months.

Applications endorsed Medical Appointment stating age, experience and qualifications together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained.

Considerable orthopaedic experience is available and the appointments offer special facilities for a gentleman preparing a thesis or wishing to undertake special work as the Hospital contains all the necessary laboratory and other facilities for research.

Canvassing will disqualify.  
By Order of the Committee of Management  
A PRESTON TURNER  
General Superintendent and Secretary

### HUDDERSFIELD ROYAL INFIRMARY (321 Beds)

MALE HOUSE SURGEON required to commence duty on July 5th 1938. Salary £150 per annum with board residence and laundry.

Appointment for six months subject to renewal at the discretion of the Board of Management. The Hospital is officially recognized for the surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications with copies of three testimonials to be addressed to the undersigned immediately.  
H JOHNSON  
Gen Supt and Secretary

### AYR COUNTY HOSPITAL (Voluntary General)

The Directors invite applications for the position of HOUSE SURGEON (male, one required). Salary £125 per annum with board and residence. Candidates please state age. Appointments to be for six months from July 1st.

Applications to be lodged with the subscriber not later than Saturday June 18th 1938 along with copy testimonials.

Ayr County Hospital JOHN J. GOUDIE  
June 3rd 1938 Secretary and Treasurer  
Essay County Hospital (174 Beds)  
Colchester

Wanted immediately an ASSISTANT HOUSE SURGEON (male). Salary £120 per annum with board, washing and residence. Medical and surgical qualifications required.

Applications with three recent testimonials to be sent by Wednesday June 15th to  
ALFRED G. BUCK, Secretary

### THE GLOUCEstershire ROYAL INFIRMARY AND EYE INSTITUTION Gloucester (212 Beds—5 Residents)

Application are invited for two posts of HOUSE SURGEON (male). The salary for each post is at the rate of £150 per annum with board residence and laundry.

The appointments are for six months which may be extended for similar periods by re-election from time to time.

Applications stating age, qualifications, experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than Wednesday June 22nd 1938.

The elected candidates will be required to enter upon their duties on Thursday June 30th 1938.  
I J. SYMONS  
Secretary

### WARRIOR GENERAL HOSPITAL Llammington Spa (164 Beds)

Applications are invited from qualified registered Medical Practitioners for the POST OF SENIOR RESIDENT SURGICAL OFFICER. The appointment is for a period of twelve months from June 30th 1938 which on application may be extended to two years.

Salary £100 per annum rising to £150 for second year other fees estimated at £50 per annum with board residence and laundry.

Candidates for the post should have held at least two Resident House Surgeons' appointments and preferably possess an F.R.C.S. qualification.

Applications stating age and full particulars together with three testimonials should be sent to the undersigned by Tuesday June 21st 1938.

EDWARD L. WIRGMAN  
House Governor and Secretary

### DERBYSHIRE HOSPITAL FOR SICK CHILDREN (54 Beds)

WANTED JULY 1st 1938—A RESIDENT HOUSE SURGEON (male). Salary £130 p.a. The appointment is for six months but may be extended by mutual arrangement. Applicants must be fully qualified.

Applications with three testimonials to be sent to the undersigned forthwith.

The Hospital is recognised by the Conjoint Board for the purposes of the Diploma in Child Health.

ARTHUR N. WHISTON  
Secretary  
25 St. Mary's Gate Derby

### ROYAL DEVON AND EXETER HOSPITAL Exeter (250 Beds)

#### RESIDENT SURGICAL OFFICER (Male)

Applications are invited for the above resident appointment shortly becoming vacant at this hospital. Engagement for twelve months and dates eligible for re-election.

Salary at the rate of £250 per annum with board apartments and washing.

Applications stating age, qualifications and copies of three recent testimonials should be sent to the undersigned on or before Monday 20th inst.

S. COLE  
Secretary and Manager

### PRESTON AND COUNTY OF LANCASTER QUEEN VICTORIA ROYAL INFIRMARY

The Board of Management invite applications from unmarried gentlemen properly qualified and registered for the post of HOUSE PHYSICIAN (vacant July 1st) with resident charge of the Medical Beds (approximately 50).

Salary at the rate of £150 per annum with board residence and washing. Six months' appointment. Total resident staff 8.

Applications stating age, particulars of qualifications and previous hospital posts (if any) to be forwarded to Mr. JOHN GIBSON, F.R.C.S., Supt. and Secretary, Royal Infirmary, Preston.

### OLDHAM ROYAL INFIRMARY

SENIOR HOUSE SURGEON required for a period of six months preferably with considerable hospital experience. Salary £250 to £300 per annum according to qualifications and experience with board residence and laundry.

Applications stating age, experience and qualifications together with copies of three recent testimonials to be forwarded to the undersigned not later than June 18th 1938.

H. EWART MITCHELL  
General Superintendent

### OLDHAM ROYAL INFIRMARY

Two HOUSE SURGEONS required for a period of six months. Salary at the rate of £175 per annum with board residence and laundry.

Applications stating age, experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than June 18th 1938.

H. EWART MITCHELL  
General Superintendent

### ROYAL VICTORIA INFIRMARY Newcastle upon Tyne (785 Beds)

#### RESIDENT APPOINTMENTS

The following Resident Appointments will become vacant as from Monday August 1st 1938.

The appointments are tenable for six months except the Skin Department and the Out-patient Dressing Department (Junior House Surgeon to Accident Room) which will alternate for three months.

- 4 HOUSE PHYSICIANS
- 4 HOUSE SURGEONS
- 1 HOUSE SURGEON to Throat, Nose and Ear Department
- 1 HOUSE SURGEON to Ophthalmic Department
- 1 HOUSE SURGEON to Gynaecological Department
- 3 HOUSE SURGEONS to Orthopaedic Department
- 2 HOUSE SURGEONS to Accident Room
- 1 HOUSE SURGEON to Skin Department
- 2 ANAESTHETISTS

LEAZES HOSPITAL (Pay bed Section)  
2 HOUSE SURGEONS (may be eligible for re-appointment)

Candidates must be registered in Medicine and in Surgery and must produce evidence of being able to administer anaesthetics.

Candidates must be prepared to take any appointment.

As regards applications for the appointment of (a) House Surgeon to Accident Room and (b) House Surgeons to Special Department preference may be given to candidates who have previously held two Resident Appointments.

Residents are remunerated at the rate of £50 per annum except the Residents in the Leazes Hospital who receive £100 per annum and the Anaesthetists who receive £200 per annum.

Before making application intending candidates are asked to apply to the undersigned for a copy of the regulations governing the appointments and form of application.

Applications stating age, experience and qualifications and accompanied by copies of not more than three testimonials should be received by the undersigned not later than first post on Monday June 27th 1938.

S. DUNSTAN  
House Governor and Secretary  
June 3rd 1938

### WEST KENT GENERAL HOSPITAL (Incorporated) Maidstone (136 Beds)

Applications are invited for the post of HOUSE SURGEON who must be a male of British nationality and unmarried. Salary at the rate of £175 per annum with board apartments and laundry.

Candidates must possess registered qualifications. Applications stating qualifications and experience together with copies of testimonials should be sent to the undersigned immediately.

EDWARD J. GREGG  
House Governor and Secretary

### KENT AND CANTERBURY HOSPITAL (183 Beds 4 R.M.O.s)

Applications are invited for the post of HOUSE SURGEON (male) to the Special Departments (Ear, Nose and Throat, Ophthalmic and Genito-Urinary). The appointment is for six months commencing July 4th 1938.

Salary £125 per annum with board residence and laundry.

Applications together with copies of recent testimonials should be forwarded immediately to the undersigned.

J. F. KENT  
Superintendent and Secretary

### ROYAL SUSSEX COUNTY HOSPITAL Brighton (272 Beds Six R.M.O.s)

CASUALTY HOUSE SURGEON (male) required August 1st 1938. Salary £10 p.a. with board residence and laundry. Candidates must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications with copies of recent testimonials to be forwarded to the undersigned.

L. L. W. LANCASTER GAYE  
Secretary-Superintendent

### GENERAL HOSPITAL NOTTINGHAM (389 Beds)

A RESIDENT CASUALTY OFFICER (male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 p.a. with board residence and laundry.

Candidates are desired to send applications stating age, qualifications and experience to the undersigned with copies of testimonials to the undersigned not later than the 23rd inst.

Duties to commence on July 14th 1938.  
HENRY M. STANLEY  
House Governor and Secretary



Medical practitioners are requested not to apply for a appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association B.M.A. House, Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Secretary 7, Drumshough Gardens, Edinburgh)

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(Contd.)</b>	<b>PUBLIC HEALTH</b>
ABERTYSSWYG MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Medical Officer)	MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE (Medical Officer and School Medical Officer)
BLAENAVON MEDICAL SOCIETY (Chief Medical Officer)	NEATH AND DISTRICT (Medical Aid Society)	COUNTY OF ROSELCPGH (Assistant Medical Officer of Health)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Industrial Color Medical Aid Society) (Workmen's Medical Scheme)	<b>DISPENSARY APPOINTMENTS</b>
LLWYNPIA CLYDACH VALE PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OSKADALE MON (Medical Officer for Medical Aid Society)	LIVERMERE CITY (Nurse in Charge Dispensary Medical Officers)

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association B.M.A. House Tavistock Square, W.C.1

Town or District.	Hon Sec of Division or Branch	Town or District.	Hon Sec of Division or Branch	Town or District.	Hon Sec of Division or Branch
<b>NEW SOUTH WALES</b> (All Friendly Society Appoint- ments)	The Medical Secretary New South Wales Branch 134 Mac- quarie Street Sydney N.S.W.	<b>VICTORIA</b> (All Institute or Medical Societies)	The Honorary Secretary Victorian Branch British Medical Associa- tion Medical Society Hall Albert St East Melbourne Victoria.	<b>WESTERN AUSTRALIA</b> (Contract and Lodge Purposes)	The Hon. Sec. Western Australian Branch British Medical Associa- tion "Shell House," 205 St. George's Ter- race, Perth Western Australia.
<b>QUEENSLAND</b> (Brisbane Associate Friendly Societies Institute)	The Hon Sec Queens- land Branch British Medical Association P.O. Box 155 Wickham Terrace Brisbane B.I.				

G C ANDERSON *Secular*

9 Leicester Road  
Lumborough

Applicants with copies of not more than three recent testimonials to F J J SILEY Secretary

1- 5 June 2. The following information was  
received from the 2nd Air Force Command and Control  
of the 1st Air Force in the 1st Air Force Command and Control

(1)  $25 \times 6 = 150$  2 2 )



## RATES FOR SMALL ADVERTISEMENTS

The Minimum Charge is 9/-, which covers up to 30 words. Extra words are charged 1/6 for 5 or less e.g. 33 words would be charged as 35. Name and address should be included when counting words for cost.

If Box number is used it should be reckoned as 5 words in the total CLOSING DAY—TUESDAY (noon)

The British Medical Association reserves the right to refuse or interrupt the insertion of any advertisement.

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BRITISH MEDICAL JOURNAL

BMA House Tavistock Square  
London WC1  
Telephone EUSTON 2111

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THESE luxurious deliciously satisfying smokes 50s or 100s at 6/3 per 100 58/6 per 1000 post free—Sole Manufacturers J. J. FREEMAN & Co. LTD 90 Piccadilly London W1 (GRO 1529)

### "SOLACE CIRCLES" TOBACCO

THE finest combination ever discovered of Choice Natural Tobaccos. Every pipeful an indescribable pleasure 12/6 per 1 lb tin post free—Sole Manufacturers J. J. FREEMAN & Co. LTD 90 Piccadilly London W1 (GRO 1529)

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**REQUIRED COMFORTABLE HOME ON** Kent Coast owned by a Doctor or Clergy man for boy aged 14 who lately has had operation for Tubercular Cervical Adenitis. Not fit to return to Public School for 12 months. Where some other boys are living an advantage. Needs some hours of daily tuition—Address No. 6156 BMA House Tavistock Square WC1

## ASSISTANCIES

**WANTED IMMEDIATELY OUTDOOR ASSISTANT** for North Midland Town Hospital experience an advantage. Salary £450 with furnished house, rent free—Address No. 6212 BMA House Tavistock Square WC1

**WANTED IMMEDIATELY INDOOR ASSISTANT** mixed practice near London. Salary £300 car provided—Address No. 6401 BMA House Tavistock Square WC1

**WANTED IMMEDIATELY INDOOR AND OUTDOOR ASSISTANTS** for Town and Country Practices with and without view to Partnership. Good salaries offered. State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester 2

**WANTED IMMEDIATELY MALE ASSISTANT** with view. Preferably married. Aged about 30. Suitable unfurnished rooms. Pleasant flourishing Midland city. Excellent prospects for first class man. Salary according to experience—Address No. 6431 BMA House Tavistock Square WC1

**WANTED IMMEDIATELY INDOOR ASSISTANT** male British. Six months or longer. Derbyshire. Experience general practice. All found £330 plus car allowance or able to drive—Address No. 6411 BMA House Tavistock Square WC1

**WANTED AT ONCE ENGLISH MALE ASSISTANT** for large mixed practice in West Middlesex. Previous experience and hospital appointments necessary. Preference given to one with surgical experience. Reply with references to—Address No. 6415 BMA House Tavistock Square WC1

**WANTED AT ONCE INDOOR ASSISTANT** for West Midland country practice. Public School or University man preferred. Must be able to drive car. Salary £400—Address No. 6411 BMA House Tavistock Square WC1

**WANTED AT ONCE ASSISTANT MIDLAND** town. State age etc. Salary £450 (out door)—Address No. 6421 BMA House Tavistock Square WC1

**WANTED AFTER JULY 10th INDOOR ASSISTANT** (male British) near Manchester. Salary £350 p.a. all found. Car provided or car allowance (£50). Previous experience not essential. Good prospects for right man—Address No. 6425 BMA House Tavistock Square WC1

**WANTED MALE ASSISTANT LARGE** mixed country practice. Mid Cornwall. Private and Public Dispensary. Must be young and well qualified. Good prospects for energetic worker. Salary £300 all found. Car or car allowance. Interview essential. Usual bond—Address No. 6445 BMA House Tavistock Square WC1

**WANTED FOR JULY 1st OUTDOOR ASSISTANT** for mixed panel and private practice in Midland. Own car preferred. State full particulars photo—Address No. 6419 BMA House Tavistock Square WC1

**WANTED INDOOR ASSISTANT (MALE)** single for mixed practice. North London. Time for reading. Salary £300—Address No. 6453 BMA House Tavistock Square WC1

**WANTED OUTDOOR ASSISTANT** Industrial area North of England. Salary £400 per annum car allowance and rooms. State nationality. Usual bond—Address No. 6216 BMA House Tavistock Square WC1

**WANTED ASSISTANT EXPERIENCED GP** minor surgery and investigations married. Good salary and prospects to suitable man free house. Large industrial practice. Manchester area. State experience nationality and religion. Interview—Address No. 6422 BMA House Tavistock Square WC1

**WANTED MARRIED ASSISTANT TO TAKE** charge of branch surgery about to be opened in a very thickly populated district in London. Must be energetic. Excellent prospect to suitable person. Salary £350 to commence. Partnership offered if found suitable. Apply fully to—Address No. 6444 BMA House Tavistock Square WC1

**WANTED OUTDOOR ASSISTANT (MALE)** Protestant for practice in County Durham. Salary £200 p.a. with £50 car allowance—Address No. 6423 BMA House Tavistock Square WC1

**WANTED NEWLY QUALIFIED ENGLISH** or Scots ASSISTANT in East London practice. Salary £300 p.a. all found. Work light. Good prospects to steady reliable man—Address No. 6406 BMA House Tavistock Square WC1

**ASSISTANT REQUIRED MUST BE KEEN** on busy general practice. Principal lives away from surgery. Usual salary plus £50 bonus if satisfactory—Address No. 6441 BMA House Tavistock Square WC1

**ASSISTANT WANTED MALE SOUTH** Coast. Town end of June. Salary commencing £300 per annum plus £50 allowance for car. Work not heavy. Residence in branch surgery—Address No. 6430 BMA House Tavistock Square WC1

**EXPERIENCED MALE ASSISTANT WANTED** immediately for several months. Abstinence. Medium panel. Large private. Newcastle area. State age experiences—Address No. 6407 BMA House Tavistock Square WC1

**FEMALE ASSISTANT REQUIRED TOWN** and Country Practice. Commencing salary £300 with board or £400 living out. Car allowance or car provided—Further particulars on application to J. S. STREETS AND CO. Chartered Accountants 44 Silver Street Lincoln

**MAN OR WOMAN ASSISTANT REQUIRED** in residential West London suburban practice. Work pleasant. Good flat car and garage supplied. Apply stating relevant particulars—Address No. 6427 BMA House Tavistock Square WC1

**PERMANENT ASSISTANT FOR OCTOBER** Suitable for married man. House provided. State experience and all essential particulars—Address No. 6152 BMA House Tavistock Square WC1

**AN ASSISTANT IS REQUIRED IN A** Radiological Practice in South Africa. Applicant between the ages of 30 and 35 will be given preference. Commencing salary £1,000 to £2,000 per annum depending on experience and qualifications. Further help will be offered to suitable applicant—Address No. 5639 BMA House Tavistock Square WC1

**PART TIME ASSISTANT REQUIRED FOR** week day morning and evening London surgeries. Some knowledge of refractions helpful. Accommodation for wife and child. Car available. Suit postgraduate—Address No. 6423 BMA House Tavistock Square WC1

**PART TIME MALE ASSISTANT WANTED** early July. Must live on surgery premises. London WC. Work very light. Excellent opportunity for postgraduate. Remuneration to be arranged—Address No. 6416 BMA House Tavistock Square WC1

**PART TIME ASSISTANT WANTED FOR** practice near Hammersmith. Most days on duty free. Suit postgraduate—Address No. 6405 BMA House Tavistock Square WC1

## LOCUMS

**WANTED LOCUM (GENTLEMAN) FOR** Partner. Pleasant practice. Cardiff. Any three consecutive weeks in August. Own car. 9 hours p.w. and car expenses—Address No. 6415 BMA House Tavistock Square WC1

**WANTED LOCUMCY WITH HOSPITALITY** wife and two children. Three weeks. Free time June to end of July. Coast. Own car—Address No. 6434 BMA House Tavistock Square WC1

**WANTED—LOCUM AUG 1st 14th EASY** Practice. South London. 6 gns per week. Live out. Suit London resident. No night work. Few visits—Address No. 6415 BMA House Tavistock Square WC1

**SLASIDE HOSPITALITY LOCUM REQUIRED** by recently retired FMS FRCS Edin. Two to three weeks August. Car available. Wife and child. Particulars to—Address No. 6440 BMA House Tavistock Square WC1

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**WANTED EXPERIENCED LADY DISPENSER BOOKKEEPER** for general practice outskirts London. Apply with testimonials—Address No. 6405 BMA House Tavistock Square WC1

**WANTED LADY DOCTOR AS ASSISTANT** IN SANATORIUM. Previous experience not necessary—Address No. 6429 BMA House Tavistock Square WC1

**WANTED—LADY BOOKKEEPER RECEIPTIONIST** for large practice in Kent. Some knowledge of Dispensing an advantage—Address with full particulars and photograph stating salary expected—No. 6419 BMA House Tavistock Square WC1

**A LADY DISPENSER BOOKKEEPER SUITABLE** immediately on request. Qualifications and with practical experience in private practice and dispensary work also trained in Bacteriology. LABORATORIES OF THE LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparations & Examinations—Write wire or phone (Day) Water 0969) Secretary 7 Westbourne Park Road W2

**A COURSE OF TRAINING IN DISPENSING** and Pharmacy is given at GORDON HALL SCHOOL OF PHARMACY and Secretary Dispensers can be supplied to Doctors. Sessions January, April and September—Apply Principal School of Pharmacy Drayton House Gordon Street WC1. Phone EUSTON 3930

**DISPENSING CAREER FOR YOUNG LADIES** FULL TRAINING for Apothecaries. Had Certificate. Enrolments every three months—Apply The Principal Central School of Pharmacy 28 Mortimer Street London SW1. Telephone Victoria 1641

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### APPOINTMENTS—Contd

**THE LONDON HOMOEOPATHIC HOSPITAL**  
(Incorporated by Royal Charter)  
Great Ormond Street, Bloomsbury, WC1  
(A General Hospital 200 Beds)

**HOUSE SURGEON AND GYNÆCOLOGICAL HOUSE SURGEON**

The Board of Management invite application for the appointments of House Surgeon and Gynaecological House Surgeon now vacant.

The appointments are two of four Resident Medical posts which occur periodically during the year and are for a period of six months with salary at a rate of £100 per annum and board and laundry.

Candidates must be legally qualified and registered. Selected candidates will be required to attend a meeting of the Medical Committee for interview.

Applications stating age with copies of testimonials to be sent to the undersigned immediately.  
**L. J. KNOWLES**  
Secretary

**BATTERSEA GENERAL HOSPITAL**  
(55 Beds)  
London SW11

Applications are invited for the resident appointments of

(1) HOUSE PHYSICIAN (female) Salary at the rate of £130 per annum.  
(2) HOUSE SURGEON (female) Salary at the rate of £130 per annum. Other terms to be arranged on appointment. The successful candidates will be required to take over their duties on August 1st 1938.

Applications stating age, qualifications and experience with copies of two recent testimonials should be sent to the undersigned not later than 9 a.m. June 27th 1938.

**G. L. BENNETT** Secretary

**METROPOLITAN HOSPITAL**  
London E8

The Committee of Management are prepared to receive applications for the appointment of SURGEON.

Candidates must be Fellows of the Royal College of Surgeons of England and not engaged in general practice.

Candidates will be required to call upon members of the staff.

Applications (twenty copies) with copies of their recent testimonials to be sent to the undersigned not later than June 17th 1938.

**FRANK JENNINGS**

House Governor and Secretary

**THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN**  
Waterloo Road SE1

There is a vacancy for an HONORARY CLINICAL ASSISTANT (male or female) at a Rheumatism Supervisory Centre for Children suffering from rheumatic fever and chorea. Candidates should be interested in children's diseases and cardiology, previous children's experience desirable. The appointment is for six months in the first instance.

Applications accompanied by testimonials should be sent to the undersigned from whom further particulars can be obtained.

**J. H. TEASDALE** Secretary

**ROYAL NORTHERN HOSPITAL**  
Holloway N7

Applications are invited for the post of OPHTHALMIC REGISTRAR. The appointment is for one year with eligibility for reappointment. Times of attendance on application.

Honorarium £50 per annum with certain fees. Applications with copies of testimonials should be sent by July 1st to the undersigned from whom the necessary forms of application and rules can be obtained.

**GILBERT G. PANTER**

Secretary

**THE NATIONAL TEMPERANCE HOSPITAL**  
Hampstead Road NW1

Applications are invited for the following post: HOUSE PHYSICIAN (male). Salary £100 per annum, board residence and laundry allowance, being provided. The appointment is for a period of six months as from June 21st. Preference will be given to those who have held resident posts. Candidates must submit applications stating qualifications, age, etc. with copies of not more than three testimonials by June 13th addressed to the Secretary.

## ROYAL HALIFAX INFIRMARY

Hospital recognized by the Royal College of Surgeons (England)

Wanted a RESIDENT SURGICAL OFFICER (male, unmarried). Candidates must be duly qualified and registered. Preference will be given to candidates holding higher qualifications. The appointment will be for twelve months. Salary including all services required in connection with residence board and laundry.

The Hospital contains 250 beds including Maternity Department and Lying-in Patient Block. There is also a Pathological Laboratory and a large Eye, Ear, Nose and Throat Department, Radiological Department and Radium Clinic.

Also wanted a HOUSE PHYSICIAN who will also have charge of Eye, Ear, Nose and Throat Department (male, unmarried). Candidates must be duly qualified and registered. Salary including services required in connection with Physiotherapy, Patients' Ward £175 per annum with residence board and laundry.

Particulars of the duties may be obtained from the undersigned to whom applications stating age and nationality together with copy testimonials should be sent not later than Tuesday, June 14th 1938.

May 6th 1938

**A. MIDGLEY**

Secretary

**THE ROYAL INFIRMARY, SUNDERLAND**  
(255 Beds)

CASUALTY OFFICER AND HOUSE SURGEON to Ear, Nose and Throat Department required immediately. Salary £120 per annum with board residence, laundry, etc.

Applications stating age and qualifications and accompanied by copies of testimonials to be sent to the undersigned.

The Infirmary possesses modern equipment and has up-to-date Pathological and X-ray Departments. The Resident Medical Staff consists of a RSO and six others. The surgical appointments are recognized by the Royal College of Surgeons of England for the six months' training required of candidates before admission to the Final Examination for the Fellowship.

**M. J. HUNTLEY**

House Governor and Secretary

**THE ROYAL INFIRMARY, SUNDERLAND**  
(255 Beds)

HOUSE PHYSICIAN (male) required. Salary £120 per annum with board residence, laundry, etc.

Applications stating age and qualifications and accompanied by copies of testimonials to be sent to the undersigned.

**M. J. HUNTLEY**

House Governor and Secretary

**HOUNSLOW HOSPITAL**  
Strimling Road, Middlesex

HOUSE PHYSICIAN and CASUALTY OFFICER

Applications are invited from male registered practitioners of British nationality for the above post. The appointment is for 6 months with eligibility for appointment for a further period.

Salary £100 p.a. with board residence and laundry.

Applications with copies of three testimonials should be sent to the undersigned as soon as possible.

**A. MOWBRAY BARKER**

Secretary

**SUTTON AND CHEAM HOSPITAL**  
Sutton Surrey  
(75 Beds)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male). Salary £100 per annum with residence board and laundry.

The appointment will be for three months from July 1st next with the option of applying for the post of Senior Resident Medical Officer for a further six months at a salary of £150 per annum with residence board and laundry.

Applications giving full particulars as to age and qualifications together with copies of three recent testimonials should be sent to the Secretary not later than Monday, June 20th next.

**THE DEWSBURY AND DISTRICT GENERAL INFIRMARY, DEWSBURY**

Applications are invited for the posts of SENIOR HOUSE SURGEON (male). Salary £200 per annum with board residence and laundry. SECOND HOUSE SURGEON (male) vacant August 1st next. The duties are principally those of a House Physician and Casualty Officer. Salary £150 per annum with board residence and laundry.

The Infirmary is a new Voluntary Hospital of 100 Beds and has the usual Special Departments with Visiting Consulting Specialists in attendance.

Applications stating age and hospital experience (if any) together with copies of recent testimonials to be sent as immediately as possible to my office.

**FRED SMITH**

Secretary Superintendent

## WARNEFORD HOSPITAL, OXFORD

Applications are invited for the office of PHYSICIAN SUPERINTENDENT to the Warneford Hospital, Oxford, a Registered Hospital for the treatment of mental disorders.

Candidates must be duly registered Medical Practitioners and have had experience in the care and treatment of mental disorders.

They should not be under thirty or over forty five years of age.

The initial salary shall be determined by age, experience and qualifications but will in no case be less than £1,000 per annum. A house is provided for the use of the Physician Superintendent who will also have the usual emoluments. Arrangements whereby he will after a term of service be assured of a pension are under consideration.

Time will be allowed for him for a limited amount of private practice.

Three months' notice to terminate the appointment may be given by either party.

Applications must be received on or before July 1st 1938 by the Chairman of the Board of Management, Warneford Hospital, Oxford. They should be accompanied by twelve copies of not more than three testimonials by references to two persons other than the writers of the testimonials and by twelve copies of replies to the requests for information in a Form of Application which may be obtained from the Chairman.

**WATFORD AND DISTRICT PEACE MEMORIAL HOSPITAL**  
(144 Beds)

Applications are invited for the following posts for a period of six months commencing August 1st 1938.

HOUSE SURGEON (male)

HOUSE PHYSICIAN (male)

Salary at the rate of £100 per annum with board and laundry.

Applications stating age, nationality and qualifications together with three testimonials to be forwarded to the undersigned not later than June 17th 1938.

**I. H. FLETCHER** Secretary

**THE VICTORIA INFIRMARY OF GLASGOW**

APPOINTMENT OF WHOLETIME RADIOLOGIST

The Governors invite applications for the appointment of a whole-time Radiologist as Assistant to the Hon. Visiting Radiologist. Salary according to experience up to £500 per annum.

Further particulars may be obtained from the Superintendent at the Infirmary. Fourteen copies of application and testimonials to be sent to the undersigned not later than June 23rd.

40 St Vincent Place **JOHN W. ROBSON**  
Glasgow C1 Secretary and Treasurer  
June 6th 1938

**VICTORIA HOSPITAL, BLACKPOOL**  
(182 Beds)

HOUSE SURGEON (Male) to the Special Departments (Eye, Ear, Nose and Throat and Obstetrics)

Applications are invited for the above appointment which will become vacant on July 1st.

There are four resident officers. Appointment is for six months. Salary at the rate of £175 per annum with board residence and laundry.

Applications with copies of three recent testimonials should be sent to the

**GENERAL SUPERINTENDENT**

**ADDENBROOKS HOSPITAL, CAMBRIDGE**

Applications are invited for the appointment of a whole-time non-resident ASSISTANT RADIOLOGIST for the period July 1st to October 1st at a salary at the rate of £500 per annum. Preference will be given to candidates holding the D.M.R.E. qualification or those working for same.

Applications together with not more than three recent testimonials should be sent to the undersigned on or before June 21st 1938.

**J. A. BEARDSALL**

Secretary Superintendent

**PRINCESS ALICE HOSPITAL, EASTBOURNE**  
(Voluntary General Hospital 170 Beds  
Two House Surgeons)

RESIDENT HOUSE SURGEON required on July 9th next. Salary at rate of £140 per annum with board and laundry.

Applications with copies of three recent testimonials to be delivered to the undersigned by first post on Thursday, June 16th.

June 7th 1938 **W. RUSSELL RUDALL**  
Salford ROYAL HOSPITAL  
(56 Beds)

Applications are invited from registered candidates (male) for HOUSE SURGEON for six months from July 1st. Salary £125 per annum.

Applications to be made at once. By Order of the Board.

**H. B. SHELLSWELL**

General Supt. and Secretary

June 9th 1938



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6 NEAR FULHAM SW—Well established mixed class PRACTICE Receipts last year over £900 panel nearly 500 increasing Nice house on rental Premium £1 250

7 ESSEX—DEATH VACANCY Old established PRACTICE held 30 years by late Vendor Receipts £1 000 p.a. panel 900 Very nice house for sale Premium 2 years purchase

8 NEAR HOLBORN WC—Well established PRACTICE Receipts average £1 000 p.a. panel 1 104 Splendid surgery accommodation only Long introduction if desired Premium £2 000

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MIDDLESEX—SUBURB £1 030 P.A. Panel 600 increasing 1 MS £100 Premium 2 years purchase Comfy house (4 bed) Sell or let—2

KENT WITHIN 15 MILES LONDON—Average £500 p.a. increasing Panel 200 Modern house nice garden 105 p.a. or sell Premium £60 for quick sale—1

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LOCK-UP LONDON SW—HELD BY WOMAN £450 p.a. Panel abt 500 Prem 1 1/2 years purchase—5

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KENT SUBURB—ABOUT £500 P.A. increasing Panel 140 Fees 3/6 to 7/6 Premium £60 Detached modern residence 4 bed and good garden—9

LONDON, W 12—AVERAGE £800 P.A. Selected panel of 900 5 ops Visits 3/6 to 5/ Premium 2 years purchase Large house part let off at over £200 p.a.—9

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CO. DURHAM—AVERAGE £1 250 No panel or dispensing Premium £600 Semi detached 4 bed etc and large garden Inc. £1 000—14

KENT WITHIN 20 MILES—ABOUT £500 p.a. Panel 375 Nice house sale or rent Premium £70 or near—15

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LONDON SUBURB W—£2 200 P.A. No panel Fees 5/ to 21/ Premium 2 years purchase Corner house on main road For sale leasehold £2 000—18

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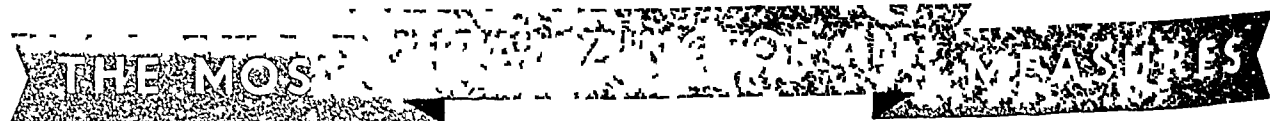
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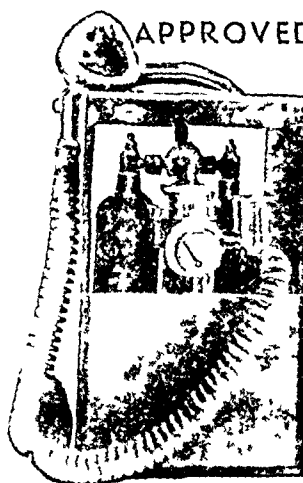
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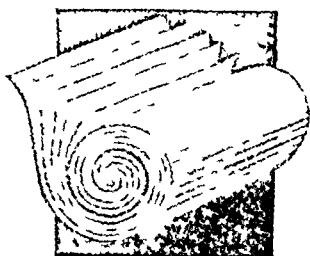
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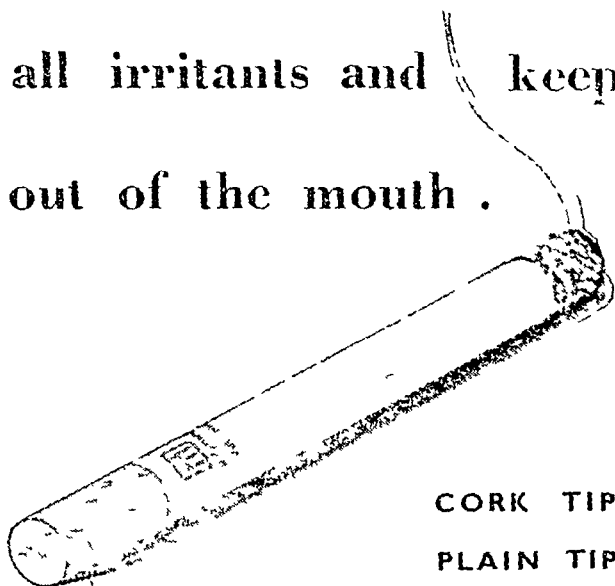
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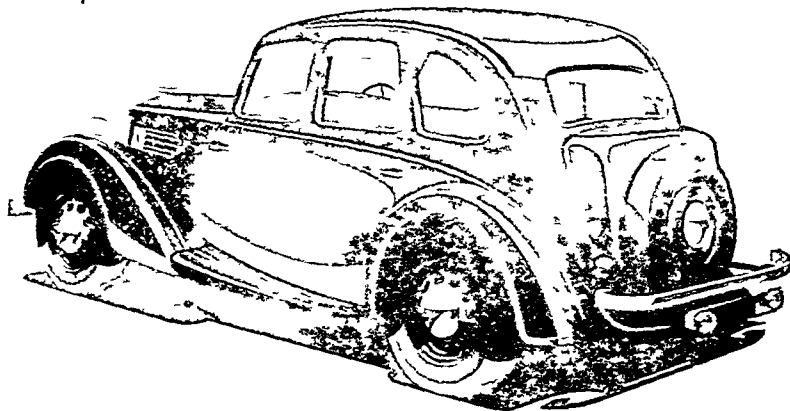
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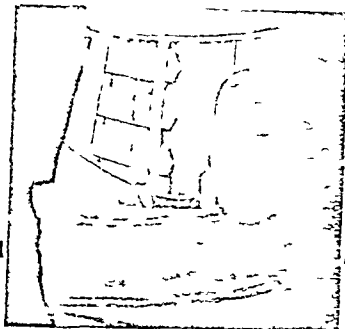
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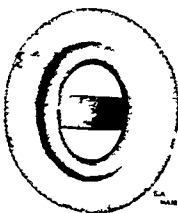


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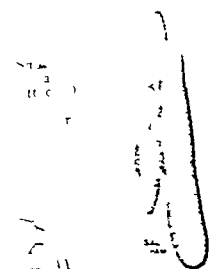
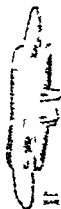


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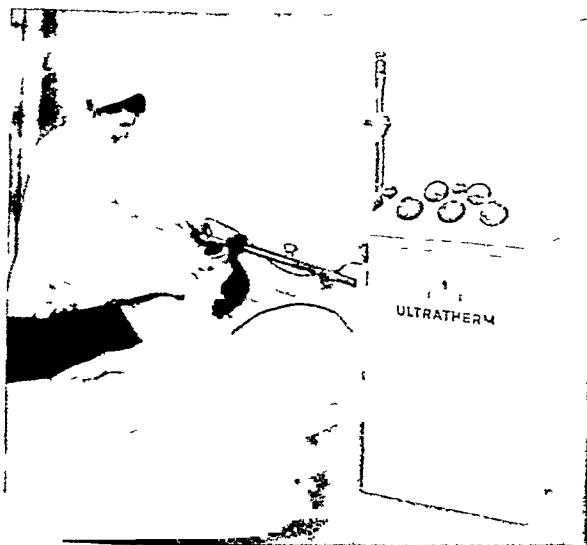
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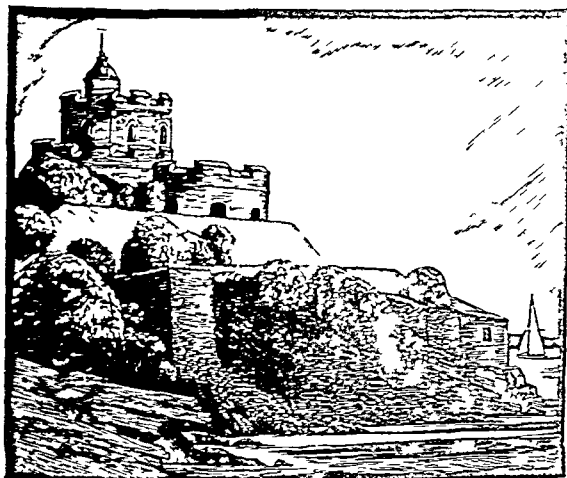
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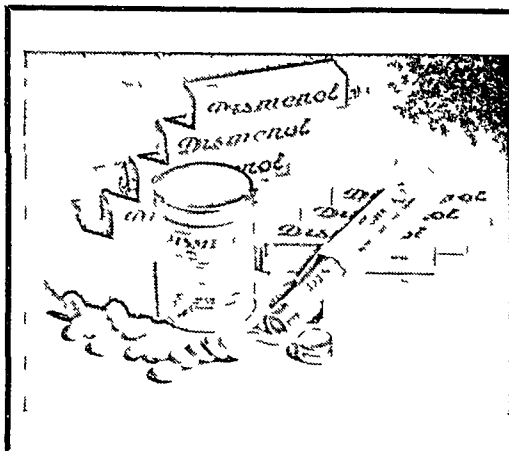
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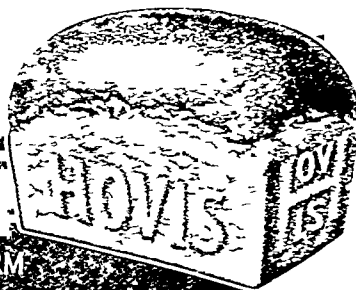
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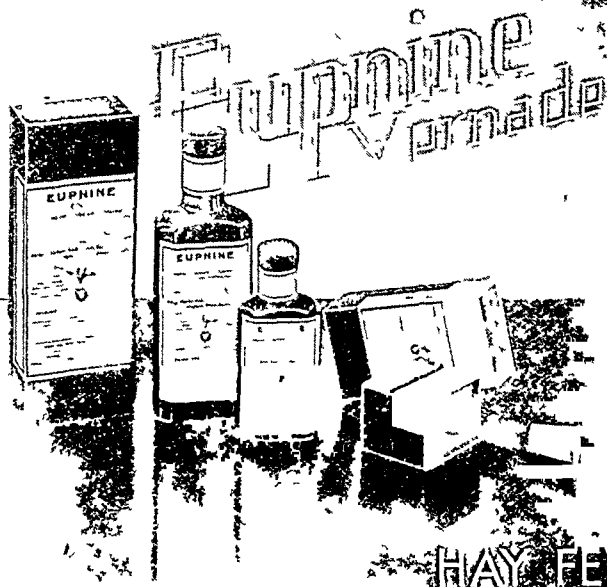
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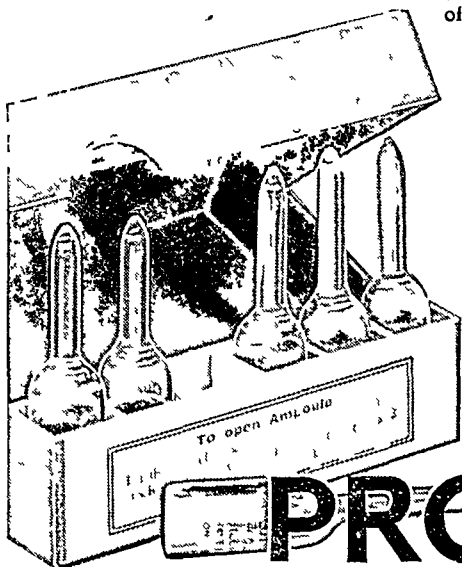
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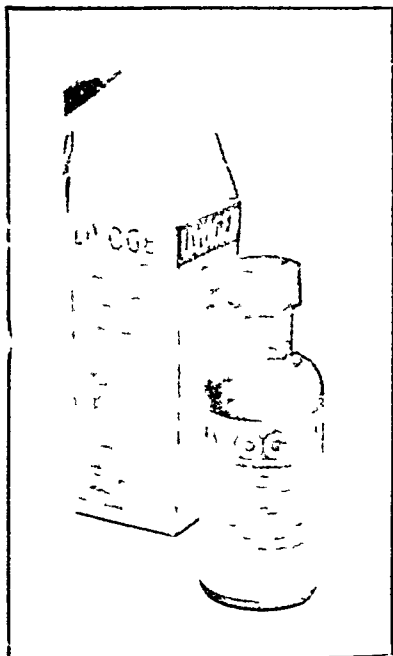
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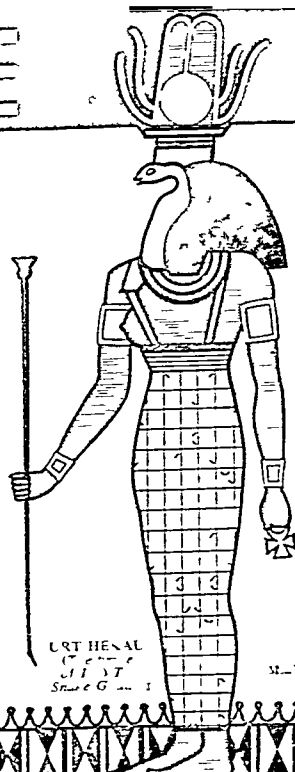
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After severe operations the regular use of Ovaltine is of the greatest service on account of its bland nature, its ready digestibility and its highly nourishing and sustaining properties.

Ovaltine is a complete food composed of fresh full cream milk, eggs and malt extract in the form of crisp granules which dissolve readily in milk to form a delicious beverage acceptable to the convalescent patient.

*A liberal supply for clinical trial sent free on request*

A WANDER, Ltd, 184, Queen's Gate, SW 7  
Laboratories and Works KING'S LANGLEY HERTS



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M-74

## The respective merits of DETOXICATED and TOXIC VACCINES

The obvious advantage of Detoxicated Vaccines is that large doses can be administered without causing serious reactions. This is of great value in the treatment of cases where any given bacterial disease is already established. In such cases toxic vaccines are apt only to aggravate the symptoms whereas moderate doses of the appropriate detoxicated vaccine can be given safely without further aggravation of the disease.

We have always upheld the superiority of detoxicated vaccines but some authorities prefer the toxic varieties because they believe that it is important to obtain more or less marked reactions in order to produce a satisfactory immunity.

The toxic vaccines have the advantage of cheapness. The detoxicated vaccines are more expensive for the obvious reason that the dosage is nearly one hundred times greater so that much larger quantities of bacteria are used in their preparation.

We supply both the detoxicated and the toxic varieties of vaccines in order to cater for the two different schools of thought in this matter. A booklet giving details of our full range of Detoxicated and Ordinary Vaccines, will gladly be supplied on request.

**GENATOSAN LTD.,**  
VACCINE DEPARTMENT  
LOUGHBOROUGH, LEICESTERSHIRE

## Pleasure Cruises . . .

3rd March, 1938

Messrs Kaylene, Ltd, Waterloo Road London, NW 2

Dear Sirs,

I have to thank you for the samples of KAYLENE and COLONOL LIQUID PARAFFIN, which arrived this morning.

It may be of interest to you to learn that KAYLENE-OL is an admirable prophylactic for the dysenteries and other intestinal infections common in hot countries. I invariably prescribe it to patients who are going for a holiday in the countries around the Mediterranean littoral, or pleasure cruising.

I think it probably acts by preventing injury to the intestinal mucosa in patients who evaporate a lot of fluid from the skin and, in the case of amoebic dysentery, by hindering the *Entamoeba histolytica* from entering the crypts of Lieberkuhn by occluding them with an oily film.

Patients who use it systematically every day as a prophylactic remain singularly free from the numerous troubles arising from the exuberant bacteriological flora of the intestine which is the rule in hot countries.

I am guided in my opinion largely by personal experience. I have had dysentery seven times and each time was definitely associated with the running short of my usual prophylactic dose. I do not know of anybody ever contracting dysentery while maintaining the regular daily prophylactic dose of KAYLENE-OL.

Yours faithfully,  
Signed

, M D

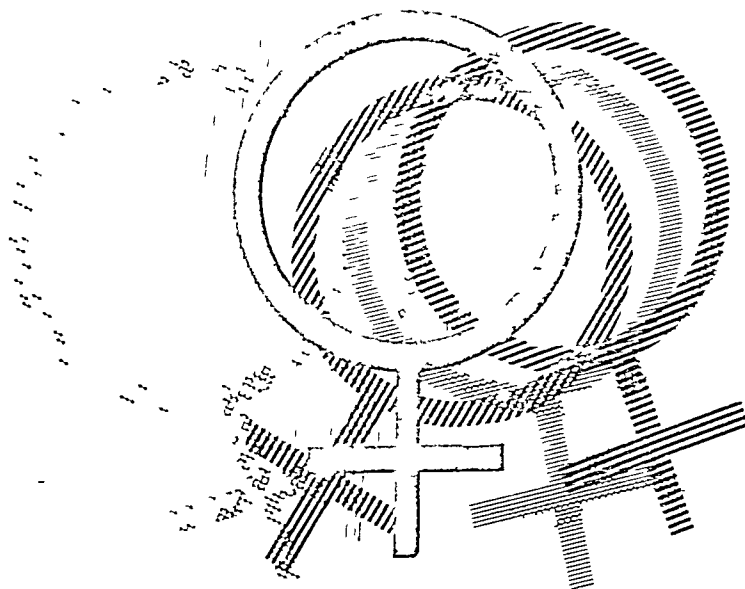
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Sole distributors Adsorbents, Ltd,  
Waterloo Road, London, NW 2

**Kaylene-ol**

• Samples on request

# GYNCESTRYL

TRADE MARK



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ORAL PREPARATIONS BASED ON CESTRADIOL - 5 TIMES MORE ACTIVE BY MOUTH THAN CESTRONE

<b>GYNCESTRYL TABLETS</b> 250 I U	1/40 of a milligram of Cestradiol per tablet corresponding biologically to 1250 I U of Cestrone	Box of 40 tablets	3/6	5 mill price per unit
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INJECTABLE PREPARATIONS (INTRAMUSCULAR) BASED ON CESTRADIOL BENZOATE

<b>BENZO GYNCESTRYL 1</b> 1,000 I B U	1/10 of a milligram of Cestradiol Benzoate per cc.	Box of 6 ampoules	3/6	5 mill price per unit
<b>BENZO GYNCESTRYL 10</b> 10,000 I B U	1 milligram of Cestradiol Benzoate per cc.	Box of 3 ampoules	5/6	
		Box of 5 ampoules	9/-	
<b>BENZO GYNCESTRYL 50</b> 50,000 I B U	5 milligrams of Cestradiol Benzoate per cc.	Box of 1 ampoule	6/-	
		Box of 5 ampoules	24/-	



*Samples and Literature on application to*

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In cases of Amenorrhea, Dysmenorrhea, Menorrhagia and Metrorrhagia, Ergoapiol serves

as a good uterine tonic and hemostatic. Valuable in obstetrics after delivery of the child and for the menstrual irregularity of the Menopause.

Prescribe 1 to 2 capsules 3 or 4 times daily. Supplied only in packages of 20 capsules. Literature on request.

As a safeguard against imposition the letters MHS are embossed on the inner surface of each capsule visible only when the capsule is cut in half as shown.



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THE WORLD RENOWNED  
FERMENTATIVE

NATURAL MINERAL WATER  
DYSPEPSIA

When the secretion is vitiated in quality and the motricity of the stomach weakens, that organ dilates, and the gastric stagnation allows the micro-organisms of many ferments to develop. Quite a series of acids are then to be met with (butyric, lactic, acetic, etc.) which not only irritate the mucosa but further, after their passage into the intestine,

NATURAL VICHY SALT for  
Drinking and Baths



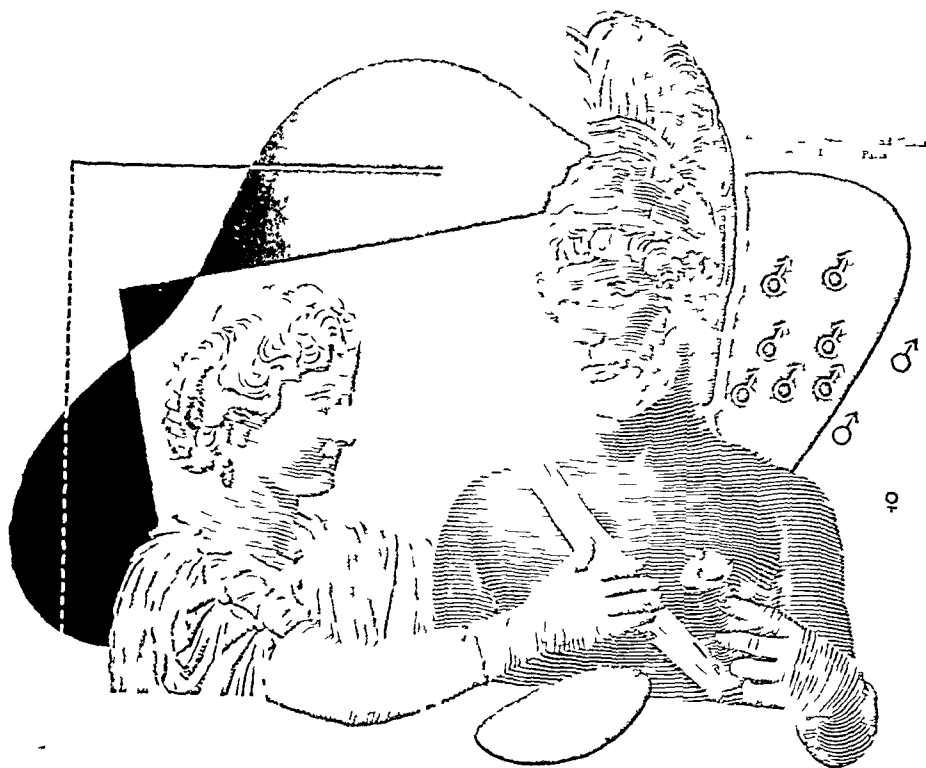
become absorbed by the lymphatics and swept into the circulation. Vichy-Célestins, by its slightly stimulating action, clears out the stomach and thus avoids stagnation and consequent fermentation. As in addition to doing this it modifies stomatal metabolism the secretions return little by little to their normal physiological condition.

VICHY DIGESTIVE PASTILLES  
prepared with Natural Vichy Salt

CAUTION—Each bottle from the STATE SPRINGS bears a neck label with the word 'VICHY-ETAT' and the name of the SOLE AGENTS

**INGRAM & ROYLE, Ltd.**

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Samples free to Members of the Medical Profession



## FOR SUBNORMAL HÆMOGLOBIN PRODUCTION

### *Liver Extract with IRON plus COPPER*

Cofron Elixir (Abbott) supplies Whole Liver Extract Iron and Copper in definite, standardised proportions. It is indicated for the treatment of mild anemias and for use in many non-specific conditions in which there is a decreased red cell count or a lowered haemoglobin percentage. The product is particularly suitable for general use as an iron tonic or to hasten restoration of normal red cell values following illness that has resulted in anemia. Each fluid ounce of Cofron Elixir represents Fresh Liver 10 gms (1½

oz.) Iron 66 mgms (1 gr) (the equivalent of 6 grs. of iron and ammonium citrate B.P.) and Copper 2.66 mgms (1/25 gr). The liver extract contains the factor or factors necessary for the maturation of red blood corpuscles and in addition supplies appreciable amounts of vitamins B<sub>1</sub> and B<sub>2</sub> which

supplement the patient's daily intake of the factors and thus contribute to improved appetite. Iron is essential in the synthesis of haemoglobin while much clinical evidence indicates that copper aids in the full utilisation of iron by the body. Cofron Elixir is supplied through pharmacies in 12-oz. and 80-oz. bottles. Descriptive literature and a free sample will be sent upon request.

#### COFRON CAPSULES

For Severe Secondary Anemias  
Supply about twice as much liver extract as Cofron Elixir in proportion to their copper and iron content. In bottles of 50 and 100 capsules

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# COFRON ELIXIR

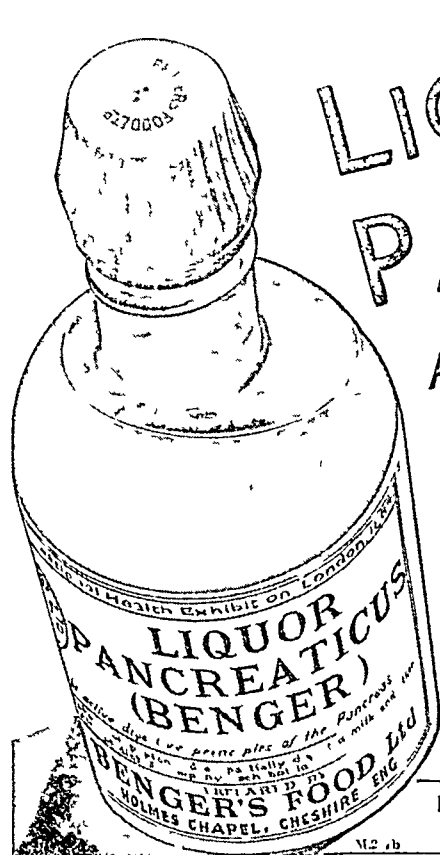
*Abbott*

Please send literature and a sample of Abbott's Cofron Elixir to

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22.5.58



# LIQUOR PANCREATICUS (Benger)

An important aid in the preparation  
of Peptonised Milk, etc.

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It doesn't, but in this respect we feel we can help you. Dole Hawaiian Pineapple Juice is the unsweetened juice of sun ripened pineapples. This is important when you consider that much of the fresh fruit obtainable during the winter is artificially ripened. Packed by the exclusive Dole Fast Seal Vacuum-Packing Process, it reaches you field fresh.

We would like you to taste and test this delicious tangy drink and will be pleased to send you a sample tin on receipt of your name and address.

The typical analysis below tells you exactly what Dole Pineapple Juice is composed of. It is a good source of Vitamins A, B and C and is invaluable in cases of throat irritation. It yields alkaline reacting minerals in the body which tend to offset the effects of acid producing foods. It also carries the Seal of Acceptance of the American Medical Association Committee on Foods.

2000 Doctors have already written for

Sample Tins of  
**DOLE HAWAIIAN PINEAPPLE JUICE**

### TYPICAL ANALYSIS

Moisture	85.3
Ash	0.1
Fat (ether extract)	0.3
Protein (N x 6.25)	0.1
Gross fibre	0.02
Titration acidity (citric acid)	0.1
Reducing sugars as invert sugar	1.2
Carbohydrates other than sugars (by difference)	0.78

Dole Pineapple Juice comes to you field fresh from sunny Hawaii—a golden nutritious drink from Hawaii's King of Fruits.



**DOLE PINEAPPLE JUICE** from Hawaii  
J. B. GILBERT & CO. LTD., 10 EASTCHEAP, LONDON, E.C.3

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asks OLD HETHERS

"That my 'Patent' Barley has put old-fashioned pearl right out of court Robinson's 'Patent' Barley comes in hygienic sealed containers Pearl barley comes loose from an open sack In a few minutes, just the quantity of barley water required can be made from Robinson's

'Patent' Barley, where-as hours of preparation are necessary when pearl barley is used Robinson's 'Patent' Barley too is more economical The precise directions appearing on each tin of Robinson's 'Patent' Barley make it unnecessary for detailed instructions to be given to your patients and ensure that barley water is made in the correct and simplest manner



# BARLEY WATER

made from

# ROBINSON'S

# "PATENT" BARLEY



You can now refer your patients and staff to Robinson's Lemon Barley Water made according to Old Hethers famous recipe and concentrated in bottles Available from chemists and grocers at 1/9 per bottle

Descriptive pamphlet and clinical trial sample of Robinson's 'Patent' Barley will be sent free on application to KEEN ROBINSON & CO LTD Dept O 187 Carrow Works Norwich



# CRUNCHY FOODS AND SALIVATION

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The proper insalivation of food is held by many physiologists to be an important factor in digestion on account of the action of ptyalin in partially converting starch

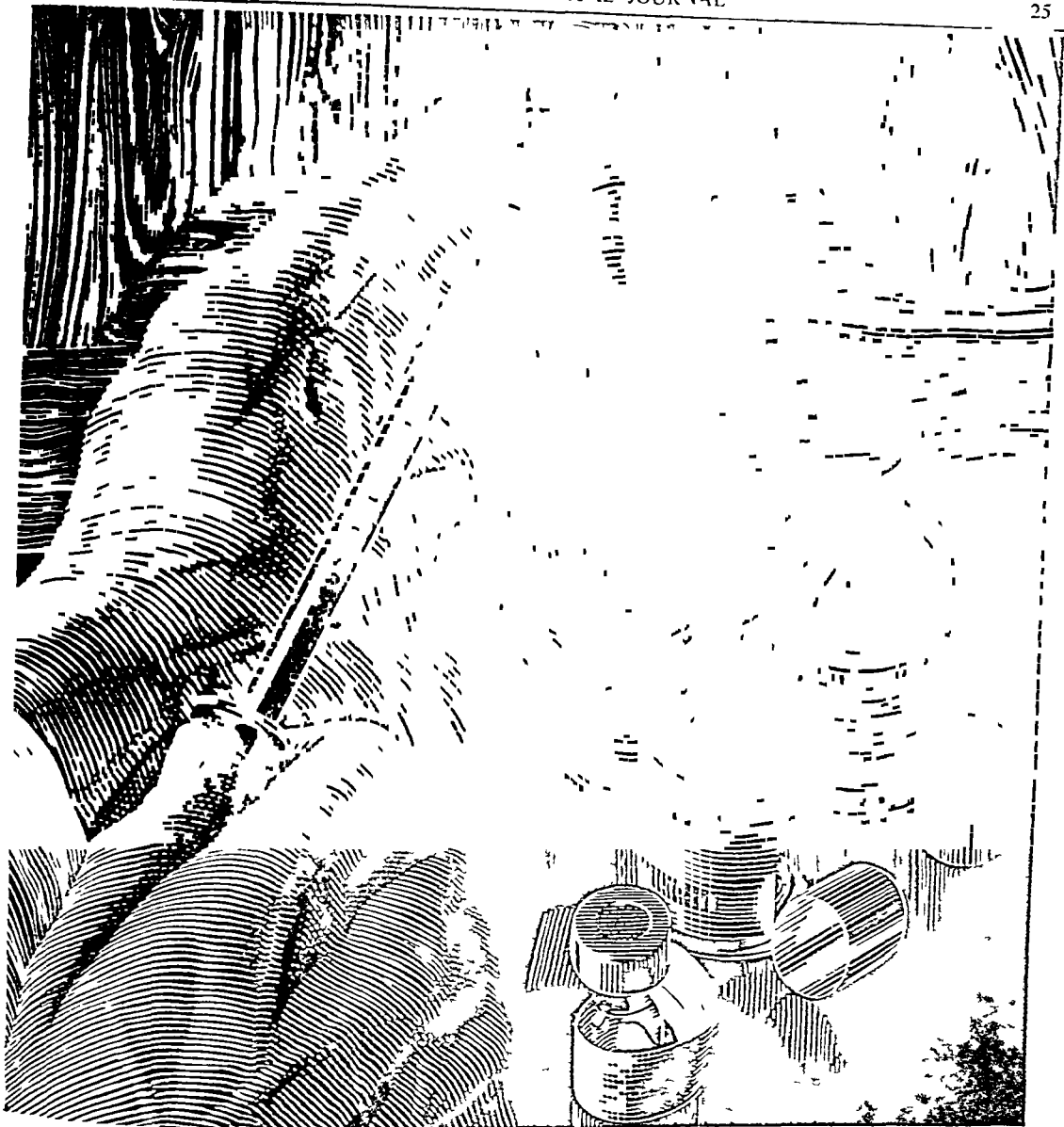
For this reason they consider that the normal diet should include a proportion of hard, dry foods, which demand thorough mastication and thus induce copious salivation.

Ryvita is a daily bread of hard, friable consistency. It therefore supplies a valuable factor which civilised dietaries too often lack. Free samples of Ryvita for distribution to patients will gladly be supplied on request.

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THE RYVITA COMPANY LIMITED  
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*Bakeries in Birmingham*

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## B.D.H. VACCINES

The special rubber-capped 3 c.c. vials in which B.D.H. Vaccines are issued are appreciated by all physicians who have employed them in the course of practice, on account both of convenience and economy. They find that the usual wastage associated with the use of a fresh 1 c.c.

ampoule for each injection in a course comprising from four to six injections is avoided. By the use of B.D.H. Vaccines there is thus effected a saving both in time and expenditure.

The metal dust-cap (which is removed before the needle of the

syringe is inserted through the rubber cap and is replaced after the vaccine has been withdrawn and the rubber cap swabbed with disinfectant) serves to maintain the sterility of the rubber cap, keeping the whole vial ready for use on the next occasion.

*A specimen 3 c.c. vial containing any one of the B.D.H. Vaccines will be sent on request.*



Ryvita *Antiphlogistine* BRAND DRESSING  
 supplies a valuable *indicated in the treatment of*  
 Free samples of *AIN* and *STRAINS*  
 supplied on request

*'In those cases where the application of moist heat is beneficial. It is also a repair-stimulating surface.'*

THE RYVITA COMPANY LIMITED  
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*Bakeries in Birmingham*

# TWO CHOLINE COMPOUNDS FOR PARASYMPATHETIC STIMULATION



## 'DORYL'

(Carbaminoyl-choline chloride)

A stable and potent choline ester greatly superior to acetyl choline. Very effective by injection in post-operative retention of urine and intestinal atony, paralytic ileus etc. Oral doses possible and successful in irritable hearts, paroxysmal tachycardia (with compensation) and anxiety neurosis. Raynaud's disease and certain other vascular diseases have benefited by Doryl administration. In ophthalmology, a special Doryl solution has proved useful in glaucoma. For tobacco and other amblyopias the tablets have been found valuable. A special solution is also available for the treatment of ozaena.

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(Acetyl- $\beta$ -methyl-choline chloride)

Mainly recommended for use by iontophoresis, and has proved very effective in treating arthritis especially of the rheumatoid type, peripheral vascular diseases such as Raynaud's disease and scleroderma, thrombo-angitis obliterans, and ulcers. A 0.1-0.5% aqueous solution with a strength of current of 20-30 mA is advised.

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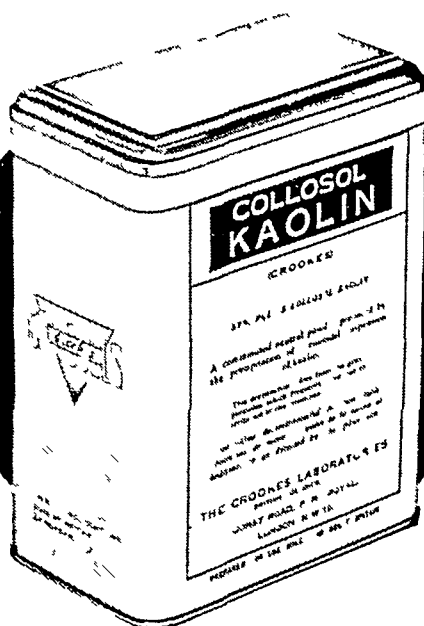
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Sales Agents —

**SAVORY & MOORE, LTD.,**  
61, WELBECK STREET, LONDON, W.1

*Crookes'*

**KAOLIN**



FOR THE PROMOTION  
OF INTESTINAL HEALTH

PRICES

CROOKES KAOLIN  
6 oz tins - - - - - 3/-  
16 oz tins - - - - - 6/6  
CROOKES' KAOLIN with  
PHENOLPHTHALEIN  
(LAXATIVE)  
6 oz containers - - - 3/6  
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CROOKES  
LACTO KAOLIN  
6 oz tins - - - - 3/-

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ON REQUEST

CROOKES' KAOLIN has achieved a great measure of success in all forms of intestinal toxæmia. It exercises the effect of adsorbing poisons, especially bacterial toxins, and of forming an adherent coating on the bowel wall protecting the surface from irritant particles and digestive juices in ulcerated conditions.

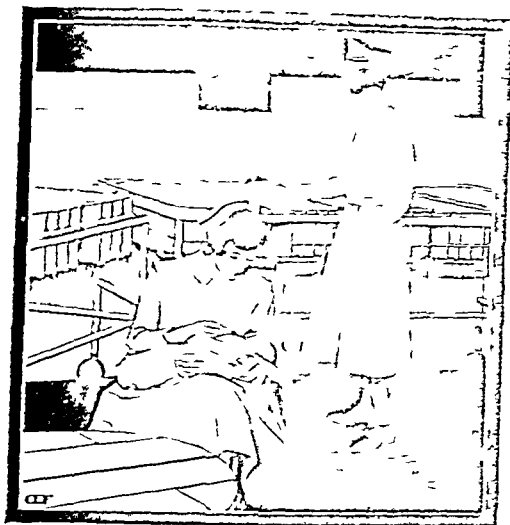
In conditions of ulcerative colitis and chronic conditions of the intestines where there is a large excess of the coliform type of bacillus, Crookes Lacto-Kaolin is more especially recommended owing to the properties of the lactose constituent.

Both products are superior to any other medicinal kaolins on the market in respect of the fineness of division of the kaolin particles. It is upon this that the adsorptive power depends.

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# ELI LILLY AND COMPANY LIMITED

*Pharmaceutical and Biological Products*



## 'SODIUM AMYTAL'

*Sodium Iso amyl Ethyl Barbiturate*

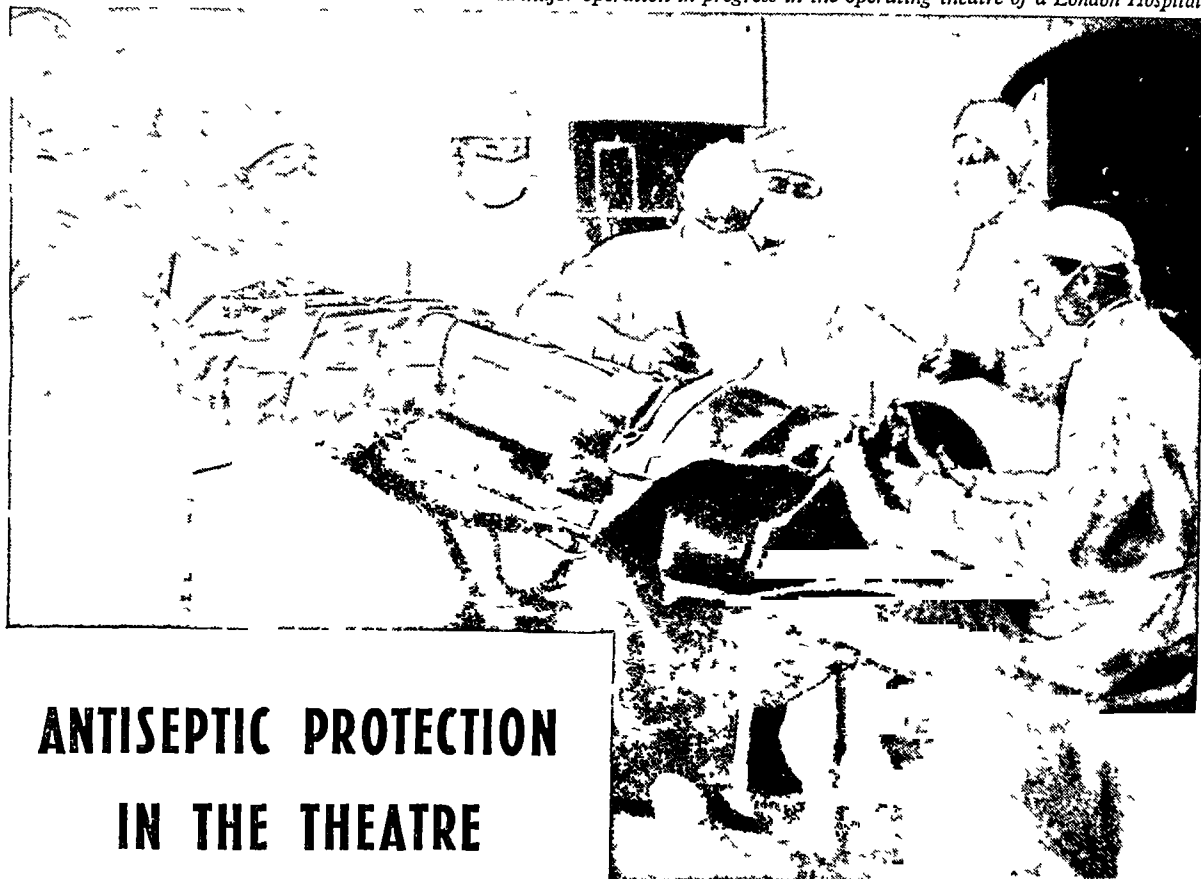
Conservatism in the choice of a hypnotic for the woman in labour may avoid severe respiratory depression of the child at the time of delivery 'Sodium Amytal' affords desirable rest and relaxation to the mother during much of the period of labour without causing notable narcotization of the baby 'Sodium Amytal' brand sodium iso-amyl ethyl barbiturate is supplied in 1-grain and 3-grain 'Pulvules' brand filled capsules in bottles of 40 and 500

*Prompt Attention Given to Professional Inquiries*

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*Distributing Agent in Britain for*

ELI LILLY AND COMPANY, INDIANAPOLIS, U.S.A.

*A major operation in progress in the operating theatre of a London Hospital*

## ANTISEPTIC PROTECTION IN THE THEATRE

THE greatest danger in any operation is the risk of introducing bacterial micro-organisms into the system. Because of this, elaborate precautions are taken in the operating theatre to prevent infection. Modern antiseptic methods have succeeded in eliminating sepsis—once the surgeon's greatest fear and problem.

Risks of infection in everyday life, though less serious, are more numerous. In ordinary hygiene prophylactic measures cannot, of course, take the elaborate lines of the operating theatre, but fortunately the simple use of soap and water usually affords adequate protection against most forms of infection. But the degree of protection naturally depends on the antiseptic, antipruritic and germicidal qualities of the saponifying agent.

Wright's Coal Tar Soap has enjoyed the confidence of the medical profession for purposes of general protection for over 70 years. It has substantial

antiseptic and antipruritic qualities, and to-day, besides being specified by leading bacteriologists as the ideal everyday safeguard against infection, is used (according to the 1932 investigation of the Institute of Industrial Psychology) by doctors themselves more than any other brand of toilet soap. Wright's is the *only* soap to contain 'Liquor Carbonis Detergens' (Wright's), the valuable therapeutic used and recommended by eminent dermatologists. You can have every confidence in using Wright's in *your* practice and recommending it to *your* patients.

**WRIGHT'S**  
**COAL TAR SOAP**  
*The Safe Soap*

*Wright, Layman & Umney Ltd, 44-50 Southwark Street, S.E. 1*

# THE IMPORTANCE OF PRECISION POLISHING

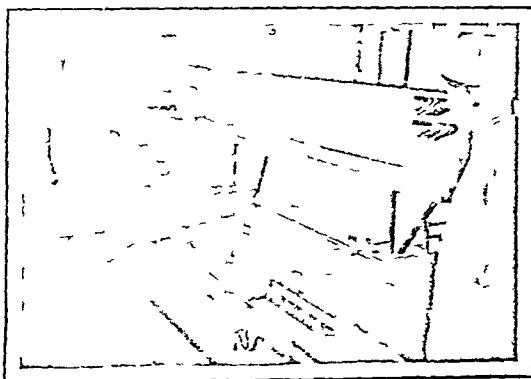
In order to obtain uniformity of calibre and complete roundness of strand along its entire length, A & H Catgut is polished by automatic machinery

Hand polishing of individual strands fails to obtain this desirable precision and uniformity in the production of surgical catgut strands

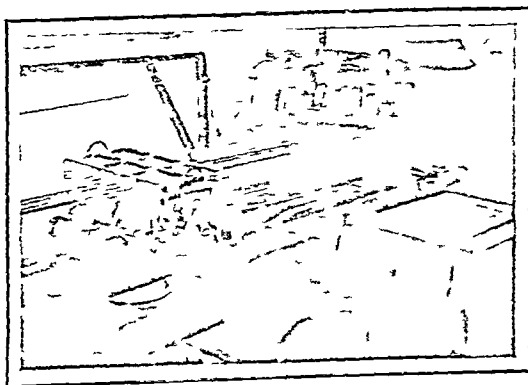
One of the modern advantages incorporated in the production of A & H Catgut

The entire product  
manufactured  
in England

*A descriptive booklet will  
be sent on application*



Precision Automatic Polishing in one operation  
of twelve catgut strands each 10 feet in length



# A & H CATGUT

AZOULE BRAND

Manufacturing Licence No 6B

**ALLEN & HANBURYS LTD., LONDON, E. 2**

*Manufacturers of Surgical Instruments and Appliances Sterilized Surgical Sutures  
Hospital Furniture and Electro Medical Apparatus*

Showrooms 48 WIGMORE STREET, W 1



INDICATIONS FOR 'SANATOGEN'

No 3

# Diabetes

Chemical experience has now definitely established that diabetes can be traced to an intricate biochemical disturbance of metabolism, which extends far beyond the limits of the carbohydrates. From this it follows that the state of the nervous system plays a most important part—nervous complications of the disease are common and the harmonious balance of endocrine action, which is necessary for a normal carbohydrate metabolism, is, of course, controlled by the nervous system.

The tonic effect of 'SANATOGEN' upon the nerves has, as many clinical records show, conferred definite benefit in the treatment of diabetes. This highly concentrated food contains .95 per cent pure milk casein with 5 per cent sodium glycerophosphate. It is very easily digested. Literature giving detailed reports on its effect in diabetes will be forwarded, free of charge, on request.

"I have now completed my test of 'Sanatogen' on diabetic patients. A man of 28, who has had Diabetes for 12 years has been sugar-free for 8 weeks, in spite of the fact that I have gently lowered his Insulin weekly for this period. A man of 55 is practically sugar-free for 8 weeks, although as above. A woman of 48 has reduced her sugar from 2 and 3 per cent to 5 per cent during the time she has been taking 'Sanatogen'. In my own case, I have been able to reduce my daily Insulin by 20 units, and I now average from 5 per cent to 1 per cent sugar. I have pleasure in testifying to the efficacy of 'Sanatogen' for Diabetes."—M R C S, L R C P

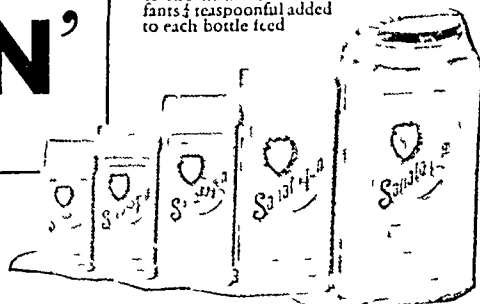
## 'SANATOGEN'

(Trade Mark)

A brand of Casein and Sodium Glycerophosphate

Sold by all chemists  
price 2/3 to 19/9

**DOSAGE.** For children and adults two teaspoonsful three times daily or according to circumstances. For infants 1 teaspoonful added to each bottle feed.

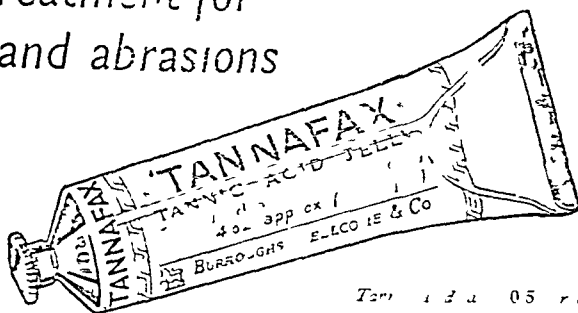


Clinical samples and literature available on request to  
**GENATOSAN LTD., LOUGHBOROUGH.**

The word SANATOGEN is the Trade Mark of Genatogen Ltd. and is not to be used for any other product without the written consent of Genatogen Ltd. The word GENATOSAN is the name of the company.

P.E.L. 301 ED CAL SERIES No 151—CELTIC

*Tannic Acid,*  
a recognised treatment for  
burns, scalds and abrasions



*Tan. 122 05 rect  
Pro. 112 240 22*

TRADE MARK

# 'TANNAFAX' BRAND

## TANNIC ACID JELLY

Eliminates the danger of delay in treatment

Unscrew the cap, or, for extensive surfaces, cut off the wide end of the tube, and 'TANNAFAX' is ready for immediate use

Owing to its non greasy nature 'TANNAFAX' may be removed with ease in those circumstances in which re-dressing is found to be desirable

*Each 4 oz. tube is 4s 6d  
If 4 oz. P. of 1000*

*Tubes of 40 gm  
(2 1/2 - approx) each*

*Tubes of 4 oz.  
(113 gm approx) each*



**BURROUGHS WELLCOME & CO, LONDON**

Address for communications SNOW HILL BUILDINGS EC1

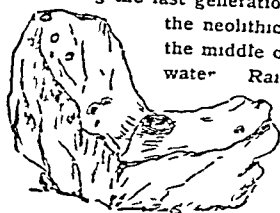
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THE 'STONE OF THE MEASLES' WITH CUP MARKINGS A SCOTTISH MAGICO-MEDICAL MONUMENT—This object associated with the cure of disease from time immemorial fell into disuse only during the last generation. In the opinion of most archaeologists the cup-markings date it back to the neolithic phase. It has evidently been transported from a considerable distance to the middle of a field where it now stands. Its artificial cavity holds about two quarts of water. Rain-filled from heaven it acquired powerful healing qualities and children suffering from measles were brought from far and near for cure. Before drinking the water the patient had to pass round the stone from left to right which may represent an act of sun-worship.



DATE The chronological date is undetermined, but the phase is neolithic.

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No A29

# 'Elastoplast' and Post-Operative Dressings (Abdominal)

(excerpts from the film "The Use of 'Elastoplast' in Modern Surgery")



*Gaping Abdominal Wound*



*Edges being approximated by two pieces of 'Elastoplast'*

SURGEONS and General Practitioners who may be interested to see this sectionalised film are invited to communicate with *T & Smith & Nephew, Ltd*, Dept B 8, Hull, for details regarding its exhibition

B M A BRANCH Secretaries are invited to write for available dates for projections



*Completed Dressing*

**Elastoplast** THE MODERN SURGICAL DRESSING  
TRADE MARK  
 ELASTIC ADHESIVE BANDAGES, PLASTERS, DRESSINGS

# BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 18 1938

## THE CLINICAL ASPECTS OF THE TRANSMISSION OF THE EFFECTS OF NERVOUS IMPULSES BY ACETYLCHOLINE\*

BY

FRANCIS R FRASER, M.D., F.R.C.P.

*Professor of Medicine University of London Director of Department of Medicine  
British Postgraduate Medical School*

### LECTURE II

#### Pharmacology of Carbaminoyl-choline

Carbaminoyl-choline was introduced by Kreitmair (1932) working in the pharmacological laboratories of Merck of Darmstadt. He considered that it excelled acetylcholine in many ways appearing to be more powerful and active at doses usually associated with hormones or vitamins. It is much more stable than acetylcholine in solution withstands boiling and is active even when administered in the digestive tract.

Stronart and Simonart (1934) showed that it is less active than acetylcholine and that its comparative stability is accounted for the apparent greater activity as a parasympathetic stimulant but that it is stronger in its nicotine-like properties. Kreitmair (1932) worked with dogs and cats and showed that in general it has the same qualitative effects as acetylcholine acting typically as a stimulant of parasympathetic stimulation and that atropine inhibits its effects. Veltin (1933) studied its action on the stomach noted contraction of the muscle and an increased flow of gastric juice and found that it induced contractions in the puerperal uterus of cats. He concluded that there is no accumulation or habituation in cats on a daily dose over long periods but that injections of large doses repeated twice daily for several days caused paralysis and death in some cats though not in others. At necropsy no reason for death was found. In man E. A. Starr (1937) has observed evidence of accumulation with subcutaneous injections and found it necessary to lower the dose. Noll (1932) studied the effect of subcutaneous injections and of oral and rectal administration in cats following a barium meal and demonstrated a powerful action on the musculature of the intestines in two and a half hours. He noted great salivation and an increase in the flow of gastric juice. Dautrebande and Marechal (1933) gave 0.01 mg per kilogramme of body weight to dogs and noted tachycardia and a fall in blood pressure followed by bradycardia and also stimulation of respiration. Dautrebande (1933) gave the same dose to cats by intracarotid injection and concluded that the

tachycardia is due to a reflex from the carotid sinus and that the carotid sinus is responsible for the immediate stimulation of respiration and also for a secondary stimulation of the time of the fall in blood pressure. Destree (1937) gave 0.125 mg per kilogramme to dogs with Pavlov fistula and found that it produced an increase of total and free acid and of mucus in the gastric secretion. Atropine prevented this action.

In so far therefore as its effects on animals are concerned carbaminoyl-choline differs from acetylcholine mainly in its greater stability so that prolonged effects can be obtained by subcutaneous injection and even by oral or rectal administration.

#### Actions of Carbaminoyl-choline in Man

Dautrebande and Marechal (1933) reported that the administration of 0.1 mg to man by intravenous injection produced a fall in blood pressure a feeling of heat dilatation of superficial vessels increased activity of movements within the abdomen salivation and lacrimation. They also found that the intramuscular injection of 0.2 to 0.3 mg caused a fall of blood pressure that persisted for twenty to forty minutes.

#### INTRAVENOUS INJECTION

In 1932 E. A. Carmichael and I began observations on the effects in man of intravenous injections. These preparations were kindly supplied by Merck and Co. and consisted of a solution of carbaminoyl-choline chloride in sterile ampoules (1 c.c.m. containing 0.1 mg) under the name of lentin and later of ampoules containing 0.25 mg in 1 c.c.m. under the name of dorvi. We gave fifty-eight injections to eleven subjects—patients in hospital convalescing from acute infections or admitted for chronic conditions such as osteo arthritis tabes dorsalis etc. Starting with a dose of 0.01 mg the dose was increased until a definite effect on the pulse rate or blood pressure was obtained. The pulse rate for each three second period was calculated from a continuous polygraphic record and blood pressure readings by the auscultatory method were taken as often as possible. Typically a fall of both systolic and diastolic blood pressures occurred accompanied by a rise of pulse rate ten to twenty seconds

\* The Croonian Lectures delivered before the Royal College of Physicians of London on May 24, 26 and 31 1938. Lecture I was published on June 11 at page 12-9.

following the injection Fig 4 shows the characteristic effect on the pulse rate. The blood-pressure readings are too inaccurate to be worth recording, but falls from a systolic of 130 mm Hg to 90 mm Hg and from a diastolic of 80 mm Hg to 60 mm Hg were commonly noted. The maximum effect on both blood pressure and pulse rate was reached in from thirty to forty seconds following the injection, and both had returned to the previous level at the end of sixty seconds. These effects appeared with a dose of from 0.03 to 0.05 mg. The previous injection of 1 mg of atropine sulphate prevented the fall of blood pressure and the rise of pulse rate. In one patient little if any rise of pulse rate was obtained even when other symptoms occurred, and this was noted also following injections in patients who had previously reacted typically to smaller doses. On two occasions only did the pulse rate fall, and in both instances the blood pressures dropped as usual and typical rises of pulse rate occurred in the same patients on other occasions. In neither instance was the fall followed by a rise of pulse rate.

The effect of the intravenous injection of carbaminoylcholine on the pulse rate in producing a rise and only

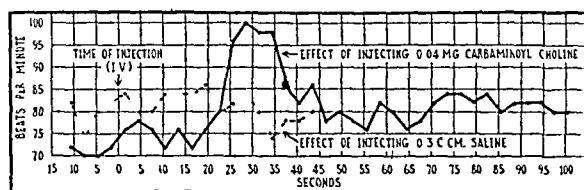


Fig 4

occasionally a fall differs, therefore, from that of acetylcholine, which produced in nearly every instance a fall followed by a rise.

Other symptoms that accompanied the rise of pulse rate were flushing of the head and neck, a feeling of heat throughout the body, a sensation of fullness in the head or headache, coughing, and a feeling of tightness in the throat or upper thorax. These symptoms were transient, variable in degree, and lasted only a few seconds. Less constantly, sweating, salivation, and lacrimation occurred. If the injections were repeated after a few minutes the effects were the same, but after a number of injections had been given a few patients complained of abdominal unrest, and two of them defaecated shortly after the termination of the observations. In four patients effective injections were repeated following the intravenous injection of 1 mg of atropine sulphate, and in each the symptoms were entirely prevented or very greatly diminished in intensity.

Three patients received doses of 0.02, 0.05, and 0.25 mg injected into the femoral artery. A slight flush occurred in the distribution of the femoral artery, but no flushing or other symptoms in the rest of the body. In these doses it had much less effect by this route than we had obtained with doses of acetylcholine of 5 to 25 mg, but we hesitated to use larger amounts because of the stability of this ester.

#### SUBCUTANEOUS AND INTRAMUSCULAR INJECTION

From these results it does not appear that carbaminoylcholine offers any advantages over acetylcholine itself for therapeutic purposes if given by intravenous injection, the effects being extremely transient when safe doses are employed. By subcutaneous or intramuscular injections conspicuous and sustained effects are obtained and during the past five years I have been able, with the help of

different colleagues, to study the effects on more than twenty-five patients. The results vary considerably from subject to subject, and in the same subject from day to day. They were patients in hospital suffering from chronic illnesses that were unlikely to interfere with the reactions to the drug. An injection of 0.5 mg will produce definite effects, which, however, are sometimes so pronounced as to be upsetting to the patient, a dose of 0.25 mg will usually produce some recognizable effects, does not upset the patient, but seldom produces all the typical reactions.

Fig 5 shows the characteristic response to 0.5 mg. Within a few minutes, usually two, the subject becomes

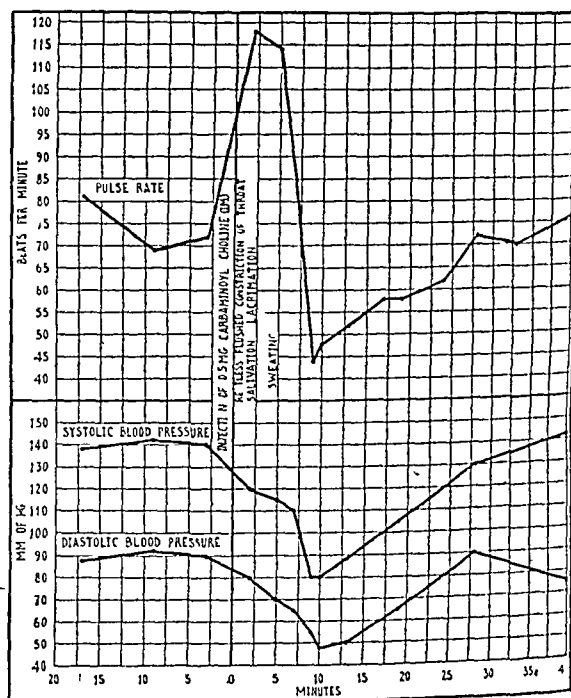


Fig 5

restless, feels hot, flushes on the face, neck, and upper thorax, and swallows because of increased salivation and a vague feeling of constriction in the throat, and tears collect in the conjunctival sac because of increased lacrimation. Throbbing in the head may be complained of early, but may not appear for ten or more minutes. With the onset of the symptoms the pulse rate rises and the blood pressures fall, but after a few minutes, usually five, the pulse rate also falls to below the initial rate. In five to ten minutes after the injection sweating appears all over the body, and in from ten to fifteen minutes borborygmi are audible, the patient is conscious of abdominal unrest, and there may be some nausea. After twenty minutes the symptoms subside, and the pulse rate and blood pressures gradually return to normal, usually regaining the initial levels at the end of forty minutes. The abdominal unrest may continue after the other symptoms have disappeared, and frequently the bed pan is called for at the end of thirty to forty minutes, when defaecation may occur, or, more often, the bladder only is emptied. This dose produced in one subject an alarmingly rapid fall of blood pressure and of pulse rate with a feeling of faintness and appearance of collapse. Atropine sulphate was accordingly injected intravenously, this being followed by a rapid disappearance of all the symptoms.

If the dose is raised to 1 mg the effects are increased in intensity and in different subjects one or other effect attains especial prominence. Fig. 6 shows the result in a patient with muscular dystrophy in whom the most striking effect was the intense pain which he located at the root of the penis. This pain persisted after he emptied his bladder and remained severe at the end of forty minutes when other symptoms had disappeared or become mild and he was given atropine which promptly relieved the pain. Following the injection of 1 mg in the same subject is in Fig. 5 the slowing of the pulse and the fall of blood pressure were so rapid that atropine was given at the end of six minutes but the most striking phenomenon was the flow of saliva which frothed at her mouth in a large ball of fine bubbles. On the other hand 1 mg in another patient caused little disturbance apart from the usual effects on pulse rate and blood pressure and when

effect was the production of local constrictions. These changes were observable for one hour following the injection. Two patients with colostomy were given 0.2 mg and 0.4 mg respectively by subcutaneous injection. Between ten and fifteen minutes later increased movements were observed in the exposed parts of the colon which pouted and were vigorously contracted and with drawn while much wind was passed. With the smaller dose no other effects were observed but with the larger dose there was sweating and abdominal discomfort and the activity of the exposed gut was much more vigorous. The gastric contents were examined following an alcohol test meal in five subjects. At the end of one hour 0.1 mg or 0.2 mg of carbaminoyl choline was injected subcutaneously. No increase of hydrochloric acid occurred and in three subjects it was diminished although histamine caused increased acidity in all of them and following the carbaminoyl choline injections it sometimes proved diffi-

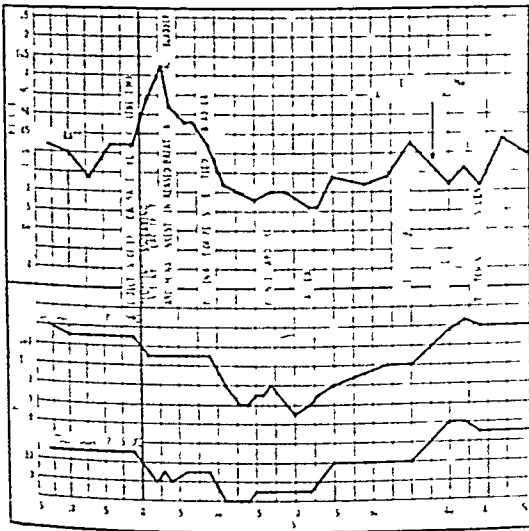


FIG 6

combined with 1 mg of atropine sulphate the atropine prevented the effects on the cardiovascular system but not entirely the increased movements of the intestines. The effects in a man with essential hypertension were in no way unusual 1 mg producing enough retching and vomiting to necessitate an injection of atropine to relieve his distress while 0.25 mg produced mild effects only (Fig. 7). In a woman with exophthalmic goitre the effects of 1 mg on the cardiovascular system were comparatively mild the bladder was emptied six minutes after the injection and abdominal unrest persisted for some hours even after defaecation occurred at the end of forty minutes.

As a result of their observations on the action in animals Kreitmair (1932), Noll (1932) and Velten (1933) pressed the effects on the gastro intestinal tract. We studied the effects of 0.2 mg to 0.4 mg in three human subjects by subcutaneous injections watching the outlines of the stomach and intestine with the x-ray screen following a barium meal. Fifteen minutes after the injection the movements of the stomach, small intestine and colon all appeared to increase. The stomach emptied more rapidly than usual and conspicuous local constrictions appeared in the small intestines and colon while from time to time a constriction would move vigorously downwards for a short distance. The normal movements seemed to be increased in vigour and frequency but the most striking

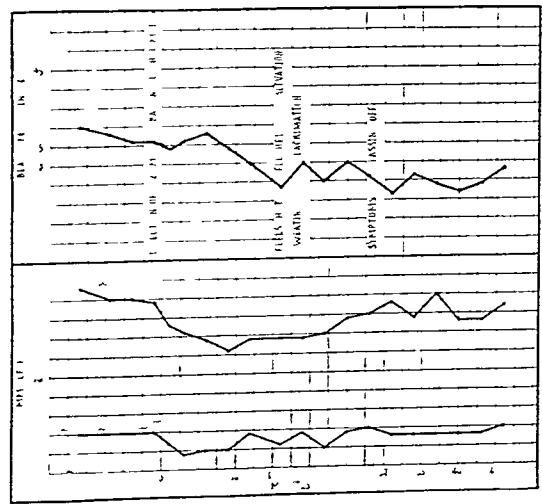


FIG 7

cult to obtain further specimens possibly because the stomach emptied rapidly.

Starr (1937) reported the effects on twenty six healthy students of giving 0.1 to 1 mg by subcutaneous injection and 0.4 to 1 mg by the mouth. He obtained a fall of blood pressure and a rise of pulse rate followed by a fall and noted symptoms similar to those found by us. He considered that it is cumulative both by mouth and by subcutaneous injection and that if repeated injections are given the dose must be reduced or headache and general malaise result.

Rutenbeck (1935) in a study of ionization as a method of introducing drugs into the body found that with a solution of 1 mg per ccm of carbaminoyl choline general effects were obtained from the absorption of the drug. He obtained local vasodilatation that was not so strong as with his amine and five to ten minutes after the circuit was closed flushing in the head, sweating, abdominal unrest and increased intestinal peristalsis were experienced. Kramer (1937) also obtained general effects of carbaminoyl choline by the same method.

Velhagen (1933) observed local effects in the eye following the instillation of a 0.75 per cent solution into the conjunctival sac. He found that it produced a strong constriction of the pupil and that it lowered the tension

in the eyeball if given two or three times a day With Dr Kent Harrison I have tried the effect when given in this way The ordinary solution for injection (doryl), which contains 0.25 mg per c cm, has no effect even when combined with 0.05 per cent solution of prostigmin, but we found that a 0.75 per cent solution as used by Velhagen produced a strong constriction of the pupil in two subjects that persisted for six hours, and also engorgement of the conjunctival vessels that passed off somewhat more quickly In five other subjects we put one drop of a 0.75 per cent solution with one drop of a 1 per cent solution of prostigmin into the conjunctival sac and obtained congestion of the conjunctival vessels and constriction of the pupil that persisted for eighteen hours in all of them, and in four a lowering of the intra-ocular tension could be detected with the finger-tips This lowering of eyeball tension is presumably due to the relaxation of the unstriated muscle fibres of the orbit, and was especially noticeable in a subject with exophthalmic goitre In no instance could we detect any dilatation of retinal arteries or symptoms of absorption of the choline ester into the general circulation

These results of the administration of carbaminoyl-choline to man show that it has in general the same actions as acetylcholine, but because of its increased stability it is effective by intramuscular and subcutaneous injection, and these actions can be maintained for a much longer time than is possible with acetylcholine By oral administration its effects appear to be less certain, and when given repeatedly malaise and headache result It can be administered slowly over long periods by ionization, and local effects in the eye can be obtained by conjunctival instillation Further, in comparison with acetylcholine the effects on the gastro-intestinal tract and the bladder appear to be greater and those on the cardiovascular system to be less The rise of pulse rate when a fall might be expected is probably due to a reflex action from the carotid sinus, resulting from the fall of blood pressure, overpowering the direct vagomimetic inhibiting action on the heart as suggested by Dautrebande (1933)

### Pharmacology of Acetyl- $\beta$ -methyl-choline

In 1911 Reid Hunt and Taveau reported the production of an ester of methyl-choline, acetyl- $\beta$ -methyl-choline, with well-marked parasympathetic and muscarine-like actions as of acetylcholine but feeble nicotine-like effects They found that it was less readily hydrolysed than acetylcholine Simonart (1932) confirmed these properties and actions in cats, and found that it was absorbed and active when administered by the gastro-intestinal tract Comroe and Starr (1933), working with frogs, cats, rabbits, and dogs, found that it has actions similar to those of acetylcholine, less powerful though more prolonged on intravenous injection, and that it is more effective on subcutaneous injection, and active when injected into the lumen of the intestine In the fully atropinized animal they obtained no rise of blood pressure, pointing to the absence of nicotine like effects on sympathetic ganglia or adrenal medulla, and the only nicotine-like effects obtained by Simonart were feeble ones on denervated muscle Schnedorf and Ivy (1937) found that in eight rhesus monkeys, with histamine-resistant achlorhydria but otherwise healthy acetyl- $\beta$  methyl choline alone by repeated injections caused a flow of acid gastric juice in half of the animals and that all responded when it was combined with histamine Flewener Bruger, and Wright (1938) showed that it caused contraction of the gall bladder in cats

### Action of Acetyl- $\beta$ -methyl-choline in Man

Acetyl- $\beta$ -methyl choline is usually administered to man as the chloride, which is supplied by Merck under the name of mecholol or mecholyl Villaret, Justin-Besançon, Cachera, and Said (1932) gave 25 mg by subcutaneous injection to healthy subjects, and found a fall in blood pressure that lasted for one or two hours, accompanied by vasodilatation and symptoms of vagus stimulation Villaret, Justin-Besançon, Schiff-Wertheimer, and Gallois (1932) applied it to the eye by instillation of two drops of a 10 per cent solution into the conjunctival sac and produced powerful miosis and a reduction of ocular tension They found that it had a powerful effect by subconjunctival injection also Starr, Elsom, and Reisinger (1933) gave it by subcutaneous injection to normal subjects in doses up to 25 mg, and observed flushing, a feeling of heat, sweating, salivation, lacrimation, increased intestinal peristalsis, epigastric discomfort, increased respiratory excursion, palpitations, and a sense of discomfort in the epigastrium and of constriction under the sternum The effects appeared in two to three minutes and passed off in twenty to thirty minutes The pulse rate rose and the blood pressure fell with the onset of symptoms, and a few minutes later the pulse rate fell in some cases to below the original level, an action similar to that of carbaminoyl choline by the same route They gave it by the mouth also in doses of 100 mg to 1 gramme, and found that when administered by this route the effects were much the same but less intense, persisted longer, and appeared in thirty to forty minutes When given orally the rise in pulse rate was not seen

Fig 8 shows the action of 25 mg by intramuscular injection in one of our patients The symptoms of

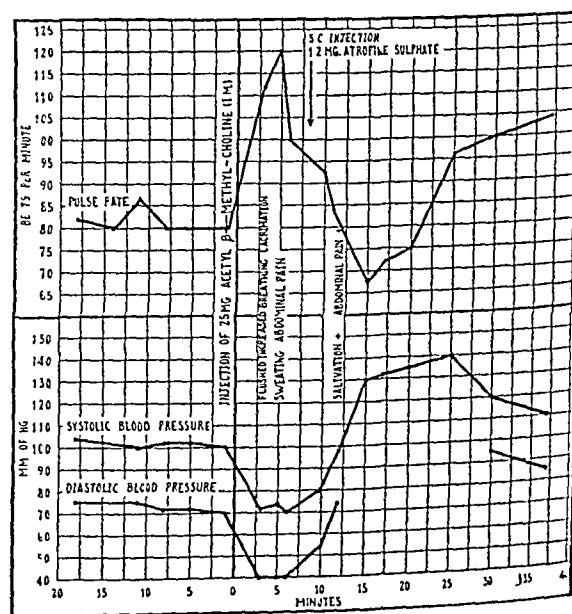


FIG 8

collapse and the fall of blood pressure appeared so rapidly that 12 mg of atropine sulphate was given by subcutaneous injection at the end of eight minutes In a second subject 12 mg of atropine sulphate was given twenty-four minutes previously and was not sufficient to prevent the cardiovascular effects of 50 mg

Abbott (1933) studied especially the actions on the gastro-intestinal tract When given by subcutaneous injection or by the mouth it caused increased movements

of the stomach, small intestine, and colon, and after oral administration the cardiovascular effects were less intense. He obtained no increase in the amount of gastric juice, but in a few cases of hypochlorhydria there was a slight rise in the concentration of free hydrochloric acid.

Pape (1935) observed the usual muscarine-like effects following the subcutaneous injection of 25 mg, but commented on the absence of slowing of the pulse. He found that the T waves of the electrocardiogram become negative following the injection, and that this effect in common with the other symptoms is inhibited by atropine.

Ritvo (1936) observed the effects of 20 to 30 mg of subcutaneous injection on the stomach and intestine by radiographs following a barium meal. He found an increase of tone in stomach and intestines five to ten minutes after the injection, followed by powerful deep peristaltic waves. In the colon the lumen narrowed and contractions increased in number and depth. These effects lasted for thirty minutes to several hours and were accompanied by evidence of parasympathetic stimulation and by headache, sweating, and a fall in blood pressure.

Myerson, Schube, and Ritvo (1937) observed the effects on the colon following a barium enema. They gave 50 mg by subcutaneous injection and found increased tone in five minutes, followed by more and more marked contractions coming and going for over one hour. The increased tone lasted sometimes for twenty-four hours, and as a rule three or four evacuations occurred. They found that the cardiovascular effects were of short duration, in contrast but considered that they were disadvantageous to the use of the drug in atony of the colon. Atropine sulphate in doses of 1/100 grain by subcutaneous injection inhibited these actions on the colon.

Myerson, Loman, and Dameshek (1937) found that following the subcutaneous injection of 30 mg the spinal fluid pressure rose by 30 to 140 mm of water during the lowering of the blood pressure in eighteen psychotic patients.

Myerson, Rinkel, and Dameshek (1936) studied the effect on the gastric juice following the subcutaneous injection of 25 to 40 mg. They concluded that it produces an increased flow of alkaline juice with a high mucous content and that free hydrochloric acid and total acidity are reduced. These effects began to pass off after twenty minutes and had disappeared by forty minutes. Loman, Rinkel, and Myerson (1937) found the same action on the gastric juice when the drug was given by ionization, but the effect was less explosive and the side effects less pronounced by giving prostigmin in addition. They were able to maintain an alkaline juice for two hours or more.

Martin (1937) obtained all the usual actions following absorption by means of ionization using a 0.25 or 0.5 per cent solution with a current of 20 to 30 milliamperes for twenty minutes. He observed that the blood sugar fell, but not convincingly, and that there was an increase of gastric juice with a fall in acidity. No case of anacidity developed free acid.

Van Dellen, Bruger, and Wright (1937) put 25 to 50 mg in a few drops of solution into the anterior nares. Evidence of immediate absorption was seen—hyperaemia and a sensation of warmth in the nose, lacrimation, salivation, flushing of head, neck, and thorax, sweating, and a sharp fall of blood pressure. The symptoms varied greatly from individual to individual and at times the respirations were accelerated; the effects passed off in four to six minutes.

Myerson and Thau (1937) found the effective dose when given by instillation into the conjunctival sac to be inconstant. A 10 per cent to 20 per cent solution usually sufficed to produce a pin-point pupil in twenty minutes. The reaction to light and convergence was retained until miosis was extreme; the palpebral fissures were narrowed, the retinal arteries and veins dilated, and the ocular tension fell 3 to 4 mm. A full effect could be obtained with a 1 per cent solution containing 1 per cent prostigmin. General symptoms of absorption did not occur.

From these observations we can conclude that like carbaminoyl choline, acetyl-methyl choline has actions similar to those of a muscarine and is more stable, producing a prolonged action even by subcutaneous or intramuscular injection or by the mouth or by ionization. By injection a dose of 10 to 20 mg appears to be comparable to 0.25 to 0.5 mg of carbaminoyl choline. The effects of both are ordinarily of the muscarine type, but the only remarkable effects observed by us were seen with carbaminoyl choline in muscle twitchings and clamping in a patient with muscular dystrophy and in increased spasm of muscles in a case of arteriosclerosis of the cerebral vessels. With both esters the results following injection appear in a few minutes, but while the action on the cardiovascular system passes off in from thirty to forty minutes, the action on the gastrointestinal tract and bladder may persist for several hours. It is generally accepted that the action of carbaminoyl choline on the gastrointestinal tract is relatively greater than on the cardiovascular system, and that the reverse is the case with acetyl-methyl choline. With both local effects can be obtained on the eye and on the nose by instillation into the conjunctival sac or anterior nares.

### Therapeutic Uses of Doryl and Mecholin

Both carbaminoyl choline chloride (doryl) and acetyl-methyl choline chloride (mecholin or mecholyl) have been used in a great variety of diseases to obtain either parasympathetic or vasodilator effects, but the reports in the literature of such uses have with certain exceptions consisted of a few case reports from which it is often difficult to judge conclusively of the value of these substances.

*In Ophthalmology*—Miloro (1935) considers that in chronic glaucoma the instillation of doryl is often efficacious when physostigmin and pilocarpine fail. He found that it produced a powerful miosis for two and a half hours and that the ocular pressure was lowered for twenty-four hours.

*In Ozaena*—Guns (1934) believes that doryl has a place in the treatment of ozaena and found that the local application of a 0.04 or 0.05 per cent solution caused increased secretion.

*Contraindicated in Asthma*—Starr, Elsom, and Reisinger (1933) caused an attack of asthma by mecholin in an apparently healthy person who had been subject to asthma, and Villaret, Vallery Radot, Justin Besançon, and Claude (1934) reported that in fifteen persons subject to asthma with various causal factors attacks were produced by the subcutaneous injection of 0.02 to 0.04 gramme. They suggested that this effect might be used as a diagnostic test. My colleague Dr J. G. Scadding has demonstrated by means of lipiodol constriction of the smaller bronchi following 25 mg of mecholin by intramuscular injection in a woman aged 37 convalescent from pneumonia and with no history of asthma.



## HEREDITARY BONE TUMOURS IN MICE

BY

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AND

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(WITH SPECIAL PLATE)

It should no longer be disputed that a tendency to cancer is often inherited. While there is ever-accumulating evidence to show that this is so in man, of which probably every practitioner must have seen examples, most of the experimental proof has been obtained by animal breeding. The inheritance of mammary cancer in mice is being very

fully investigated, chiefly by American workers. Certain strains which have been inbred for many generations are characterized by a definite and constant cancer incidence, high in some strains, in intermediate or low in others. Once these characters are established such strains are used extensively for investigating the origin of mammary carcinoma. Other inbred strains have proved the inheritance of a leukaemic tendency while in others there is a regular production of tumours of the liver or lung.

In 1929 a pair of mice from the Simpson strain (developed by Dr. Burton J. Simpson of Buffalo from the Lathrop-Loeb stock) was given to us by Dr. T. Lumsden. From this pair we have bred more than 5,000 descendants. The general incidence of mammary carcinoma is over 50 per cent (in some inbred lines it is considerably higher). Lung tumours are very frequent, and other lines have a high incidence of leukaemia. Angiomas, epitheliomas, and other neoplasms are less numerous.

## Sarcomata

Sarcomata were known to occur but rarely in the strain. The first six cases in our stock appeared in 1933, three of these being of bone and three subcutaneous. Mouse 100, the first to produce a bone tumour, had a sarcoma of the sternum in addition to a mammary carcinoma. The relations and descendants of these sarcoma mice were

bred from, certain lines were inbred brother to sister, others were outcrossed in an attempt to increase the sarcoma incidence. During the next two years there were forty-two cases of bone tumours, mainly sarcomata, in this group. One of these, a female of 5½ months, had a hind limb amputated for a sarcoma of the tibia and was paired to a sarcoma-bearing male. The descendants from this mating, together with those from three other double sarcoma pairings, formed the nucleus of our present inbred sarcoma strain, now in its seventh generation. The sarcoma incidence in one line is shown in Fig. A.

The sarcoma incidence in the ordinary Simpson stock is approximately 1 per cent. During the first four generations of inbreeding it increased to 10 per cent. In our inbred strain from the double sarcoma pairings it is just over 50 per cent. At the time of writing there have been ninety-six cases of bone tumours in the inbred strain.

among 188 mice which have died over the age of 5½ months. There is a curious difference in incidence in the sexes, the females producing three times as many sarcomata as the males.

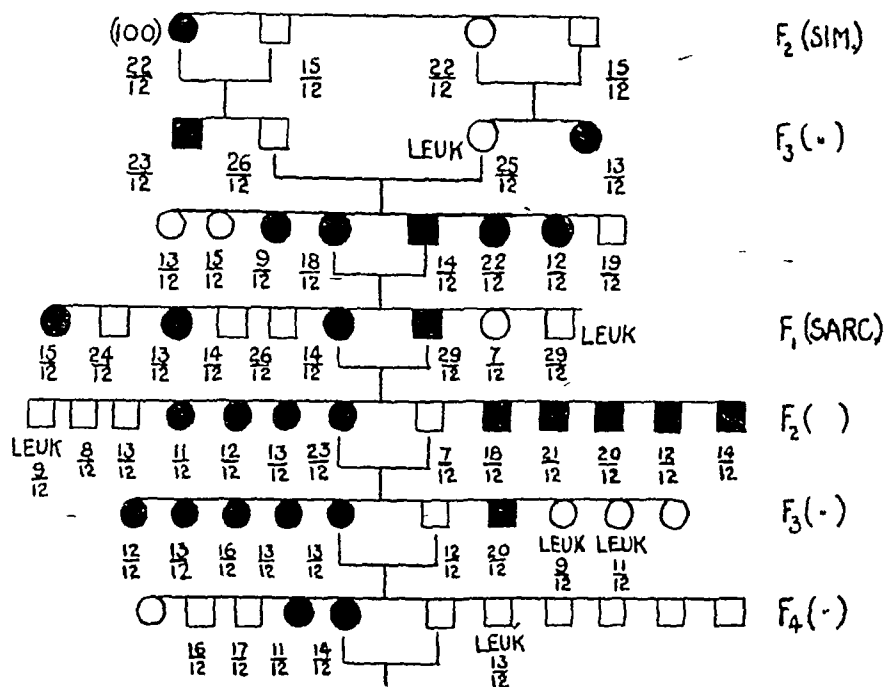


FIG. A—The pedigree of one line of the sarcoma strain showing the high incidence of sarcoma. The age of the mouse at death or appearance of the tumour is given in months. Where no age is given the mouse is still living.

○ = female, ● = sarcoma-bearing female, □ = male, ■ = sarcoma-bearing male, LEUK = leukaemia, SIM = Simpson stock.

usually the first indication of a vertebral tumour. Large tumours about the pelvis may impede locomotion or parturition while in others intracranial growths may be suspected. Diagnosis has been confirmed in some cases by



FIG. B—Right femur and tibia from mouse 3754, o.c. (o.c. = osteogenic sarcoma of femur, slight changes in tibia).

X-rays, which are a ready means of revealing multiple lesions or metastases (Plate Fig. 1). An analysis of the sites shows that any bone may be affected (in one mouse the whole skeleton was altered), but the more common

sites are the femur, tibia and spine, and occasional tumours of the jaw, skull, humerus, ribs or sternum are met with.

The main types recognized are osteomata composed either of compact or of cancellous bone alone or in varying proportions and in some cases associated with chondrification or rapidly growing soft tissue. The cancellous osteoma local or diffuse is the most common type.

### Histology

Histological examination demonstrates all stages in the development of bone tumours. The earliest phase consists of proliferation of the osteoblasts forming local hard or cancellous tumours (Plate Fig. 2) single or widely distributed throughout the skeleton. This change may be confined to a small area, but more often it increases in extent until most of the bone is affected. At any time this proliferation may pass beyond the limits of the periosteum and invade the surrounding tissues. Again at any point proliferation may show giant-celled tissue or may pass into a purely spindle-celled rapidly growing sarcoma (Plate Fig. 3). Metastases are found in the lungs, liver, kidneys and spleen. Like the parent tumour they show all grades of bone formation.

The essential feature of the tumours seems to be a varying degree of neoplasia of the osteoblast. In their varying degrees of differentiation and malignancy they show an exact analogy with the mammary tumours which range from a single adenoma through all the stages to a generalized carcinoma of the whole mammary tissue.

### Conclusion

With the possession of this inbred sarcoma strain which reproduces many of the bone lesions known in human pathology it may be possible to investigate the proximate cause of bone tumour formation and perhaps solve other problems concerning bone neoplasia.

Research into this subject and the investigation of rarer types of bone pathology are proceeding.

This work was carried out under a grant from the British Empire Cancer Campaign.

C. Coggi (*Ann. Ostet. Ginec.* February 28 1938 p. 107) discusses the aetiology, morbid anatomy, symptomatology and treatment of necrobiosis of uterine fibromyomata during pregnancy. Six personal cases he describes include three cases of total aseptic necrosis and one case each of partial aseptic necrosis, red degeneration and aseptic necrosis. As a result of his investigations he comes to the following conclusions: (1) Aseptic necrosis in uterine fibromyomata during pregnancy is fairly infrequent and is chiefly found in primiparae of a relatively advanced age; the immediate cause is ischaemia. (2) The symptoms consist chiefly of pain in the hypogastrium accompanied by tenderness on pressure over one particular spot and general disturbance which may range from slight pyrexia to cachexia and even acute peritonitis. (3) Expectant treatment is dangerous and unreliable and should only be adopted in special cases. (4) Myomectomy is the treatment of choice whenever possible; the fear of myomectomy being followed by abortion should not prevent the performance of this operation since the patient will be in a better state to face another pregnancy. (5) The prognosis is always grave and whatever be the treatment adopted necrobiosis is dangerous for the mother and in most cases fatal to the foetus.

## A CASE OF ABDOMINAL PREGNANCY

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(WITH SPECIAL PLATE)

Although many cases of abdominal extra-uterine gestation have been reported in recent years the condition is one of the most difficult to diagnose. The diagnosis is difficult because of the many causes which may give rise to it. In this case the condition was found at the time of a laparotomy which had been made in only 35 per cent of the cases reported. Before proceeding to report the case the following remarks will be relevant. Firstly, it is to be noted that the knowledge of this condition for many years has been related to the exhaustive study of the condition in the animal body.

### Present knowledge of the Condition

Abdominal pregnancy has been reported in women whose ages range from 15 to 64 years, the 64-year-old patient having carried her foetus forty years. Under 2 per cent had previously lived ectopic pregnancy and the condition has seldom complicated other diseases or tumours. The chief symptoms are abdominal pain and this is often associated with slight vaginal haemorrhage and attacks of fainting or vomiting. On abdominal palpation the foetus may be felt separate from a moderately enlarged uterus and lying higher than the normal foetus. The cervix, though so it is less so than in a case of normal pregnancy and it is often high up behind the symphysis pubis. Exploration of the uterine cavity with a sound or hystero-graphy after iodol injection has been found of considerable diagnostic value.

Deformities are the rule in the baby; these are often due to pressure only eight cases out of 236 having been reported as normal. The foetal mortality is high in eighty-six cases in which the baby was born after six months the mortality was 22 per cent, whereas in sixty cases in which the baby was born alive in the eighth and ninth months the mortality was 35 per cent.

The maternal mortality was 14 per cent in the 236 cases; shock, haemorrhage and peritonitis accounting for the majority of deaths. It has been taught that in abdominal pregnancy operation may be probably delayed until the foetus is dead and the placenta thrombosed and relatively avascular, but Cornhill and Lash have shown that in the cases so treated the maternal mortality was 33 per cent, thus forcing one to the conclusion that such a teaching is erroneous. These authors also point out that operative treatment should include the removal of foetus, membranes and placenta *in toto* as the mortality of such a procedure—being 10 per cent—compares very favourably with a mortality of 20 per cent in cases treated by leaving the placenta with or without marsupialization. However it may be that the high mortality of the latter policy may be partially accounted for by its being adopted in the more advanced cases or with more serious ill patients. Certain other writers on the other hand consider non-interference with the placenta to be the wisest course and report its complete absorption in a few months.

Upon the question of the optimum time to operate for the safety of the mother and child the conclusion is that as the policy of delay has been shown to be fraught with

greater risk—since placental separation and rupture of the sac are ever-present dangers—operation is indicated as soon as the diagnosis is made. The delay necessary to obtain a living child is never justified in the face of the danger to the mother, the high foetal mortality, and the incidence of deformities.

### Case History

The patient a housewife aged 31, was admitted to the cottage hospital on October 28, 1937. She had two children, aged 2 and 5 years. She was small and plump, but looked pale and ill. Her last period was on August 12, and was quite normal. On October 13 the patient noticed a small vaginal show which cleared up in a few days, and she remained well until about six days before admission, when there was pain in the lower abdomen, nausea, and a slight rise in temperature. The pain cleared, but the abdomen was still uncomfortable, and in the early morning, two days before admission the patient went downstairs and collapsed on the floor where her husband found her. Her doctor states that the pulse was thin and rapid and the skin cold, he moved her to hospital, where she rapidly recovered. When examined two days after admission she was pale, and was in considerable pain. The pulse was 90 and the temperature  $101^{\circ}$ . The abdomen was tumid and resistant below the umbilicus, but not rigid. There was a profuse thick yellow vaginal discharge, with marked tenderness on rectal examination, but no mass was palpable. On vaginal examination the cervix was soft but the uterus could not be defined.

Two weeks later the patient was seen again, and her general condition was found to be much improved, the pulse was normal and the temperature varied up to  $100.8^{\circ}$ , but she still had occasional abdominal pain, notably after an enema had been given. On examination there was some resistance, but the uterus could be felt to be about the size of an orange, and in the pouch of Douglas was a soft ill defined mass. A conservative policy was advised with regard to the mass, and local heat was applied as fomentations and douches.

On my next visit to the cottage hospital the patient had been discharged but she was readmitted on January 15, 1938, because it had been noticed that the abdomen was increasing in size in a manner not associated with the swelling of normal pregnancy. The enlargement was mainly to the left of the mid line. On examination there was no increase of pulse or temperature, the general condition of the patient was good but the abdomen showed two separate swellings. The uterus the size of a four-months pregnancy was situated to the right side of the hypogastrium, while to the left was a much larger tumour, ovoid in shape, extending in a curved manner to a height above the umbilicus and to the left of it. The mass was soft movable of even consistency—not tender—and its lower pole of identical fluctuant softness, could be felt in the pouch of Douglas. The biological test for pregnancy was positive.

Although it was noted that the uterus was small for the estimated duration of pregnancy, the diagnosis of abdominal pregnancy was not considered, and the case was labelled one of pregnancy complicated by an ovarian cyst with the observation that perhaps the original pain had been due to partial rotation of a cyst which was at that time smaller and concealed by the resistant abdominal muscles. In view of the rapid increase in size of the tumour operation at an early date was advised and the patient kept in hospital. A few days later an enema given in the course of routine preparation for an operation, precipitated an attack of violent general abdominal pain. The patient was anxious, the respirations short and the pulse rate raised. The abdomen previously soft enough to allow of easy examination became tense rigid, and exquisitely tender.

Under gas oxygen ether anaesthesia the patient was submitted to laparotomy. By a right paramedian incision the peritoneum was opened to allow of the immediate outflow of dark fluid blood. This was cleared away and on retracting the edges of the wound a large ovoid, smooth, dark blue,

glistening tumour was seen lying in the left side from the pelvis upwards. Within could be seen foetal parts floating in an excess of apparently clear amniotic fluid. As blood welled freely up from the pelvis haste was made to deliver the whole foetus together with its sac which was scarcely adherent to surrounding structures. The cord was cut, the intestines drawn to one side, and the placental site examined. The placenta was a large disk, well formed and covering the right broad ligament, the right side of the enlarged and soft uterus, and the lower pole of the caecum. Blood issued rapidly from beneath its detached edge, and so it was quickly peeled off and the haemorrhage controlled by firm pressure applied with hot packs for five minutes without ceasing. On then examining the site the haemorrhage was seen to have diminished and the ovarian vessels and an extended upper branch of the right uterine artery were ligatured. The roughened broad ligament was thereupon doubled over and sewn down, raw surface to raw surface. The haemorrhage was not difficult to control and the abdomen was closed. Half a litre of glucose saline was given intravenously by the drip method, and 1/3 grain of morphine was injected hypodermically. In four hours the patient had a pulse of 120, and from then onwards she made a steady recovery.

### Description of the Foetus

The foetus (see Plate) weighed about sixteen ounces, and its total length from vertex to heels was about eleven inches. The skin was wrinkled, firm, and reddish in colour, and there was some sebaceous material about the groins. The legs were slightly longer than the arms. The back was bent forwards in a sharp dorsal kyphosis and the head was flattened from side to side, and was of a peculiar scaphoid shape as if it had been moulded round a prominence. The mouth, eyes, and ears were fairly well formed.

On delivery from the mother's abdomen the foetus was alive and moved quite vigorously, at the same time making many gasping attempts to breathe. After five minutes all trace of life had passed.

### Commentary

It will have been noticed that this case conforms with those reported in that the mother was a previously normal woman who, on becoming pregnant, had a show of blood after a month and then severe abdominal pain, also that she carried her ectopic foetus unsuspected until eventually she was delivered of a premature and deformed child by abdominal section.

The possibility is that pregnancy started in a Fallopian tube, there was a warning haemorrhage a month later, and at the sixth week a tubal abortion occurred. The embryo must then have found new and satisfactory attachment or retained sufficient of its old connexions to survive and grow. The later attacks of pain must have been recurrent haemorrhages culminating in a loss causing symptoms and signs which demanded laparotomy. Despite the fearsome vascular bed promoted at the placental site by the action of the growing embryo, control of the haemorrhage after delivery of the foetus sac, and placenta was not difficult, and was mainly effected by the pressure of hot packs for five minutes without relaxation.

### BIBLIOGRAPHY

- Cornell, E. L. and Lash, A. F. (1933) *Surg. Gynec. Obstet.* (Internat. Abstr. Surg.), 47, 98.  
Eisaman, J. R. and Ziegler, C. E. (1935) *J. Amer. med. Ass.* 104, 2175.  
Friedman, S. L. (1937) *Amer. J. Obstet. Gynec.* 33, 683.  
Woods, E. B. (1936) *Ibid.*, 32, 155.

## KERATOPLASTY WITH REPORT OF A CASE

BY

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(WITH SPECIAL PLATE)

During the last few years isolated accounts of successful corneal grafting by surgeons in this country and particularly on the Continent have appeared in ophthalmological and medical journals and the various methods employed by ophthalmic surgeons have been fully reported. Elaborate methods of corneal grafting might well deter many oculists from attempting to perform the operation. In this paper it is intended to describe the simple technique employed with complete success in a case towards the close of last year.

Much experimental work has been done during the past thirty years with varying degrees of success. The degrees of success as described by various authors may be grouped under three headings: (1) clinically transparent; (2) slight degree of opacity in the graft or behind the graft resulting from the formation of a fibrous tissue membrane; (3) much opacity but less than originally. The visual acuity will depend not only upon the transparency of the transplant, but also upon the transparency of the lens and vitreous and the condition of the retina.

There are three methods of keratoplasty: (1) total; (2) partial superficial; (3) partial penetrating. In the two former methods the transplant becomes opaque in a period varying from three weeks to a few months. The last method offers the best permanent results. If the graft remains transparent for a period of one year the result is said to be permanent. I quote this from Elschnig's and Filatov's observations. The transplant must be taken from the same individual (autoplasty) or from individuals of the same species (homoplasty). Hetero transplants invariably become opaque. The homogeneity of the donor's and the recipient's blood grouping appears to be of no importance.

### Case Record

Eighteen months previously the patient, a young woman aged 23, had a severe interstitial keratitis of both eyes resulting in opacities of both corneae. The Wassermann reaction was strongly positive. She received vigorous treatment for the condition at the Bath Eye Infirmary for five months. Mercury and iodide were given and she received three courses of chemical treatment. A year after the beginning of treatment the eyes became white. In November 1937 right vision was +60 and left vision was limited to hand movements. As vision in the left eye was the worse I decided to operate on this eye. A donor was found—a patient who was being treated for a perforating injury to the sclera which resulted in loss of vitreous and complete detachment of the retina. The wound was stitched but the eye remained irritable and so enucleation was indicated.

### PRE-OPERATIVE PREPARATION

The blood group of the donor was A and that of the recipient B. Cultures were taken from the conjunctival sacs of the donor and the recipient. No pathogenic micro-organisms were grown during forty-eight hours incubation. For some weeks previously the sacs of the recipient had been irrigated with 1000 hydrarg. oxycyanid 1 in 10000 three times a day. An apertent was given the evening before the operation and a drop of eserine 1 per cent aqueous solution

was instilled into the left eye. On the day of the operation the left conjunctival sac was irrigated with normal saline and the lids were everted. The skin of the lids and the area in the conjunctiva were painted with a solution of brilliant green in spirit and a drop of eserine was again instilled into the left eye.

### OPERATION

The recipient eye was anaesthetized with several drops of cocaine 4 per cent. Four or five drops of adrenaline 1 in 1000 were instilled at intervals of a few minutes. A facial nerve block with 2 ccm of 2 per cent novocain injected at the point where the upper branch of the ophthalmic cranial nerve crossed the neck of the condyle of the mandible, each within 1 cm of the ocular globe and lid speculum was tied during the anaesthesia. A No. 1 Hudson's wire the conjunctiva was incised round the limbus in the upper half from 12 to 9 o'clock and under tension of 10 or so that it could be drawn down over the entire cornea at the conclusion of the operation and sutured to the sclera. Three sutures of No. 1 black silk were passed from the conjunctiva near the cut edges (see Fig. A). The site of the graft is delineated

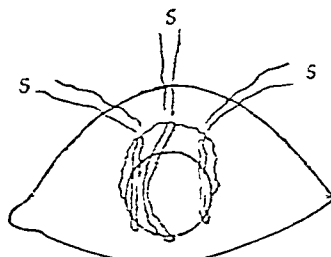


FIG. A.—Diagram showing position of sutures (S) which are tied below after the graft is in position.

by placing No. 1 trephine (4.65 mm) over the centre of the cornea and cutting through the epithelium. The trephine was removed and a drop of sterile fluorescein was placed on the cornea. This outlined the graft. The trephine was again applied and when a section had involved half the thickness of the cornea the trephine was slightly tilted to one side so that the cutting edge was directed obliquely through the deeper layers of the cornea. The anterior chamber was thus entered. The trephine was removed and the action completed by dividing the remainder of the cornea with a pair of scissors whose cutting edges were bevelled.

The eye of the donor was enucleated and immediately immersed in a watery solution of brilliant green 1 in 2000 and then transferred into physiological saline at body temperature. The eye was held in the left hand and the graft removed in the same way as from the recipient's eye but using a 4.65 mm trephine. By using a trephine a little less in diameter the piece of cornea could easily be fitted into the bed prepared. The graft was removed by sliding a repositor beneath it and it was then placed in a watch glass filled with sterile normal saline at about blood temperature. The bed of the graft having been prepared the graft was lifted on to the upper surface of a spatula transferred to the corneal bed and fitted as accurately as possible so that the surface of the graft was flush with that of the surrounding cornea. The corneal flap was drawn gently over the entire cornea and the sutures tied. Sterile atropine oil 1 per cent was instilled and both eyes were firmly bandaged. Luminal 1 grain was given twice daily.

### POST-OPERATIVE COURSE

On the second day the patient complained of severe pain in the operated eye. The bandages were removed and one drop of oily atropine was instilled into that eye. Both eyes were bandaged again. Hereafter the eye was dressed every day and atropine was instilled. On the fourth day the conjunctiva had receded from the cornea exposing the graft which was

transparent Ten days after the operation the right eye was uncovered The graft acting as a foreign body, caused great irritation and in consequence a white fibrous ring began to form round it A number of small blood vessels could be seen growing superficially in the cornea from the limbus towards the transplant As time went on these vessels encroached upon the margin of the transplant, but never at any time did they grow to the centre By the third week from the date of the operation the eye became quiet and the bandages were removed Six weeks after the operation vision with correction was 6/36 This rapidly improved Now, six months after operation, the graft is quite transparent, the pupil is freely active, and there are no anterior or posterior synechiae The fundus can be clearly and distinctly seen with the ophthalmoscope, and the field of vision is fairly full Vision with correction is 6/5 partly and the patient can read the smallest print She is now able to take an interest in life, and can follow her former occupation of a shop assistant (The two figures in the Plate show the condition of the eye before and after operation)

This is believed to be the best visual result so far reported in this or any other country, vision having been completely restored

### Comments

1 The operative procedure in this case is simple, and requires no elaborate instruments

2 With a larger trephine than the one used, anterior synechia would be more likely to occur, resulting in opacification of the graft With a smaller trephine than 4 mm the fibrous tissue ring which forms at the junction of the cornea and transplant is apt to occlude the small central clear area of the graft

3 By contracting the pupil with eserine before trephining the recipient's cornea there is less likelihood of injuring the lens when preparing the bed for the transplant

4 To bring the conjunctiva over the cornea in the manner described is better than dissecting the conjunctiva from the whole limbus and drawing it over the cornea by a purse-string suture, as by this latter method the graft is more easily dislodged from its bed

5 The graft should be very carefully trephined, as Descemet's membrane easily buckles and detaches at the cut edge

6 Local anaesthesia is preferable to general anaesthesia as it eliminates post-operative unrest

This case was shown at a meeting of the Brith Clinical Society last February

My thanks are due to Dr H J Heathcote for examining the blood for the Wassermann reaction and for the blood-grouping in the two cases

### BIBLIOGRAPHY

- Castrovicio R (1934) *Amer J Ophthalm*, 17, 932  
 Elsching A (1930) *Arch Ophthalm* Chicago 4 165  
 Filatov, V P (1935) *Ibid* 13, 321  
 Thomas J W T (1933) *Proc roy Soc Med* 26, 597  
 — (1935) *Trans Ophthalm Soc U K* 55, 373  
 — (1937) *British Medical Journal* 1 114  
 Tizzard I H S (1937) *Lancet* 1 1106

According to official reports the year 1937 in Czechoslovakia was characterized by an almost general rise in infectious diseases Typhoid fever was very frequent in the eastern provinces diphtheria showed considerable recrudescence in Bohemia there was a rise in malaria and influenza caused almost twice as many deaths as in 1936 On the other hand the decline in tuberculosis continued and scarlet fever measles, and whooping cough claimed fewer victims

## SUPERIOR PULMONARY SULCUS TUMOUR

BY

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(WITH SPECIAL PLATE)

The condition described by Pancoast in America in 1924, and called by him a superior pulmonary sulcus tumour, gives a definite clinical syndrome and is rare enough to deserve mention Comparatively few cases have been reported, and these mostly in America

The patients are of the carcinoma age, usually male, and present themselves on account of pain in the region of the shoulder, shooting down the inner side of the arm and forearm The pain is more or less constant, is very intractable, and persists during the course of the illness, which is usually less than a year Loss of power and wasting in the muscles of the hand follows, and is associated with Horner's syndrome (paralysis of cervical sympathetic) of the same side (contracted pupil, enophthalmos, and lack of sweating with dryness of the face and neck) At the same time dullness at the apex of the lung may be made out, and as the disease progresses a hard indefinite mass may be palpated behind the clavicle Repeated radiographs will show a small circumscribed shadow at the apex of the lung and gradual destruction of the posterior parts of the first and, later, the second and third ribs, together with the adjacent articular and transverse processes and sides of the bodies of one or more vertebrae The apical shadow remains fairly circumscribed, with a lack of intrathoracic metastases All the cases are typical, Horner's syndrome being an essential feature The ulnar pain, the wasting of hand muscles, and the Horner's syndrome place the lesion in the region of the common trunks from the eighth cervical and first thoracic nerves as they issue from the intervertebral foramina

### Case Record

The present case was that of a man aged 50 years a butcher, who had been attending the medical outpatient department of the Royal South Hants and Southampton Hospital for some years with tabes dorsalis He was sent to us on July 8, 1937 with a tentative diagnosis of angina pectoris, as he had complained of pain in the left side of his chest and left arm for the past ten weeks This was worse on exercise and better on raising the arm above the head He had had a right hemiplegia twenty five years ago in which he lost his speech, but this had recovered considerably

On examination he was found to have considerable arterio sclerosis His blood pressure was 160/90 There was no great enlargement of the heart and no murmurs The right pupil was larger than the left, and both were inactive to light and accommodation No knee jerks were demonstrable but his right arm and leg showed weakness and loss of power, and he gave bilateral Babinski responses Marked hyperaesthesia of the left chest and shoulder was present The central nervous system was otherwise normal as were the other systems The Wassermann reaction was positive

An electrocardiogram taken on July 18 was normal On July 22 radiographs showed no evidence of aneurysm At this date the left apex was found to be dull to percussion but there was no cough or sputum X ray films taken on August 16 revealed no cervical rib but there was definite erosion of the tip of the first dorsal vertebra (? tuberculous or syphilitic) which appeared to be associated with a containing cyst At this time a lump could be felt behind the inner third of the left clavicle and he complained of pain and numbness

on the inner side of the left arm with weakness of the hand grip and fingers.

On September 5 definite wasting of the left palmar muscles and loss of hand grip were observed. He now received injections of NAB bismuth and sodium iodide. He was seen by Mr. Nightingale and Dr. Fisher who thought this to be definitely a case of new growth at the left apex (probably bronchial). On the 12th there was oedema and swelling of the left arm (due to lymphatic or venous obstruction) and left Horner's syndrome. Another radiograph taken on the 15th showed that the condition was worse; there was more erosion of the seventh cervical vertebra, the first rib had disappeared, and the second partly disappeared at the head and neck (Plate Fig. 1). From this time the patient went rapidly downhill, his temperature became elevated and he died on September 28.

**Post mortem Examination.**—A large mass was found at the left apex involving the lungs, upper three ribs and the vertebrae and surrounding the left subclavian vein which was thrombosed. No primary was present elsewhere but there was terminal pericarditis and pyaemic abscess of the kidney. The growth had the consistency of an unripe pear and had completely replaced the upper two ribs, which could be cut easily with the knife. Sections of lung, ribs and cervical glands were made.

**Report of Sections.**—All sections showed squamous celled carcinoma with cell nest formation (Plate Fig. 2). Catarrhal pneumonia was present in the lung.

#### Commentary

This case corresponds exactly to the description given by Pancoast and is actually more complete owing to our being able to obtain a full necropsy. None of the original cases apparently were examined post mortem. The result of microscopy does not settle the vexed question of the origin of the tumour which Pancoast suggested was in the remnants of the fifth branchial cleft. A tumour in this situation gives none of the common symptoms of carcinoma of the lung such as cough, sputum or haemoptysis. Its symptoms and signs are due entirely to pressure and mechanical involvement of the structures in its neighbourhood; consequently the picture may be given by any tumour which encroaches upon this particular situation. Cases described by Evans, Tobias, Steiner and Francis, Jacoby and others all exhibited the typical x-ray appearances and clinical features but were shown to be due to various tumours such as thymomas, sympathoblastomas, secondary growths from stomach and cervix uteri and breast and bronchial carcinoma. The last mentioned forms the largest proportion of the cases and probably is the usual cause of the syndrome. Browder and de Veer in describing another case suggested that the name of carcinoma of the pulmonary apex is more appropriate than that applied by Pancoast. Our case may therefore have been a squamous cell type of carcinoma at the apex, originating most probably in the lung but possibly in a branchial remnant.

The differential diagnosis includes several widely differing conditions. Cervical rib and syringomyelia may be excluded by the x-ray appearances. Tuberculous fibrosis at the apex does not cause destruction of the ribs or vertebrae. Endothelioma of the pleura spreads more rapidly and again there is no bone change. Osteogenic sarcoma of the ribs or spine in this region may contuse but there is generally widespread metastasis to other organs, the superior sulcus tumour being circumscribed and only spreading locally.

All the patients have been unrelieved of their symptoms by any procedure surgical or otherwise, and a feature of

the condition is its rapidly progressive and fatal course. The growth seems to be completely resistant to irradiation treatment which was given in the majority of cases reported. Jacoby suggests the frequent metastasis of bronchial carcinoma to the suprarenals as a cause of the rapid decline. Such metastasis however has not been demonstrated in any case.

I am indebted to Dr. M. K. Jardine for assistance with the case history and to Mr. H. J. Nightingale and Dr. D. Fisher for permission to report the case.

#### BIBLIOGRAPHY

- Browder J. and de Veer J. A. (1934) *Amer. J. Cancer* 24: 307.  
 Ellis B. M. (1934) *Ibid.* 20: 791.  
 Frost T. T. and Volpney S. E. (1936) *Ibid.* 26: 48.  
 Jacoby H. A. (1934) *J. Amer. Med. Ass.* 103: 84.  
 Kellman H. and Jenkinson S. (1931) *Arch. Pathol.* 23: 38.  
 Pancoast H. J. (1924) *J. Amer. Med. Ass.* 99: 1391.

## FAILED SPLENECTOMY IN ACHOLURIC JAUNDICE, AND THE RELATION OF TOXAEMIA TO THE HAEMOLYTIC CRISES

BY

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L.D.S.

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The accepted treatment for acholuric jaundice is splenectomy and in the majority of cases there is little doubt that the results are good. Cowen (1936) mentions the generally accepted view that the operation brings about complete and lasting freedom from symptoms. Dawson (1931) states: "Even in the severe anaemias the recovery is rapid and permanent and the patients are thenceforth healthy." Pemberton (1931) however summarizes the results in 118 cases operated upon between 1911 and 1931 in the Mayo Clinic. The hospital mortality was four subsequent deaths numbered eleven (six stated to be due to unrelated causes); eighty-two patients were alive and well and fair and poor results were obtained in sixteen cases. Difficulties exist in the interpretation of these figures but some degree of failure apparently resulted in at least 20 per cent. the true figure being probably higher. While the author believes that splenectomy should be advised as the safest form of treatment in all cases these figures suggest that the results may not be so good as some writers would indicate.

Examination of the literature shows that failure of varying degree has been due to operative mortality complications such as hepatic disease and other types of anaemia, and inability to achieve temporary or permanent relief from excessive haemolysis. Relief from the latter is the direct object of the operation and in this paper consideration is directed chiefly to this question. We have failed to find any published data of its frequency.

It has been recommended that to prevent possible future haemolytic crises splenectomy should be carried out even in slight cases especially if the family history is bad (Cowen 1936). Probably this is effective in many cases but it is clear from the literature (Freund 1932) that the operation does not guarantee freedom from such crises.

There appears to be some factor which converts latent into acute acholuric jaundice, and as many of these patients are quite well between haemolytic attacks, some information as to the cause of these latter is desirable. Consideration of some of the failed splenectomies, including one of our own, and various other cases, suggests that toxæmia may be one of the factors stimulating haemolysis.

### Failed Splenectomies

Freund (1932) quotes six cases from the literature, and records two others, in which operation failed to relieve the haemolysis permanently. Freund's first was a case of congenital acholuric jaundice in a boy aged 10 in whom haemolysis continued without remission after splenectomy, with pyrexia and abscesses, but necropsy gave no clue as to why the case differed from others in which splenectomy was successful. The second case was that of a girl of 11, with chronic bronchiectasis and hyperthyroidism, both of which preceded any history of jaundice. Considerable improvement followed splenectomy, but nine months later she developed a sore throat with pyrexia, and jaundice followed a few days later, death ensuing rapidly. Post-mortem examination showed bronchopneumonia with pus in the dilated bronchi. The author questions the advisability of splenectomy in this case, owing to a possible depression of the defence mechanism against infection. She also suggests that further studies should be made to ascertain whether or not chronic infection occurring in a case of haemolytic jaundice should be considered a contraindication to splenectomy. Both these cases showed increased red cell fragility.

A. C. and A. Van Ravenswaay (1934) recorded a case of haemolytic jaundice with normal red-cell fragility associated with an infection of the paranasal sinuses and the left ear and mastoid. Multiple transfusions failed to cure, and splenectomy was followed by only temporary improvement, but remission eventually occurred. Further attacks of sinusitis were associated with jaundice and anaemia, and in each instance improvement in the sinus condition was accompanied by an improvement in the anaemia.

Lovibond (1935) records a case in which, eight days after splenectomy, the patient died from a streptococcal infection. There was a history of a mastoid operation five years previously, following which she had been treated for anaemia. Liver, iron, blood transfusion, and splenectomy all failed to improve her condition. Increased fragility was found in one out of six tests. "The probable cause of the anaemia was thought to be either acholuric jaundice or an infective process."

### Relationship of Toxæmia to the Haemolysis

The question of the presence or absence of infection or toxæmia and its possible relation to the haemolysis is one of special difficulty.

Some authors accept the presence of pyrexia and leucocyte changes as evidence of infection, but the products of the rapid blood destruction might be sufficient to account for these phenomena (Joules and Masterman, 1935). Also, it is a common experience that cases of severe anaemia tend to be febrile whatever may be the actual mechanism involved (Lovibond 1935). While these points constitute no evidence against the toxicæmic theory, they render pyrexia and leucocythæmia inadequate for establishing its causal relation. Almost twice the clinical evidence of an association between infection and the decline in haemoglobin is available in two of the crises quoted and whooping fluctuations of each in one case being particu-

larly suggestive. Further examples of this relationship are provided by the following cases.

Dedichen (1937) records an epidemic of haemolytic crises in two families, eighteen members of which were found to have familial haemolytic jaundice. The author suggests that the acute manifestations were precipitated by what was presumably influenza. Scott (1935) records an epidemic of crises occurring at short intervals in four members of one family (increased fragility in all), suggesting an infection, although Scott does not favour this view. Infection, nevertheless, does not appear to be excluded, and the epidemic nature of the attacks is suggestive, and is not otherwise explained. It is doubtful, however, if the crises were entirely haemolytic in character. Estu and Lenci (1931) record a case which developed a haemolytic crisis with palpable spleen following the onset of a tonsillar infection. After tonsillectomy the red cell count rose almost to normal and the spleen became impalpable. Splenectomy was not performed.

Lederer's acute haemolytic anaemia bears a close resemblance to the crises of acquired acholuric jaundice, and Lederer (1925, 1930) in recording six cases of acute haemolytic anaemia suggested that they were due to infection, basing this opinion on the sudden onset and the presence of fever and leucocytosis. In discussing this condition O'Donoghue and Witts (1932) emphasize the slenderness of the evidence on which anaemia is attributed to foci of infection. They conclude that this acute haemolytic anaemia appears to be a specific illness due to infection, but the nature of the infection is unknown. In selecting thirty-six cases from the literature for consideration, however, they have rejected all with proved infection.

In the absence of experimental evidence the examples quoted do no more than suggest that toxæmia may be a possible factor in the haemolytic crises of acholuric jaundice. This possibility receives some support from the following case, in which splenectomy was performed during a haemolytic crisis without success, but after removal of an ovarian teratoma recovery ensued.

### Case of Failed Splenectomy

The patient was a married woman of 44, and was admitted to hospital with a two months history of shortness of breath on exertion, increasing pallor, and some loss of weight and appetite. She had had no menstrual period for five months. There was no history of previous jaundice and no family history. She was febrile, and there was a lemon tinge in the skin. Apart from a tumour in the lower abdomen, thought to be a fibroid, and a precordial murmur no other physical signs were detected. The haematological findings are shown in the table.

Microscopical examination of the blood showed the presence of the densely staining microcytes usual in acholuric jaundice, along with large numbers of reticulocytes and nucleated red cells. Free HCl was found in a test meal. A diagnosis of a haemolytic crisis in acholuric jaundice probably of the so-called acquired type was made.

### COURSE OF THE ILLNESS

A transfusion was given but failed to affect the haemolysis as did a further transfusion three weeks later. Parenteral liver treatment was tried without effect. Splenectomy was therefore carried out, a small spleniculus being also removed. Gall stones were noted to be present. The patient's blood was now found to agglutinate the red cells of two donors of her own group (O), but a compatible donor was found and a further transfusion given after the operation.

Although the spleen had been impalpable it was seen to be enlarged on removal, the weight being 500 grammes. The cut surface was a uniform dark red colour, the Malpighian bodies being invisible. Microscopical examination showed the usual feature of acholuric jaundice—namely, well marked engorgement of the pulp with red cells, the Malpighian bodies were small, and no pigment deposits or Gandy-Gamna nodules were seen.

Table showing the Blood Picture in a Case of Failed Splenectomy

D	Haemoglobin per cent	Red cells per cmm	Colour index	Ret. abn. v. per cent	No. of R. cells per cmm	Field	Direct	Exch. time	Leucocytes per cmm	Pol. morph. per cent	Leucocytes per cmm	Leucocytes per 100	Platelets per cmm
11.5	23	810,000	1.4	—	—	—	—	—	—	—	—	—	—
11.0	17	550,000	1.47	—	—	—	—	—	—	—	—	—	—
11.5	30	—	—	—	—	—	—	—	—	—	—	—	—
11.5	27	1,250,000	1.03	—	—	—	—	—	—	—	—	—	—
11.5	26	1,010,000	1.05	455,000	—	—	—	—	—	—	—	—	16,000
11.5	23	—	—	—	—	—	—	—	—	—	—	—	—
11.5	18	550,000	1.06	—	—	—	—	—	—	—	—	—	—
11.5	29	1,000,000	1.12	—	—	—	—	—	—	—	—	—	—
11.5	31	1,300,000	1.11	50,000	—	—	—	—	—	—	—	19+	30,000
11.5	33	1,300,000	1.04	604,000	—	—	—	—	—	—	—	—	100,000
11.5	37	1,357,000	1.00	74,000	—	—	—	—	—	—	—	—	100,000
11.5	45	2,150,000	1.05	473,000	—	—	—	—	—	—	—	2.4	251,000
11.5	29	1,253,000	1.1	—	—	—	—	—	—	—	—	—	—
11.5	30	1,170,000	1.3	46,000	—	—	—	—	—	—	—	222	140,000
11.5	27	—	—	—	—	—	—	—	—	—	—	—	—
11.5	27	—	—	—	—	—	—	—	—	—	—	—	—
11.5	62	3,000,000	1.0	250,000	—	—	—	—	—	—	—	2.6	30,000
11.5	—	—	—	—	—	—	—	—	—	—	—	—	—
11.5	76	—	—	—	—	—	—	—	—	—	—	—	—
11.5	83	4,650,000	0.24	61,000	—	—	—	—	—	—	—	19.0	340,000
11.5	83	4,310,000	1.03	—	—	—	—	—	—	—	—	2.76	—
11.5	82	4,000,000	1.0	—	—	—	—	—	—	—	—	—	356,000
11.5	96	—	—	—	—	—	—	—	—	—	—	—	—
11.5	90	4,175,000	1.03	—	—	—	—	—	—	—	—	2.7	—
11.5	82	4,240,000	1.05	0,000	—	—	—	—	—	—	—	2.65	359,000

TF direct Van den Berg's test refer to the immediate reaction.

Following the splenectomy the patient was worse the red cells becoming deeper and of the obstructive type for a short period with some swelling of the left leg and pleural fluid pain in the chest. Pyrexia persisted and there was no cessation of haemolysis but there was an increase in the reticulocytosis. The haemoglobin rose to 45 per cent but soon fell back below 30 per cent.

Eventually after four months in hospital during which splenectomy three transfusions and liver therapy had failed to arrest the haemolysis it was decided as a last resort to explore again in search of a spleniculus. This was done but no spleen was found. The gall bladder and the pelvic tumour which proved to be an ovarian teratoma were removed. No transfusion was given. Unexpectedly the haemolysis ceased immediately the signs of toxæmia disappeared the temperature settled and the blood began to return to normal complete recovery ensuing.

## ULTIMATE BLOOD CHANGES

Twenty six days after the last operation the excessive haemolysis having ceased the increased fragility was still present. It was not tested again for sixteen months when it was found to have become normal. The use of a quantitative technique and washing the red cells revealed no defect. Price Jones curves were constructed from blood films taken before the splenectomy and transfusions (25/1/36) and after the establishment of normal fragility (18/10/37) and are shown

in the accompanying chart. The mean corpuscular diameter was originally normal but the variability was very high.

After recovery the mean diameter was found to be above the normal range (8.136  $\mu$ ) but the variability was normal and

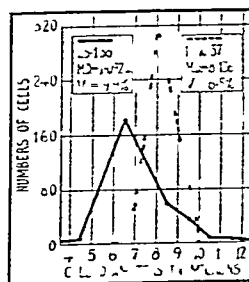


Chart showing the Price Jones curves before splenectomy and transfusions and after the establishment of normal fragility.

no large megalocytes were found. The mean corpuscular volume (98 c $\mu$  on 18/10/37) was also slightly increased with a normal mean thickness (19  $\mu$  calculated). Apart from these changes and an increased platelet count the blood picture has become normal.



## THE OVARIAN TERATOMA

The ovarian teratoma consisted of a dermoid cyst containing some pellets and flakes of sebaceous matter and hairs. The following tissues were present in the wall: squamous epithelium, sebaceous and salivary glands, hairs, intestinal wall including mucosa, lymph follicles, muscular tissue, nerves, and nerve ganglia. No splenic tissue was found. Degenerative changes with an inflammatory exudate and polymorph infiltration and plasma cell foci were present in places. A bacteriological examination was not made, as its possible significance was not apparent at the time.

The gall bladder contained numbers of dark coloured faceted calculi. Except for pigmentation of the epithelium the wall showed no changes, but the cystic lymph gland contained considerable deposits of brown pigment, conspicuous to the naked eye. Microscopically these were found to be associated with proliferated endothelial cells lining the sinuses, the pigment gave a negative reaction for iron, and was presumably of biliary origin.

## Discussion

In attempting to explain the train of events in this case the usual limitations of uncontrolled clinical material of this type restrict the drawing of conclusions, but the most probable explanation, so far as it goes, is that some substance was being absorbed from the ovarian teratoma and was, directly or indirectly, one of the causes of the haemolysis. Its mode of action can only be a matter of speculation, and we are unable to define the relation of the excessive fragility to the condition. It was present throughout the haemolytic period, persisted afterwards when excessive haemolysis had ceased, but eventually disappeared and the mean corpuscular diameter, which had been normal, became abnormally high. The findings suggest a change from spherocytosis to a flatter cell of normal thickness and increased diameter, but it is of interest that Hawksley (1936), as the result of a study of the red cells, suggested that familial acholuric jaundice could not at present be regarded as a primary defect either of erythropoiesis or of splenic function, and Vaughan (1937) concluded that increased spherocytosis is not the fundamental abnormality present in the red cell.

There are certain other possibilities which appear less probable. The removal of the gall-bladder at the second operation might be related to the successful result. No significant changes were found in the gall-bladder wall, and although calculi were present they are also present in a large proportion of cases of acholuric jaundice, and whether they are left or removed at operation does not appear to influence the result so far as haemolysis is concerned.

With regard to alternative diagnoses the condition most closely resembling this case is Lederer's haemolytic anaemia. The following are against this diagnosis: (1) the failure to respond to transfusions, (2) the excessive fragility and other red cell changes, (3) the prolonged period of haemolysis (four to six months), (4) the histopathology of the spleen, which was that of acholuric jaundice. While these may appear to be good reasons for differentiation, we discuss this question further below.

The absence of a previous history and a family history (two daughters were available for fragility tests and both were found to be normal) is usually accepted as evidence that the case is of the acquired type of excessive red cell fragility, although the existence of the acquired type is still questioned (Vaughan, 1936). There is some evidence that the two types exist but we have no definite conclusion to offer on this question. As excessive fragility

persisted for some time after cessation of the haemolysis an additional factor or factors (besides the spleen) must have been present during the crisis.

## Classification of the Haemolytic Anaemias

The classification of the haemolytic anaemias is still unsettled, chiefly owing to lack of knowledge of their aetiology. It is not even clear whether cases showing increased fragility should be classified with those in which fragility is normal. Of Lederer's six cases (1925, 1930) the fragility is mentioned in three, and in these it was normal. Other writers have disregarded this point, and many cases showing increased fragility have been classified as Lederer's haemolytic anaemia.

Lederer did not discuss the differentiation of his cases from the crises of acquired acholuric jaundice. O'Donoghue and Witts (1932), in dealing with differential diagnosis, differentiate Lederer's anaemia from acholuric jaundice by the absence of family history and the brief duration, and from chronic acquired haemolytic anaemia by the acute febrile course with leucocytosis and signs suggestive of infection, but they provide no means of distinguishing it from haemolytic crises in acquired acholuric jaundice.

We have mentioned above four reasons for differentiating our case from Lederer's haemolytic anaemia, but in the latter condition has not yet been adequately defined we are unable to estimate to what extent these differential criteria are valid. We make the following comments regarding them.

1 Failure to respond to transfusion—Some cases described as Lederer's have failed to respond to transfusion, and some cases of acholuric jaundice (Scott, 1935) have apparently responded well. One of us has seen an acute haemolytic crisis apparently respond satisfactorily to a transfusion, but when recurrence took place, over a year later, transfusion failed. Response is apparently variable in either condition and even in the same individual.

2 Excessive fragility—This has already been discussed. Other red cell changes have not yet been adequately defined in Lederer's.

3 Duration—According to O'Donoghue and Witts Lederer's disease is of a self-limited character, tending to death or complete recovery within a period usually of a few months. The value of this criterion is nebulous.

4 Histopathology of the spleen—This is not yet established in Lederer's anaemia, as in none of his six cases was the spleen available for examination.

It is apparent that the differentiation of the two conditions is by no means clear, if indeed Lederer's anaemia is a distinct entity. In the absence of any record of increased red-cell fragility in Lederer's original cases, haemolytic crises showing this feature appear to us to be best classified in the acholuric jaundice group until more is known of the aetiology. It is perhaps of some interest that Harvey and Janeway (1937), in describing three cases of haemolytic crises apparently due to sulphanilamide, comment on their striking similarity to Lederer's anaemia.

## Treatment

The first treatment usually adopted in haemolytic crises appears to be transfusion, in spite of its special risks. When this fails splenectomy has to be considered. Some of the cases quoted and the new one recorded indicate that an alternative sometimes exists and our case shows that this alternative may be effective where the other two methods fail. It would seem reasonable to suspect the presence of an infection or other toxæmia in any case of acholuric jaundice showing a haemolytic crisis, but that

there are other factors in the production of the latter is apparent from its rarity compared with the frequency of toxæmia.

Failed splenectomies have been recorded not only in the apparently acquired type of acholuric jaundice but also in the hereditary congenital type (Freund 1932) and there seem to be no data available to show whether failure is commoner in one type or the other. It is doubtful at present therefore whether splenectomy should be regarded with greater favour in the familial congenital type.

### Summary and Conclusions

A case of acholuric jaundice with a hæmolytic crisis is recorded in which splenectomy failed to cure the hæmolytic crisis.

Recovery followed the subsequent removal of an ovarian cyst.

From a consideration of this case and others from the literature it is apparent that splenectomy does not always cure or prevent hæmolytic crises in acholuric jaundice and where radical treatment is necessary splenectomy is not invariably the method of choice.

Evidence suggesting that toxæmia may act as one of the precipitating factors in producing a hæmolytic crisis and that the latter may be cured by removal of the toxæmia, is discussed.

We are indebted to Mr P. McEwan in regard to the surgical procedures mentioned.

### REFERENCES

- Coates S. O. (1936) *British Medical Journal* 1 690.  
Dawson of Penn. L. O. (1931) *Ibid.* 1 963.  
Dodd H. G. (1937) *Norsk Med. L.* 98 279.  
Freund M. (1932) *British Medical Journal* 1 1371. *Epidemiol.* p. 73.  
Freund M. and Lencz P. (1931) *Rev. Ass. med. Argent.* 44 347.  
Freund M. (1932) *Amer. J. Dis. Child.* 23 6-7.  
Harris A. M. and Janeway C. A. (1937) *J. Amer. med. Ass.* 109 12.  
Harris J. C. (1936) *J. Path. Bact.* 43 565.  
Harris J. C. and Masterman L. M. (1935) *British Medical Journal* 1 2 150.  
Lancet M. (1925) *Amer. J. med. Sci.* 170 500.  
— (1930) *Ibid.* 179 228.  
Lombard J. L. (1935) *Lancet* 2 1393.  
O'Donoghue R. J. L. and Witts L. J. (1932) *Glasg. Hosp. Rep.* 82 40.  
Pemberton J. de J. (1931) *Ann. Surg.* 94 755.  
Pemberton J. de J., A. C. Van and A. Van (1934) *J. Missouri med.* 31 198.  
Sait A. M. (1935) *Lancet* 2 872.  
Van der Vliet J. M. (1936) *The Anaemias* London p. 250.  
— (1937) *J. Path. Bact.* 45 561.

F. Hamburger (*Disch. Tuberk. bl.* March 1938 p. 53) points out that almost every tuberculous patient has tuberculous bronchial glands; there is however a narrower and more definite clinical entity occurring chiefly in infants under 2 years old. The general symptoms include a subfebrile daily temperature with a slight rise at night, lassitude, night sweats, and anorexia. Local symptoms are due to compression of the bronchi or trachea and give rise to a high pitched metallic cough and expiratory stridor. Similar symptoms may be due to mediastinal tumours or to acute bronchitis and these conditions must be ruled out. Physical examination is of little value in the diagnosis of tuberculous bronchial glands. The tuberculin test must always be carried out. A negative result is proof of the absence of tuberculosis. An increased shadow round the hilum may be due to causes other than enlarged bronchial glands; its presence in a radiograph must be interpreted together with the other clinical data. A high blood sedimentation rate of 30 to 40 millimetres or more after an hour is in favour of active tuberculosis; a lowering of the rate is of good prognostic significance.

## Clinical Memoranda

### Fragment of Needle in Foot

(WITH SPECIAL PLATE)

The following case history presents some points that may be of interest.

#### CASE RECORD

A man consulted me on March 15 1937 complaining that for the past two years he had suffered recurrent attacks of pain in the right ankle joint. Latterly this symptom had increased in severity and on exertion the right foot became swollen.

On inspection the condition appeared to be due to chronic arthritis of the ankle joint. On examination revealed a small fragment of a needle in the soft tissues below the head of the tibia (Fig. 1). Under local anaesthesia a Sennet's incision was made into the sole of the foot down to the location of the foreign body using the fluorescent screen. The incision was extended leaving the cannula in position. A fluoroscopic photograph (Fig. 2) was then taken by Dr McDougall. The case is as follows.

A piece of the end of a needle about half an inch long was visible close to the bone in the plantar aspect of the head of the tibia. In the dorsal plantar view the foreign body is seen in the centre of the foot and about a quarter of an inch from the joint formed by the os calcis and the cuboid. A needle indicator in position showing the relation of this guide to the foot is as follows.

Under local anaesthesia a vertical incision about three inches in length was made in the sole of the foot. Using the cannula as a guide the dissection was carried through the plantar aponeurosis and deeper structures down to the head of the os calcis. The fragment of needle was found under the periosteum. The distal end of the cannula was situated about a quarter of an inch from the foreign body.

Points of interest are (a) the use made of the cannula as a guide (b) the patient had no history of a needle having entered his foot or any other part of his body.

Auckland, New Zealand.

J. P. HASTINGS, M.D.

### Ischio-pubic Osteochondritis with Report of a Case

(WITH SPECIAL PLATE)

This uncommon condition has only recently been recognized clinically. Attention was first drawn to it by Van Neck in 1924. Since then a few cases have been described in America and on the Continent but none has been reported in the British Isles. Probably it does occur with some rarity and only needs a wider recognition of its clinical and radiographic features.

The condition arises before the union between the ischium and pubis is complete. This occurs between 8 and 10 years of age. The case described below was that of a boy 8 years old when first seen. He had been complaining of pains in his lower limbs for four years. In Durham's series the average age of the five patients was 7½ years. Either sex may be affected. The condition may be bilateral or may only affect one side. It is a non-suppurative osteochondritis allied to the disturbances in growing areas met with in Perthes's and Osgood-Schlatter's disease. Durham thought that trauma might be a causative factor in some of his cases. There was no definite severe injury in the present case but the boy was apt to trip and fall easily, and this may have been a factor.

The child is usually brought to the doctor on account of a limp and of pains in his lower limbs, referred about the hip-joint. The severity varies, in some children the disability is slight, but in others the child may be acutely ill. Two of Durham's patients held the hip flexed and had a temperature of over  $102^{\circ}$ . On rest in bed the acute symptoms rapidly subside. In bilateral cases all the symptoms may be referred to one side. Examination usually shows some spasm in the adductor muscles, causing a limitation of abduction, extension, and rotation of the hip-joint. Some thickening is to be felt over the ischio-pubic junction, and in the acute stage tenderness is present over the swelling.

Treatment consists in rest in bed till all spasm has disappeared. This will take less than six weeks, although the radiographs will still show the rarefaction and swelling at the ischio-pubic junction. Gradually the bony condition returns to normal.

#### CASE RECORD

In the present case the mother stated that for four years the patient a boy aged 8 was easily tired. After walking about a hundred yards he would complain of pains in the calves; he also tripped and fell without apparent cause. The symptoms were not always present, but varied from day to day.

The boy was pale, of average height and weight, and had large and unhealthy tonsils. Nothing abnormal was noted on inspection. Movements at the hip joints were full, with the possible exception of a slight diminution of internal rotation in the left hip. Palpation of the ischio pubic ramus revealed a slight thickening in the descending ramus. This swelling was not tender. The reflexes and sensation were normal. An x-ray examination showed swelling and rarefaction at the ischio pubic junction typical of osteochondritis. The condition was present on both sides, but was more marked on the right side (see Plate).

It was thought that the septic tonsils might have been a factor in the boy's pains and condition. The tonsils were accordingly removed by dissection. When seen six weeks later the patient was much improved in every way, but he was not yet allowed to exert himself. A radiograph taken at this time showed a lessening of the rarefaction, but the bone was not yet normal.

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### Clubbing of Fingers and Toes associated with a Congenital Lung Cyst

(WITH SPECIAL PLATE)

The following case appears to be interesting enough to be placed on record.

#### CASE RECORD

A commercial traveller aged 50 was referred to the outpatient department for investigation on account of glycosuria. He gave no history suggestive of diabetes mellitus and the urine did not contain sugar, acetone or diacetic acid. Blood sugar was found to be 0.085 per cent two hours after a meal containing carbohydrates. On closer interrogation the patient stated that he had been taking large doses of aspirin for headaches. There was no history of previous illness, but since 1917 when he was gassed in France he had developed some cough with a little sputum. This had never been blood-stained; there was no dyspnoea on exertion and no other symptom of cardiovascular embarrassment.

On examination the patient appeared to be a normal healthy man rather younger than his age. He was not cyanosed. Attention was immediately called to the fingers which displayed a noticeable degree of clubbing with nails curved like an inverted watch glass and of a moderately livid tinge (Fig 1). It was soon discovered that the toes showed a

similar abnormality (Fig 2). The patient repeatedly stated that he had always had large nails and remembers quite distinctly his mother telling him that they had been so since childhood. No information was obtained as to whether this peculiarity had occurred in other members of the family. The

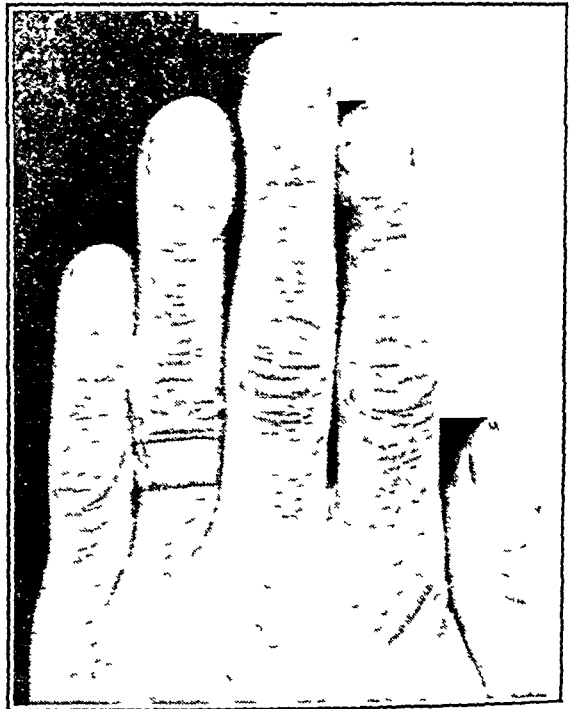


FIG 1—Photograph of left hand showing a noticeable degree of clubbing.

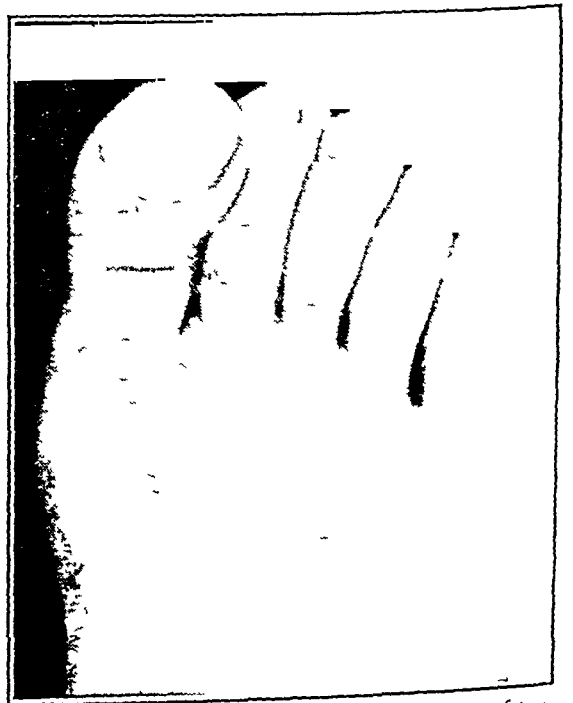


FIG 2—Photograph of right foot showing clubbing of toes.  
The patient is an only son and lost his father when still very young. His mother lives in Canada.

The heart was not enlarged and the sounds were clear. There were occasional extrasystoles without subjective distress. An electrocardiogram was normal except for occasional ventricular extrasystoles. His blood pressure was 130/80. The lungs expanded normally and on percussion gave a

slightly hyperresonant note. On first examination a small group of crepitations were heard over the right interscapular region; on this finding was not confirmed in subsequent examinations. A radiograph of the chest showed a moderate degree of chronic bronchitis and emphysema such as is often found in patients who have been gassed. The sputum was negative for tubercle bacilli and the sedimentation rate was 6 mm. at the hour. A blood count showed normal values for red blood cells, haemoglobin and white blood cells with normal distribution.

The right lung was then injected with lipiodol by the intra-axillary route and a bronchogram was taken (see Plate). This led to the discovery of an unsuspected cavity about half an inch in diameter in the right upper lobe. The distribution of the lipiodol was normal in the other bronchi. Unfortunately the patient refused to undergo injection of the left lung on account of a mild iodism after the first injection.

### DISCUSSION

Two points are obviously of interest in the diagnosis of this case: first what is the nature of the cavity shown in the bronchogram and secondly can any relation be established between the condition of the lungs and the clubbing of the fingers and toes? The most probable explanation of the cavity is that it is a lung cyst. There is no evidence either local or systemic of tuberculosis or of non-tuberculous lung infection. The outlines of the cavity are not shown in the chest radiograph. As to the second point it is evident that no recent infective or other pathological process could explain the clubbing of the fingers and toes as this occurred very early in childhood. A causal relation might with the greatest reservation be assumed with a congenital lung cyst especially as we do not know whether a bronchogram of the left lung would have shown a similar and perhaps more extensive process. But I would like to stress the words "with the greatest reservation".

One fact certainly emerges from the study of this case—that is the importance of bronchography. I think it is worth while emphasizing this point as in a recent paper Dr Seaton (1938) stated that clubbing of fingers without an apparent cause is not uncommon. I venture to suggest that this statement is rather far-fetched and that the condition would be found to be quite infrequent provided the cases were investigated thoroughly enough and a chest was not dismissed as normal merely on clinical and radiological evidence.

As I myself am presenting a case of congenital clubbing of the fingers and toes it is obvious that it is not my wish to deny the existence of such a condition. The familiarity in some cases as reported in Dr Seaton's very interesting paper would indeed be sufficient to establish it firmly.

### SUMMARY

A case of congenital clubbing of fingers and toes is described in which a radiograph of the chest did not show any marked abnormality while a bronchogram revealed an unsuspected cavity in the right upper lobe. The nature of this cavity believed to be a lung cyst is discussed with its possible relation to the clubbing of the fingers and toes. The importance of bronchography in the diagnosis of obscure cases is emphasized.

I wish to express my gratitude to Dr Ernest Fletcher for permission to publish this case and for helpful advice and criticism.

E. MONTUSCHI, M.D.

### REFERENCE

Seaton D. R. (1938) *British Medical Journal* 1 614.

## Rupture of an Ovarian Dermoid

(WITH SPECIAL PLATE)

So uncommon is the rupture of an ovarian dermoid that the following case seems of sufficient interest to be recorded.

### CASE RECORD

A single woman aged 34 admitted to Charing Cross Hospital as an emergency under the care of Mr R. A. Fitzmaurice on whose behalf I saw the case and by whose permission these notes are published. She was seized with a sudden sharp pain all over the abdomen but felt more severely in the right iliac fossa. She was emphatic that it was not of a colicky nature and in no way resembled colic. She stated that the abdomen was sore to the touch. Two days previously she had vomited and on the onset of the acute pain there had been a feeling of fullness in the abdomen with retching but no recurrence of the vomiting. The bowel habit over many years had been constipated with a definite feeling of obstruction to the passage of the faeces. There was no disturbance of micturition. Her menstrual period which began at the age of 17 had been regular although painful until an untimely menopause at the age of 40. The only point of interest in the past history was a bilious attack two months prior to admission—since a hard passed up to the liver at the time of operation revealed the presence of gall stones.

On examination the patient did not appear ill. Her temperature was 99° the pulse 116 and her tongue clean. The abdomen was diffusely tender and rigid more so below the umbilicus than above and more to the right than to the left of the midline. No abdominal mass was palpable. The rectum contained a quantity of constipated faeces and a mass of similar consistency in the pouch of Douglas was thought wrongly to be faecal material in the sigmoid colon. A diagnosis of mild unlocalized peritonitis was made probably not of appendicular origin. Operation was advised and accepted.

A lower paramedian incision was made and the peritoneal cavity was found to contain fluid resembling sebaceous material of which some three pints were removed by suction. The source was found to be a collapsed left ovarian cyst the site of rupture through which hair was protruding was on the right hand side the solid portion occupying the pouch of Douglas. The cyst was removed appendicectomy performed and a drain left down to the pelvis. The tumour measured some eight inches in diameter and its contents are shown in the photograph here reproduced (see Plate). *Staphylococcus albus* was grown on culture of the fluid. Dr H. W. C. Vines reported as follows upon the specimen: "A multilocular simple dermoid cyst presenting no unusual features." There was no drainage and the patient made an uninterrupted recovery being discharged on the fourteenth day after operation.

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Surgical Registrar

H. Mai (*Münch. med. Wschr.* March 18 1938 p. 399) reports on the use of convalescent serum in the treatment of acute anterior poliomyelitis in children. His statistical survey embraces 375 cases of which 145 were treated with convalescent serum while 190 had no serum. The serum had no effect when given in either the pre-paralytic or paralytic stage. The mortality among the children treated with serum was higher than among the children who had no serum but this was probably due to the fact that no recourse to serum was frequently had in very severe cases with signs of respiratory paralysis. On the whole the serum proved neither useful nor harmful.

## Reviews

### THE PECKHAM HEALTH CENTRE

*Biologists in Search of Material* An Interim Report on the Work of the Pioneer Health Centre, Peckham (Pp 104 2 plates, 3 plans 2s net) London Faber and Faber 1938

Dr Scott Williamson and Dr Innes Pearse describe themselves merely as 'Biologists in Search of Material,' but their humanitarianism, like cheerfulness, will "keep breaking through." Such a title for their second interesting and stimulating report on the work of the Peckham Health Centre errs on the side of undue modesty, especially in view of their admission that visitors to the centre are impressed by finding "a socio-medical institution throbbing with movement and gaiety." However, in justification of the title they have chosen, they lead off with an introduction based on broad biological principles, which is followed by Mr J G S Donaldson's pertinent commentary from the layman's point of view as to the importance of the experiment.

It is by this time fairly widely known that the centre takes the family as the unit for investigation, believing that only in this way can proper insight into the problems of the individual be obtained. To this rule there is only one, and an important, exception—the fiancé(e) of a member of the family. On the social side the opportunities for neighbourliness are an important asset of the centre, and one which has its medical aspects (has not Dr Stephen Taylor recently written convincingly on the causes of the 'Suburban Neurosis'?). Here we are naturally more concerned, however, with the valuable data of a more immediately medical sort which have been accumulated. It is perhaps surprising that out of 1,666 individuals about 180 were found in the course of routine examination to be suffering from major maladies, very few of whom were attending a doctor. It is less surprising, but rather depressing, to learn that minor maladies were ten times as frequently found—more than one often being found in the same individual. One clinical observation which is worth emphasizing is the frequency with which infestation by worms was found in those who persistently had less than 100 per cent of haemoglobin. The findings at the centre agree with those of Professor Stanley Davidson that many women of the working class are on the borderline of iron starvation. The account of 'devitalization' in its two forms of 'hypotonia' and 'dystrophy' (to adopt the authors' nomenclature) is full of valuable and suggestive hints for all medical men, as is the discussion of the causes of malnutrition in those apparently adequately supplied with food.

Two other points in the report are worthy of comment. Between the two states of health and disease there is a considerable "no man's land" in which the individual may feel well but is using up the powers of compensation with which his body is endowed. The authors label this, not too happily we think, 'well-being', well seeming would perhaps be more accurate. The importance of preventive treatment at this stage is obvious: the opportunities of giving it are few, except under such conditions as obtain at a health centre like this. The other point is the avoidance of *advice*—the facts are so presented to the individual that he can form his own conclusions as to the right thing to do. Herein they follow the method of certain schools of psychotherapy. They realize that individuals from infants to old people resent or fail to show any interest in anything initially presented to them

through discipline, regulation, or instruction." This, alas, is often only too true!

It may be said that this is the report of enthusiasts, well, enthusiasm is necessary to carry through such a task. Visionaries, perhaps—but such visions have a way of coming true. In any case, we recommend the reading of this report and, still more, a visit to the Peckham Health Centre as an admirable tonic for any doctor who in moments of depression feels that his is the task of Sisypheus.

### OBSTETRICS AND GYNAECOLOGY, 1937

*The 1937 Year Book of Obstetrics and Gynecology* Obstetrics, edited by Joseph B De Lee, AM, MD Gynecology, edited by J P Greenhill BS, MD, FACS (Pp 704, 137 figures 2 50 dollars, 10s 6d, postage 6d) Chicago Year Book Publishers, London H K Lewis and Co 1938

The Chicago Year Books of Medicine have now reached their thirty seventh edition and are well known to, and appreciated by, English readers, the need for such a compendium as a yearbook is indubitably growing every year in all departments of medicine, for neither practitioner nor specialist can hope to establish direct contact with the new ideas which are being promulgated in such profusion and in many languages. The chief difficulty of the busy man is that he has not enough leisure to sift out the new ideas from the mass of verbiage in which they not uncommonly lie buried, he looks to a yearbook to do this for him. And further, not all new ideas are improvements on the old, therefore the reader requires critical guidance in evaluating the new departures that are presented to him. *The 1937 Year Book of Obstetrics and Gynecology* edited by Professor De Lee and Dr Greenhill, is exemplary in all respects. More than three hundred papers are summarized more or less succinctly, and to all but a very few there is appended an editorial comment which the reader will find extraordinarily helpful. The comments are attractively written and even when brief are never perfunctory. As an example of American terseness may be quoted the verdict on a communication in the well-known Scandinavian *Acta Obstetrica* ("OK Ed"). Another of Professor De Lee's comments, this time on the "Endocrine Background of Toxaemia," is worth reproducing: '(Perhaps the author is groping towards the light of truth. Good luck! Ed)'. A series of nineteen papers dealing with analgesia and anaesthesia in labour are of especial interest, and incidentally are the subject of the longest and raciest editorial comment in the whole book. Beginning with 'Mrs Pithecanthropus Erectus,' who had no more pain than the animals her man fought for food, the editor deplors the effect of "civilization (?) " in making women intolerant of pain, but relates with approval the case of the young primipara who refused an anaesthetic on the ground that 'she wanted to drink deep of life,' which she regarded as a great adventure. The conclusion reached is that there is no completely harmless anaesthetic or analgesic and that women must pay a price for their relief from pain.

In the gynaecological section will be found notes of a series of twelve papers dealing with vaginal infection by trichomonas which will be of interest to the pathologically minded gynaecologist. Senior readers of the section will note with interest the revival of an old method under a new name, introducing steam into the uterine cavity (utero-causis it was called) had a short and undistinguished career in the early years of the present century but was soon abandoned. It appears to be now staging a comeback under the name of vaporization.

Many papers dealing with endocrinology are brought to the attention of the reader, but the most useful feature of this section is a series of four charts the work of Dr Greenhill depicting the functional activities of the pituitary and ovarian hormones throughout the menstrual cycle, pregnancy and the puerperium. Dr Greenhill has come as near to explaining this very complex subject as the human mind can be expected to get and if the reader cannot master it with the aid of the charts he should give it up as a bad job and hope that time will bring simplification.

### SHORT-WAVE DIATHERMY

*Short Wave Diathermy*. By Tibor de Cholnoky. (Pp. 110, 5 illustrations, 20s. net.) New York: Morning Side Heights Columbia University Press; London: Humphrey Milford Oxford University Press, 1937.

In this book Dr Tibor de Cholnoky presents a useful survey of the subject up to its present state of development. As the majority of publications on short wave diathermy have been in foreign languages an outline of the subject in English with accounts of the experimental work which has been done is timely. It opens with a brief and simple account of the physical aspects of short wave diathermy recapitulating the essentials of electric heat production. The author is chiefly concerned with the medical side of the subject and does not discuss in detail the physics of the production of short waves or the technical details of apparatus and for these the reader must consult standard textbooks.

Much interest has been aroused regarding the possible action of short waves on bacteria and various workers hoped that a lethal or at least an inhibitory effect on their growth would be produced. By experiments *in vitro* Schlöphake and Haas found that streptococci were killed and tubercle bacilli at body temperature were killed after some hours exposure. The results of other workers have been inconclusive and contradictory. Differences in apparatus used and the impossibility at present of measuring with accuracy the intensity of the electric field are factors accounting for variation in results. Experiments on plants seem to show that short waves have an accelerating effect on growth and sprouting and there is scope for further research in this direction.

After chapters on wave lengths and on clinical technique and general principles comes Part V on the clinical applications of short wave diathermy. Here the most outstanding effects described are those first reported by Schlöphake in the rapid and successful treatment of boils and carbuncles. The author also cites Schlöphake's encouraging results in forty cases of lung abscess in which progress was recorded by radiographs and laboratory tests. Dental conditions too further work should be interesting and valuable and in bone and joint injuries short wave diathermy has proved its usefulness. The earlier workers with short waves expected that in addition to local heating effects short waves would be found to have "specific" effects varying with wave lengths etc. The author believes that at present there is no evidence to support any claim for the existence of specific effects and regards short wave diathermy entirely as a form of heat therapy the beneficial action of which is due to the intense and lasting hyperaemia it provokes.

Dr Tibor de Cholnoky has written a cool and level-headed review of the work achieved by workers with short wave diathermy. If the book is lacking in the freshness and enthusiasm of books written from personal experience it is the verdict of an impartial observer and as such is to be valued. There is an ample bibliography.

### PROGNOSIS OF ACUTE DISEASE

*Les Eléments du Pronostic dans les Maladies Aigües*. Notes de Pratique. By A. B. Martan. (Pp. 80, 20 fr.) Paris: Masson et Cie, 1937.

This study of the prognostic factors in acute diseases by Professor Martan will be found helpful to many. Never prophesy unless you know is in medicine a counsel of perfection for we are daily called upon a prophesy in matters wherein certainty is difficult if not impossible. The author does not accept the view that the public is more willing to excuse an error of diagnosis than one of prognosis; rather the truth is that the public can judge the latter more readily than the former. An error in diagnosis is a matter on which only another medical man is capable of expressing an opinion but all the world can recognize an error of prognosis. A medical man can shelter his reputation by guarded answers to the latest enquiry put to him but if he considers the interest of his patient and of medical science he must know the signs which forecast the course and the issue of the malady.

Professor Martan considers that it is in acute diseases that prognostic errors are most easily made and have the most serious consequences. He starts by discussing the prognostic factors in typhoid fever because the principles apply with minor differences to the other acute diseases. This recalls Osler's remark that he could teach all the general principles of medicine from typhoid fever. Fortunately for the public cases of typhoid fever are much less common than they were. But in consequence medical students qualify and go out into the world with a much less adequate knowledge of a disease which still crops up unexpectedly and which calls for prolonged and skilful treatment however expectant in type. There is therefore abundant justification for pride of place to be accorded to this disease in the book before us. Subsequent articles deal with lobar pneumonia, bronchopneumonia, diphtheria, scarlet fever, meningitis, endocarditis and pericarditis. It is a sign of the importance attached to a study of rheumatism at the present time that one third of the book is devoted to the last two subjects. The whole book is practical, lucid and interestingly written.

### ORAL SURGERY

*Surgical Diseases of the Mouth and Throat*. By Earl Calvin Padgett, B.S., M.D., F.A.C.S. (Pp. 807, 3s. figures 42s. net.) Philadelphia and London: W. B. Saunders Company, 1938.

This book will have an appeal to both surgeons and dentists but the author's ambition has been even wider since he tells us in his preface that he has made an attempt to present material which will be of interest to certain special practitioners such as the nose and throat specialist, the dermatologist or radiologist who see conditions which in certain instances overlap from their field into that of oral surgery. A large field is covered as may be exemplified by the fact that there are chapters on fractures and dislocations, dental extraction, inflammatory diseases of the antrum and articles on radiation therapy and speech training in cases of cleft palate. The author has had the assistance of a number of colleagues to whom he refers in the preface where he also makes a remark which reminds us of a not unfamiliar problem in other branches of surgery. With Dr Sheldon and Dr Louis James there took place considerable discussion concerning the dividing line between those cases which should be submitted to the orthodontist and those which should be managed by the oral surgeon. The field covered is even wider than the title implies since

Chapter XVIII deals with inflammation and diseases involving the neck, and accounts are given of tuberculous lymphadenitis and oesophageal diverticulae. Diseases of the normally placed thyroid are not included, but lingual goitre and tumours and cysts of the thyroglossal tract come within the scope of the book. Clefts of the lip and palate are taken up in much detail and are well done, and this section constitutes one of the best in the book.

There is a brief account of the development of the modern operation for trigeminal neuralgia in which we should like to have found a reference to Sir Victor Horsley, who in December, 1890, attempted sensory root section for the condition, whereas the Spiller-Frazier operation was developed between 1898 to 1901. The author states the subzygomatic route for alcohol injection to be the safest and best. Few neurosurgeons would agree, however, this route having been almost universally abandoned for the Hartel approach from outside the angle of the mouth. While minor criticisms such as these apply to certain sections, we have nothing but praise for the work as a whole. It is easily read, the type being clear and the text divided into well-indicated sections, while line drawings and photographs amply illustrate it. This is a valuable work which in our opinion comes near to achieving the rather ambitious aim of its author.

### Notes on Books

Mr GUY BUTLER has all the qualifications to write a book on *Athletics and Training* (Adam and Charles Black, 5s). First as an athlete he was an amateur champion while still a schoolboy, and subsequently, in a long and distinguished career, all but achieved the highest honour in this branch of sport. He has more recently devoted himself to athletic journalism and has adopted the profession of trainer. He knows enough of the scientific side of the subject to know what he does not know, and he realizes the limitations of academic teaching for the aspirant to success on the track. Most books on training are full of ill-digested physiology or of pseudo-scientific jargon. Mr Butler has wisely stuck to his last, he has produced an eminently practical work in which every track and field event is dealt with technically. The subject of diet, upon which so much ink is unnecessarily spilt, is dismissed in a few lines. To illustrate how individual this detail must be the author states that when Nurmi beat the world's record for six miles his lunch antecedent to his effort consisted of almost all the things which theory forbids the athlete.

Dr DONALD PATERSON has thoroughly revised his book on *Sick Children: Diagnosis and Treatment*, for a third edition (Cassell and Co., 12s 6d), and this can again be recommended as a concise and practical account of modern paediatric practice. The section on anaemia, to which attention was drawn in a review of a previous edition, has now been brought into line with modern work on this subject and there are new accounts of acute and chronic sinus disease in childhood. Practitioners will find this a useful work, and the prescriptions freely scattered in the text are a valuable feature of the book.

*The Adolescent*, by ADA HART ARLITT, Ph.D., is published by the McGraw-Hill Publishing Company, price 8s 6d. This guide for parents in the upbringing of their children is essentially American for the Americans and so has less application in this country. It is pleasant, easy reading and on the whole full of common sense. The author makes no effort to penetrate to the deeper motivations of adolescent conduct which is probably commendable in a book intended for the laity, though it makes it appear rather superficial to the more initiated.

This is one of the many books which can safely be recommended to parents who wish to study the many problems of their growing children's lives.

The second English edition of *Poulsson's Textbook of Pharmacology and Therapeutics* has been prepared by Dr STANLEY ALSTEAD (Heinemann, 25s). The general character of the volume has not been changed, but the recent rapid advances in pharmacology have called for extensive revision. Important new advances such as sulphonamide and protamine-zinc-insulin receive notice.

## Preparations and Appliances

### A NEW PROSTHESIS

(WITH SPECIAL PLATE)

Mr A. WYNN GREEN (Wolverhampton) writes

The statistics concerning a one-eyed person are somewhat startling. Boissoniere gives the proportion in England as 1 to 162 persons, and this number must have been considerably increased by eye injuries during the war. Nor is the number decreasing to any extent, for, although many eyes are saved nowadays by the more advanced methods of surgery, the risks are being increased by motor accidents and by accidents in industry. The importance of any advance in the making of a prosthesis cannot be too much stressed: the one-eyed person is acutely conscious of his physical defect, and therefore suffers psychologically as well. Moreover, he is always at a disadvantage socially and in obtaining his livelihood. A skilfully devised, well-fitting prosthesis that can be worn with confidence, does not give rise to any eye irritation, and is within the reach of limited incomes: this seems to me a branch of ophthalmology well worthy of attention.

Considerable as are the advantages of the use of Snellen's reform eye, nevertheless it has this disadvantage—that it can be employed with success only in a socket of average size, unless (in cases where the socket is larger than normal) a base of porcelain, platinum, or gold is fitted, but this adds greatly to the cost.

A prosthesis recently devised by Mr L. B. Dibbens of Stafford has been used with satisfactory results by two patients of mine, who each had an eye removed because of growths, on the upper lid in one case and on the lower lid in the other. In neither instance was a satisfactory plastic operation possible, because the tumour had so extended as to destroy the lid structures. This particular prosthesis is clipped on to the inside of a spectacle frame, it consists of a transparent plate of amyl acetate, about 3 mm thick, on the orbital surface of which is painted with oils the representation of an eye, the upper and lower lids, and the surrounding skin (Plate, Fig. 1). The painting is done with the patient present, so that the eye may be accurately imitated for size as well as for colour of iris and of surrounding flesh. On the interior surface a small circular cavity is cut out, and into it is placed, to represent the pupil, a black bead which is covered with a section of an amyl acetate or calcium glass ball to form the corner. The whole plate is cemented or screwed to a tortoiseshell clip, which is fixed to the spectacle frame. Great care must be exercised in fixing the angle of the plate, and also in determining the size of the painted eye for refraction through the plate will alter the appearance of this considerably. The cost of the whole fixture is within the means of an ordinary hospital patient.

One of my patients, Mr S., had an epithelioma of the lower lid, destroying the surrounding structures. Excision was performed, with radium treatment by Mr Milnes Walker. Figs. 2 and 3 show him before and after fitting the prosthesis. Figs. 4, 5 and 6 illustrate the case of Mr F. who had a large sarcoma of the left upper lid, which had caused evulsion of the eyeball.

## INSULIN AND DIABETES THE PRESENT POSITION

SILPHEN PAGET LECTURE BY  
PROFESSOR BLST

The twelfth Stephen Paget Memorial Lecture under the auspices of the Research Defence Society was delivered on June 9 by Professor C H Best of the Chair of Physiology, University of Toronto who took as his subject Insulin and Diabetes. The Present Position Professor Best whose name is associated with that of Sir Frederick Banting in the discovery of the hormone is visiting this country for the purpose of receiving the Fellowship of the Royal Society.

The lecturer began by recounting the familiar story of the early work on insulin carried out in Toronto. He said that the leading part played by Banting in the initiation and prosecution of the research could not be over-emphasized and he also paid a tribute to the memory of Professor J. J. R. Macleod who made possible the rapid extension of the findings which Banting and he were able to obtain in the spring summer and early autumn of 1921. One of their first attempts to prepare insulin in quantity for clinical trial was made by administering millions of solution of a substance known as secretin to an anaesthetized ox. They thought that by this procedure they might exhaust the enzymes of the pancreas and then by performing a pancreatectomy render available supplies of insulin. They removed the organ and did make some active extracts from it but it was obvious that this was not a practicable procedure. They then resorted to the use of alcohol as an agent for the precipitation of inert material including the enzymes and their efforts immediately met with considerable success.

"One day we made a special lot of this material from the pancreas of one beast. The pancreas was removed aseptically. We tried the material on our colony of depancreatized dogs and then on ourselves. As the effect on Bunting and myself was only local we decided to go ahead with the administration to a severe case of diabetes. This was done on January 11 1922. The patient was one Leonard Thompson of Toronto General Hospital under the care of Dr. Walter Campbell. He was not a particularly co-operative patient and often threatened to spoil his interesting history by motor cycle accidents.

### From Early Experiment to Large scale Production

Professor Best showed portraits of another early patient—a little diabetic boy who played about in the laboratory before insulin was really available. His recovery under insulin was a matter of great pleasure to Banting and himself. Some people would go so far as to withhold insulin from a diabetic child—always the child of someone else; they are stories over the pain of others. Never yet have I come across anyone who had the courage of his convictions to a sufficient extent to withhold insulin from his own child.

The preparation of insulin was now on a secure scientific basis to facilitate large scale production. He gave a brief description accompanied by a colour film of the present methods from the bringing into the laboratories of the mass of ox pancreas to the final packaging of the sterile tablets. He also showed among other charts one illustrating the insulin content of the pancreas obtained from the animal at different ages. These findings had been obtained by Dr Scott and Dr Fisher. The content was much greater during intra uterine life than after birth and although this fact was not appreciated at the beginning, foetal pancreas was in fact used as a source of insulin for quite a long time. In detailing the work on the purification of insulin and the obtaining of insulin in crystalline form Professor Best mentioned that quite early in the history of this investigation the people who had the purest insulin found the greatest difficulty in pre-

paring crystals while those who had relatively crude insulin were exempt from his trouble. This was presumed because one or some closely related metal was present in the latter preparations (Scott).

[illegible]

## Mortality in Diabetes

Coming to the question of mortality in diabetes Professor Best said that the Ontario figures were of first interest because nowhere else in the world had insulin been at the disposal of everybody who wanted it since 1922. It was perfectly true that here as elsewhere the mortality from diabetes in certain age groups had not come down and might be going up. But a study of graphs showed that in the earlier age groups from birth to age 19 a sharp decline was obvious. The difference in the curve of mortality at under fifty and over fifty was also evident. Another curve showed that more and more insulin was being used in Canada every year. Even the slump years 1929-31 showed no dip in this upward curve proving that insulin was not a luxury. It meant that while the older practitioners did not easily take to insulin the younger ones trained in the more modern methods available used it to an ever increasing extent. While the medical student could not be expected to read the 10,000 publications that had appeared on the subject of insulin since 1922 he might be assured that he performed a most valuable function in spreading the knowledge of the modern treatment of diabetes and other diseases.

### Vote of Thanks

Sir EDWARD MELLANBY in proposing a vote of thanks said that it had been his lot to attend patients suffering from diabetes in pre insulin days. It was a mortification to feel that whatever one did one could only postpone the eventual issue for a matter of months. Nowadays one approached the diabetic patient almost with a jaunt, air knowing that one could turn him out to do his normal work within a few weeks. He was also one of the first



people in this country to make insulin, and he could appreciate the excitement which Banting and Best must have felt when they carried out their first experiments. One of the first two patients was a man who was brought in apparently in a moribund condition. He was six feet in height but weighed only six stone, and could not walk or stand. He left hospital after a month or two, and subsequently became managing director of a large steel company and was still living a completely healthy life. The discovery of insulin was only one of many advances in recent years which were the result of animal experiment. It was a curious situation that the greater the success of medical research in preventing or controlling disease the greater was the likelihood that the disease being prevented or controlled, the triumph would be forgotten.

The resolution of thanks was seconded by Dr R D LAWRENCE and supported by Lord LAMINGTON, who presided.

## MEYERSTEIN INSTITUTE OF RADIO- THERAPY

### GIFT TO THE MIDDLESEX HOSPITAL

Sir William Bragg, President of the Royal Society, opened on June 9 the Meyerstein Institute of Radiotherapy at Middlesex Hospital. This is a self-contained unit of four floors, made possible by the generosity of Sir Edward Meyerstein, a great benefactor to the Middlesex, who, having already contributed £30,000 towards the cost of the institute, announced at the opening ceremony his intention of giving the remaining £16,500 necessary to complete it.

#### Staffing and Equipment

In the institute all forms of radiotherapy are available for both in-patients and out-patients, both hospital and private. It is closely linked with the main hospital, and the resources of the Middlesex staff and laboratories are available for the service of the unit. The honorary director is Dr J H Douglas Webster, and there are five whole-time medical officers and a resident house officer, a sister, and six radiographers.

The most modern equipment both on the radium and x-ray side has been installed and elaborate protective precautions have been taken. The treatment cubicles are all provided with duct suction ventilation giving a change of filtered air twelve times an hour. Protective lead has been embodied in the walls to prevent stray radiations from reaching the corridors, and lead has even been put into the flooring of the second floor on which powerful tubes are installed, to prevent extraneous irradiation of the patients in the cubicles below. In every cubicle there is a two-way communication between patient and radiologist by means of microphones and loud-speakers. Two of the three cubicles on the ground floor contain shock proof x-ray tubes and the third is for telerradium. Here with 4 grammes of radium, mass irradiation is carried out at 8 cm distance. The radium when not in use is housed in a safe surrounded by ten inches of lead and the transference of the substance to the applicator is effected pneumatically through a flexible tube.

The first and second floors are devoted to x-ray therapy one for female patients and the other for male. The control of 200 kV shock proof tubes is by a multiple interlocking device so arranged that the apparatus as a whole must be switched on always in the same order—for example, no current can be conducted through a tube unless the appropriate cooling pumps are already working. In this way the plant has been rendered immune to abuse. The dose of x-rays to the patient measured either with an ionization chamber or by a calibrated clock is completed automatically by the closing of a lead shutter on the tube head and the interlocking is such that it is impossible for the patient to receive an over-

dose. There is also interlocking on the door of the cubicle, so that the moment the door is opened the lead shutter will close. On the first floor Siemens tubes cooled by oil are used and on the second floor Metropolitan Vickers tubes constructions which it is possible to dismantle completely, so that in the event of a broken filament or cracked target they may be taken to pieces, the faulty part replaced, and the whole reassembled. The couches and various centring and control devices are by Newton and Wright. The top floor is in part used for treatment by surface radium, with well provided mould and mounting rooms.

#### The Opening Ceremony

At the opening ceremony, in the absence of Prince Arthur of Connaught, the president of the hospital, the guests were received by Mr T B Money Coult, vice chairman. Sir William Bragg, before declaring the institute open, referred to the reputation which Middlesex had sustained for many years in research and advance in radiotherapy. He believed that Sir Edward Meyerstein got the inspiration for his present benefaction when he found that as a result of this work the word "inoperable" had been struck out in relation to certain conditions and "operable" substituted. The application of radium and kindred radiations to the cure of disease and alleviation of suffering was not misnamed a romance. He himself, although not a medical man had been in touch more or less with every phase of this progress. He remembered a day, many years ago, when he was at work in his laboratory and a young man entered and began to explain some of his theories concerning a magnetic detector. He was the future Lord Rutherford, who was afterwards to achieve unrivalled fame for his work on radio activity.

The new institute (Sir William Bragg continued) had an interest to the scientific mind beyond its obvious purposes. It was an instance of the application of science to human need and desire. A correspondent in the *Times* had been complaining of the vagueness of the customary interpretations of the word "science." He himself thought there was nothing better than the words which the founders of the Royal Society employed in 1660 when they met to consider the beginnings of the study of experimental science—"the improvement of natural knowledge." Since the Society was founded there had been a very great improvement, with tremendous changes in men's activities and powers. The improvement was due mainly to the extension of the natural senses through the development of instruments. With such extension a new world, unseen by the natural eye, came into view. Upon that unseen world the work of the institute depended. The radiations which it employed in its beneficent work were far beyond the range of human senses. They had effects of which humanity was glad to avail itself, but without the explorations of the unseen world nothing would have been known about them.

Before the ceremony closed Dr Hans Holfelder, a friend of the director, presented to the hospital on behalf of the medical faculty of Frankfurt University a portrait of Professor Röntgen.

C W Lavmon and H E Michelson (*Arch Derm Syph* Chicago, January, 1938) point out the immunity of certain areas of the body to the invasion of certain diseases and the rarity of lichen planus of the eyelids in particular. They report five cases and classify them into three types: (1) Typical lilac coloured pitted and scaling papules similar lesions occur elsewhere on the body. (2) An annular variety similar to that seen on the penis with the same type of lesion on other parts of the body. (3) A variety seen in brunette women aged about 30 in which the upper eyelids are discoloured with a brown, symptomless retiform eruption similar to that seen in a pigmented case of erythema ab igne. Their cases responded to treatment with x-rays and the injection of mercury bichloride.

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## CANCER AND HEREDITY

The idea has long been abandoned that the 'cause of cancer' will be discovered and it is now recognized that a malignant neoplasm is the resultant of a number of factors and that these factors are themselves variable according to the site and nature of the growth. Recently much attention has been paid to the possibility of a heritable factor, and with the application of strict genetic analysis many interesting points have become apparent which though they cannot be claimed to make the problem of carcinogenesis simpler yet draw attention to some of its complexities. About 1908 J. A. Murray and others pointed out that the progeny of mice with carcinoma of the breast were more liable to develop a neoplasm in this site than those descended from mice not so affected, as a result of these observations Maud Slye suggested that the incidence of spontaneous cancer was due to a simple Mendelian recessive factor. This view was not generally accepted but it was necessary to secure strains of genetic purity before it could be put to the test. This can be achieved by repeated brother-sister inbreeding (strains which are pen-bred will not suffice) and after about thirty generations it can be shown that such a strain is genetically uniform. Since 1930 reports of investigations based on this method have been appearing and the findings of different workers may now be profitably reviewed.

In regard to spontaneous mammary cancer in mice it was shown that pure strains could be obtained in which the incidence in each strain was reasonably constant but this incidence varied between 0 and 85 per cent in different strains and they could not be divided into two groups—those of high and those of low incidence—which would have been the case had mammary cancer been due to the action of a single gene. In a 'high cancer' strain the extreme liability to mammary cancer is seen only in the female but if the males of the strain receive ovarian transplants (Murray<sup>1</sup>) or injections of oestrin (Lacassagne<sup>2</sup>) mammary cancer develops but males of a low-cancer strain do not so respond. Cramer and Horning demon-

strated that the administration of oestrin induced characteristic histological changes in the adrenal and pituitary glands of mice of ordinary mixed strain and that this change arose spontaneously in mice of a 'high cancer' strain. These changes and the liability to mammary cancer could be inhibited by the administration of the 'hydrocortisone hormone of the inferior pituitary'. In this particular strain it has been proved that there is no excessive secretion of oestrin but that there is an increased sensitivity of the tissues to this substance which when given to normal mice in enormous doses produces mammary hyperplasia and sometimes carcinoma. It is not yet known whether these endocrinal type changes in the pituitary glands of all 'high cancer' strains. All that can be deduced from these experiments is that the susceptibility to cancer of the breast in mice is determined by chromosomal factors but they throw no light on the factors controlling its incidence. That this is influenced by extra-chromosomal factors is suggested by the results of hybridization between pure strains of 'high' and 'low' cancer incidence. It was found that the incidence in the first generation tended to resemble that shown by the strain from which the mother was derived, such an inheritance is non-Mendelian and can only be explained by the transmission of some factor either occurring in the cytoplasm of the ovum during intra-uterine life or by means of the mother's milk. Bittner and Little have demonstrated that the incidence of cancer in female mice of a high-cancer strain is reduced if they are fostered by a mother from a low-cancer strain and the reverse would also appear to be true. Furthermore tubal ova from high-cancer strains have been transferred to uteri of low-cancer strains and after twelve months no cancers have developed in the offspring. The final experiment of fostering some of these transferred mice on a high-cancer strain mother has still to be performed but the conclusions of these experiments that the extra-chromosomal or maternal influence may tentatively be attributed as due to a breast-cancer producing influence obtained by the progeny from the milk of high-cancer mothers appear to be justified. What the nature of this milk-borne factor is remains to be discovered.

MacDowell and Richter found that the incidence of mouse leukaemia is also influenced by maternal extra-chromosomal factors but that they are not transmitted in suckling. According to Lynch and Andervont<sup>3</sup> the susceptibility of mice to lung tumours both spontaneously formed and induced by dibenzanthracene is inherited as a dominant characteristic. Lynch's work excluded the possibility of

<sup>1</sup> *J. Cancer Res.* 1928 12 18  
<sup>2</sup> *C. R. Soc. Biol. Paris* 1934 115 937  
<sup>3</sup> *J. Path. Bact.* 1937 44 633

*Lancet* 1938 1 74  
*J. Heredity* 1937 28 117  
*Arch. Pathol.* 19 20 709  
*Amer. J. Cancer* 1937 31 77  
*Publ. Hlth. Rep. Wash.* 1938 53 252

a maternal factor, though it would appear that there is a modifying gene in the sex chromosomes. In animals other than mice the influence of heredity has been little studied, though Stark<sup>9</sup> found that in *Drosophila* some tumours are definitely sex-linked and hereditary. Goier<sup>10</sup> has emphasized the importance of an appreciation of genetics in relation to tumour transplantation. A tumour arising in a genetically pure strain of mice can be transmitted successfully to all other members of the same strain and to those hybrids in which certain dominant genes are present. Furthermore, if the tumour is transplanted to a host lacking these particular genes it regresses after a short while and immune bodies to the tumour cells are found in the blood. Nevertheless, as Phelps<sup>11</sup> and others<sup>12</sup> have demonstrated, these immune bodies are not specific to the cells because they are tumour cells but because they are cells genetically different from the host's, identical immune bodies being produced by transplanting the normal organs of animals of distinct constitution. It is owing to the lack of recognition of the influences of genes in tissue immunity that false hopes have been raised as to the possibility of producing anti-cancer sera, and these observations will have considerable bearing on all future transplantation experiments.

Turning to human cancer, it is at once apparent that selective breeding such as has been achieved in the laboratory can never occur, yet it is reasonable to suppose that the liability to cancer is associated with genetic factors in man as well as in animals, this has been demonstrated in such conditions as familial polyposis of the colon,<sup>13</sup> and Cramer's<sup>14</sup> statistical survey has revealed that the familial incidence of mammary carcinoma is exceptionally high. The cancer family of Warthin, in which forty-three carcinomata appeared in 300 members, has been much quoted, and though a recent report<sup>15</sup> suggests that the cancer liability is disappearing in the descendants all the observations are in keeping with cancer liability being associated with dominant characteristics. The immediate clinical application of these various observations appears to be related to the work of Cramer and Horning in which mice highly susceptible to cancer showed evidence of endocrinal imbalance and remained cancer-free after treatment with hormones antagonistic to oestrin. Already the male hormone is being used with favourable results in "chronic mastitis," regarded by many as a condition predisposing to cancer. If certain physical characteristics were

observed to be frequently associated with cancer of a particular organ, persons with these characteristics could be kept under observation and treatment be instituted at the onset of any suspicious signs. The difficulties and perils of such a course of action are considerable, though it is only along lines such as these that preventive measures in cancer can be developed.

## MEDICAL CO-OPERATION BETWEEN ENGLAND AND FRANCE

Though the bonds uniting English and French medicine are numberless, it is surely not invidious to draw special attention to one which is singularly well designed to meet present needs. It is the Association pour le Développement des Relations Médicales entre la France et les Pays Etrangers (A D R M). The fact that this body co-operates in medical matters with other countries than those of the British Empire adds to, rather than detracts from, its usefulness to any special country, for it is in a certain sense becoming a central exchange or telephone putting many people of many countries in touch with one another. The directing force of the A D R M, which in 1922 was recognized by the President of the Republic at that time as "reconnue d'utilité publique," is the well-known surgeon, Professor Hartmann, who has endeavoured, often in the face of great difficulties, to make Paris a Mecca for medical pilgrims of all nations in reality as well as in name. Behind him are Dr Mathe and a full-time assistant, Mademoiselle Hure, whom medical visitors to Paris find a living encyclopaedia. In her office in the Faculty of Medicine (Salle Beclard), 12, rue de l'Ecole de-Médecine, she is to be found every day between 9.30 and 11 and between 2 and 5 dispensing information in whatever language an inquirer addresses her. To appreciate her services, it has only to be realized that before they were available a foreigner coming to Paris to follow postgraduate courses had to run the gauntlet of multiple forms and regulations. First he had to attend at an office open only three times a week and for just two hours at a time, and then, if he had been successful in obtaining the necessary document, he had to tie himself off to some other office to pay his fees after being kept waiting in a queue for an unconscionably long time. Now all he has to do is to confide himself and his contributions to Mademoiselle Hure, who not only takes charge of all technical formalities but also gives invaluable advice on where to go and whom to see.

At the annual meeting of the A D R M held this year an interesting account was given of its

<sup>9</sup> *Amer J Cancer* 1937 31 252

<sup>10</sup> *J Path. Bact.* 1937 44 691

<sup>11</sup> *Amer J Cancer* 1937 31 441

<sup>12</sup> *Imp. Cancer Res. Fund.* 35th Annual Report 1937

<sup>13</sup> *Cancer Res.* 1930 5 241

<sup>14</sup> *Amer J Cancer* 1937 30, 318

<sup>15</sup> *Ibid.* 19 6 27 434

activities during 1937. An incoming stream of distinguished medical foreigners has been counterbalanced by an exodus of French apostles of medicine to different countries. Professors Abram and C. Richet to the U.S.A. and Mexico, Cunéo and Lereboullet to Italy, Fiessinger and Lian to Sweden, Sargent to South America, Baudouin to the U.S.A., Besançon to Portugal and Hungary, and Brumpt to the Near East. With the support of the French Foreign Office, the Association has promoted the exchange of numerous medical students of several countries with those of France. In the case of Czechoslovakia alone, a three-day visit of more than sixty doctors to Paris was organized last October, and special lectures and demonstrations were provided for them. A return visit will be paid to Prague in September of this year. It is no secret that only a few years ago Professor Hartmann's efforts to promote international co-operation in the medical field encountered considerable xenophobia on the part of the more excitable elements among the French medical students temporarily stampeded into believing that the development of the Paris school of medicine as an international centre would be to their detriment. The following statistics reflect to a certain extent this state of affairs. In 1929 there were as many as 144 foreigners registered as candidates for the University diploma. The corresponding figures for 1935 and 1936 were only forty-four and nine respectively, whereas in 1937 the registrations had risen to fifty. The figures for the State diploma in the same period follow the same curve, with twenty-seven and twenty-two registrations in 1935 and 1936 respectively, and as many as forty-three in 1937. Between 1936 and 1937 there has also been an appreciable rise in the number of foreigners attending postgraduate courses. There seems good reason therefore to believe that the hospitality and facilities provided by the Paris school of medicine for the foreign visitor are becoming more and more appreciated by him.

### THE RADIIUM INSTITUTE AND MOUNT VERNON HOSPITAL

The union of these two bodies is now complete. This means two things: in course of time expense will be saved by the elimination of duplicate services, but more important still will be the concentration of resources for the treatment of the sick, the prosecution of research, and the training of radiotherapeutists. For the moment the work of the two institutions will go on as hitherto, but use will be made of the resources of one body to supplement the other—thus the deep therapy plant at Mount Vernon will be used for the

patients of both. It is intended eventually to concentrate most of the work both on the therapeutic and research side at Mount Vernon where there is ample bed accommodation and good pathological and physical laboratories out to keep the outpatient department and offices in London. Negotiations are taking place between the Medical Research Council and the new body for the continuance of the Radium Beam Research as a medical research unit of the Medical Research Council. Arrangements are also being made whereby the Property Trust money held by the Royal College of Surgeons for the Radium Institute shall be used to provide a comparative test of the relative therapeutic values of radiation produced by a radium beam and that of a 200 KV deep therapy plant. The experiment has the approval of the Radiological Committee of the Medical Research Council and the British Empire Cancer Campaign. In order to ensure a strict comparison as possible the work will be undertaken by the staff of the Radium Beam Therapy Research. The secretary of the now completely amalgamated body, the Radium Institute and Mount Vernon Hospital, is Mr. F. A. Garner.

### THE NARCOTIC DRUG TRAFFIC IN EGYPT

Russell Pasha, in his report of the work of the Egyptian Narcotics Bureau for 1937, records the progress which has been effected during the last decade in combating the illicit traffic in dangerous drugs. He contends that

the wholesale manufacture in Europe of drugs for the illicit market has ceased. Moreover, by restricting supply he has raised the prices of narcotics. Whereas in 1929 the wholesale price of illicit heroin in Egypt was ££60 the kilo, it is now in the neighbourhood of ££600 the kilo, and is entirely out of the reach of the fellahin. By the abolition of the capitulations foreign traffickers are now dealt with in the Egyptian courts without the intervention of foreign consuls; severe penalties are inflicted, up to imprisonment for five years and a fine of ££1,000. Russell Pasha warns the Egyptian Government against the return of wealthy traffickers who have been deported and urges the authorities to be adamant in refusing re-entry of these incorrigible foreigners who so nearly brought Egypt to its death.

The world's supply of contraband heroin still passes from the Far East through the Suez Canal to Europe and America, and though some will inevitably drop off at Suez and during the canal transit, the local situation is now well in hand. A clean capture of 36 kilos of opium and 2.75 kilos of hashish in course of transit from Palestine to Kantara is reported. In all 552 kilos of opium were seized during 1937, chiefly in 'Sinai, Suez, and Kantara. In regard to the treatment of narcotic addiction, experience in Egypt confirms the conclusions arrived at in the United States—namely, 'that there is no medicine known which will cure one addicted to the use of narcotic drugs without his consent or against his will. So-called cures are

held to be "not cures at all, but merely temporary de-narcotization of basically unstable and abnormal persons" Addiction in Egypt while decreasing in the cities, is increasing in the provinces, especially in those adjacent to the Suez Canal and the Palestine frontier, while hashish is the narcotic most frequently resorted to During last year 2,866 persons were accused of possession, trafficking cultivation, or addiction, and 1 802 were committed and sentenced to imprisonment, accompanied in most cases with fines Illicit cultivation of the opium poppy has been increasing in Upper Egypt but the Narcotics Bureau, by means of aeroplane patrols, has located and photographed several hundred acres of flowering opium poppy and secured conviction of the cultivators Attention is again directed to "the harmful drinking of a black brew of adulterated tea" The International Tea Bureau, however, is, by means of travelling motor caravans, teaching the villagers how proper tea should be made Russell Pasha urges the reduction of the heavy import duties on tea and tobacco, by encouraging the use of "these harmless creature comforts" he hopes that resort to dangerous narcotic drugs might thus be lessened

#### EFFECTS OF ANOXAEMIA IN ANGINAL SUBJECTS

It is generally accepted that anginal pain is brought about by ischaemia of the myocardium, but it is not known whether this acts entirely or partly by reducing the supply of oxygen or in some other way It has been suggested that the pain is caused by certain products of metabolism which accumulate when the flow of blood through an active muscle is deficient, and according to this view lack of oxygen is not the most important factor—but according to R L Levy and A L Barach<sup>1</sup> it is They devised an apparatus for inducing oxygen want without the necessity for rebreathing, and observed the effect of inhaling air with an oxygen concentration of 12 per cent on thirty-seven patients with heart disease nearly all of whom had angina, and on eleven with normal hearts In the experiments the saturation of arterial oxygen fell to an average level of 75 per cent and the pulse rate, respiratory rate, and systolic blood pressure were usually increased The effect on venous pressure was variable, but the circulation time was always decreased in the patients with cardiac disease except in two with aortic stenosis In the normal group the circulation time was only slightly decreased The electrocardiograms of the patients with heart disease altered in form, the T wave becoming flattened or inverted and the RS-T segment deviating, as is sometimes observed in spontaneous angina Pain developed during the test in about half the patients with angina but in none of those with normal hearts It was found however that there was no uniformity in the conditions which gave rise to pain a patient might have pain in one test but not in another and it was impossible to correlate its onset with the changes in pulse rate blood pressure venous pressure circulation

time, or saturation of arterial oxygen, except in the two cases of aortic stenosis, in which a sharp and prompt response always took place under given conditions Levy and Barach reconcile the variable results of their experiments with their belief in the importance of anoxaemia in the production of cardiac pain on the hypothesis that there are various mechanisms, particularly quickening of the rate of circulation, which can compensate for the reduced saturation of arterial oxygen The constancy with which pain could be produced in aortic stenosis is thus correlated with the unchanging rate of circulation in these cases The test can be regarded neither as reliable nor as safe for the diagnosis of angina or coronary insufficiency, as in this series severe symptoms occurred in two instances, but the results show at least that anoxaemia is one important factor in the causation of cardiac pain

#### THE DOCTORS' COOKERY BOOK

The continued concern of the medical profession with the more practical aspects of nutrition is reflected in the publication to-day of *The Doctors' Cookery Book* (British Medical Association, 4d) This is a grand child of the 1933 report of the B M A Nutrition Committee, and the direct successor of *Family Meals and Catering* The committee's original task was "to determine the minimum weekly expenditure on food stuffs which must be incurred by families of varying size if health and working capacity are to be maintained, and to construct specimen diets" Dietary tables were drawn up, applicable to families of different sizes, and with the help of medical officers of health these diets were priced Useful as was this report, the chain from physiological laboratory to market and kitchen remained incomplete With suitable expert assistance the committee therefore proceeded, in 1934, to the preparation of *Family Meals and Catering* The purpose of this latter booklet was to translate the most widely useful of the above diets (that for a man, wife, and three children aged 6-8, 10-12 and 12-14 years) into the practical form of menus, recipes, and shopping lists for three weeks It received a ready welcome from local authorities, and a sale of 120 000 copies was quickly achieved Gratifying as was this result, the circulation of the booklet was none the less small in relation to the number of households which according to Sir John Orr, must be living on or below the nutritional borderline Accordingly an attempt has now been made in *The Doctors' Cookery Book*, to make a more direct appeal to the working class housewife The new booklet has an attractive cover, and is printed in convenient size for the kitchen The text has been rewritten and simplified and the complete dietary carefully re-examined in the light of the expert report which is printed at page 1326 of this issue Each of the dishes comprised in the three weeks menus has been specially made up and photographed and each day's menus now face a full page of illustrations In addition the price has been reduced and every effort to secure publicity for the booklet is being made

<sup>1</sup> *Am. Heart J.* 1935 15, 187

Copies are obtainable from any bookseller or news agent as well as from all W. H. Smith's bookstalls and co-operative societies. The help of medical practitioners in making the publication known will be welcomed. All inquiries should be addressed to the Secretary, British Medical Association, Tavistock Square, London, W.C.1.

### THE NOCHT Festschrift

Under the title *Festschrift Bernard Nocht* a volume has been published containing a foreword by Professor Muhlens and some 116 papers on various subjects relating to tropical medicine contributed by the friends and pupils of Professor Bernard Nocht in commemoration of his eightieth birthday. Professor Nocht, the founder and first director of the Institut für Schiffs- und Tropenhygiene at Hamburg, has a wide international reputation in tropical medicine. He is known especially for his researches on beriberi, malaria and blackwater fever, but his name is perhaps most familiar to many as the first to introduce under the name of Nocht's modification the now universally used Romanowsky method of staining malaria parasites. At the time of the great cholera epidemic at Hamburg in 1892 Nocht was chosen to direct measures against this disease and he later became increasingly concerned with the organization at Hamburg for the investigation and treatment of tropical disease in connexion with shipping and the German colonies. These activities led to the founding of the Hamburg Institute of Tropical Medicine and Nocht's appointment as its director, the post he still holds. The numerous papers in the *Festschrift* arranged alphabetically according to authors cover a wide field. Especially interesting in view of the occasion for its publication is the short account by Dr Carmichael Low of the foundation of the different schools of tropical medicine which now form such important centres of medical research and teaching in this country and in Germany. The Liverpool School was officially opened in April 1899 and the London School in October of the same year. This was followed by the opening in 1900 of the Hamburg Institute, an account of which with its threefold functions of research, teaching and provision of hospital treatment for tropical diseases is given by Professor Sonnenschein. Since its foundation 2,661 postgraduate students have attended courses in tropical medicine and associated with its many activities are such well known names as Nocht, Fülleborn, Giemsa, Schaudinn, Muhlens, Ruge, Schilling, Martini and others. Among contributions of a more directly scientific character are a number of papers dealing with malaria and related subjects. Notable among these are papers on various aspects of recent research upon the fate of the sporozoite and the significance of the endothelial stage in certain forms of bird malaria brought into prominence recently by the researches of Raffaele, James and Tate and others. In this connexion Brumpt records his results obtained in the treatment of *P. gallinaceum* in fowls with quinine, plasmoquine and atabrin. Administration during the

incubation period as with human malaria does not prevent the infection developing. But once parasites have appeared in the blood such infection is readily controlled. The same phenomenon is observed in blood inoculated as in mosquito infected birds and the author inclines to the view that the drug is not effective during the incubation period because the infecting organism has by then not sufficiently developed in numbers to bring about the degree of immunity which on this view is necessary to the effective action of the drug. In relation to blackwater fever an important contribution is made by Fairley who gives a very clear account of the conditions pertaining to intravascular haemolysis and the mode of formation and significance of the new blood pigment pseudo-metnaemoglobin discovered by him. In connexion with the same syndrome Malamos has studied the relation of liver damage brought about by antimony and by carbon tetrachloride to haemoglobinuria in monkeys infected with *P. knowlesi*. Haemoglobinuria did not occur as a result of such treatment and the author considers therefore that the haemoglobinuria occurring in this infection in monkeys is distinct from blackwater fever in man. An important paper is one by Weise describing a new test for determining plasmoquine quantitatively in the urine. This test, which depends upon the formation of an azo compound with *p*-arsanilic acid, appears to be much more delicate than that dependent upon the blue colour given in the chloroform test. We note that for quantitative purposes the test has been found particularly valuable. Of subjects other than malaria some half dozen papers relate to *Leishmania*, a description being given by Nattan Larnier of schizogonous metacyclic and pseudocystic forms of *L. donovani* whilst Napier discusses the method of testing drugs against kala-azar and records results obtained with a new antimonial drug (No. 561) which gives no local reaction injected intramuscularly and as regards effectiveness is in the same class with neostibosan. Other papers relate to a great variety of other subjects in tropical medicine impossible to specify in detail.

### SPREAD OF YELLOW FEVER IN AFRICA

In the annual report of the Department of Public Health Union of South Africa for the year ended June 30 1937 reference is made to the possibility of the spread of yellow fever from its endemic areas on the west coast to other parts of the continent and more especially to the Union itself. The vulnerability of the port of Durban Bay is pointed out, a locality where it is impossible to depend upon an entire absence of susceptible mosquitos at any time of the year. The report forecasts that, if ever yellow fever were introduced into Durban it would probably be a comparatively simple matter with the efficient corporation health department available to eliminate the disease in the town itself. If however it once succeeded in penetrating the surrounding country, the difficulties involved in checking its spread would be almost insuperable. The Department stresses the necessity for making the health

of South Africa one hundred per cent safe, and maintains that it is not enough to rely on the efforts of neighbouring countries. With this end in view extensive experiments in methods of fumigation of aircraft were carried out under the auspices of the Department, and improved apparatus was successfully devised. Proposals have been submitted to make every aeroplane self-contained in the matter of defence against insects. With regard to the seaplane service the procedure on arrival at Durban is to fumigate the flying boat and its contents at the moorings. Passengers then proceed to the quarantine float, moored close by in a position safe from shore mosquitos. Here the health, immigration, and Customs formalities are carried out. The quarantine float functions both as an examining office and as a small isolation hospital unit. Should it be necessary to detain passengers, it is a simple matter to have any special hospital equipment required brought from the shore, and by towing the float to a selected berth in the bay away from the air base and from ships' moorings, to secure complete isolation from man, mosquitos, and shipping.

### BRITISH HOSPITALS IN CHINA

We publish to-day at page 1339 an influentially signed letter addressed to members of the medical profession on behalf of the Lord Mayor's Fund for the Relief of Distress in China. This plea for sympathy and active co-operation in the relief of suffering is reinforced by the honorary secretary and treasurer of the Fund, Dr H Gordon Thompson. Goods in kind, or money to buy drugs, dressings, or instruments will be welcome. Without an ample supply of medical stores the hospital work for wounded, both civilian and military, cannot go on. Everywhere people are asking "What can we do about China?" There is one thing that can be done and is being done, for the Chinese in their hour of desperate need. Whatever the outcome of the war, China will not forget that British men and women did their best to alleviate her sufferings at the risk, and even at the cost, of their lives. Our medical colleagues must be supported in this gallant work.

### DAWSON WILLIAMS MEMORIAL

The Dawson Williams Memorial Fund was established by voluntary subscription in 1928 in commemoration of the late Editor of the *British Medical Journal*. Its object is the award of a prize every two years, or at longer intervals in recognition of work done in connexion with paediatrics. The Fund is administered by the following Trustees: the Presidents (for the time being) of the Royal College of Physicians of London, the Royal College of Surgeons of England, the British Medical Association, the Royal Society of Medicine, and the Section for Disease in Children of the Royal Society of Medicine and the Editor of the *British Medical Journal*. The fifth award of the prize (which consists of a certificate and a cheque for 50 guineas) is due to be made in 1938, and the Trustees have chosen

as the recipient Professor Leonard Parsons M.D., F.R.C.P., of Birmingham, for his researches into diseases of children. With the consent of the Council of the British Medical Association the prize will be presented by the President of the Association on the occasion of his Presidential Address at Plymouth on Tuesday, July 19. Professor Parsons will give a lecture on the subject of the prize entitled "Some Nutritional Problems of Childhood" before the Section of Diseases of Children at the Plymouth Annual Meeting on Thursday, July 21.

### HORSLEY MEMORIAL LECTURE

The Victor Horsley Memorial Fund, which was raised in 1920 to commemorate the services of Sir Victor Horsley to Science and the Empire, is devoted to the giving of a lecture triennially in London. By invitation of the Trustees (the Presidents for the time being of the Royal Society, the Royal College of Surgeons of England, and the British Medical Association, the senior physician to the National Hospital for the Paralysed and Epileptic, Queen Square, the senior surgeon to University College Hospital and Mr Stanley G Robinson, son-in-law of Sir Victor Horsley) the sixth Victor Horsley Memorial Lecture will be delivered by Dr Gordon Holmes, F.R.S., physician to the National Hospital and to Charing Cross Hospital, on Tuesday July 12, at 5 p.m., in the lecture theatre of University College Hospital Medical School, Gower Street, W.C. The title of the lecture is "The Cerebral Integration of the Ocular Movements" and the chair will be taken by Sir Cuthbert Wallace, Bt, P.R.C.S. Admission is free on presentation of a visiting card, and tea will be served in the library of the Medical School at 4.30.

### BIRTHDAY HONOURS

The full list of medical honours conferred on June 9, the official day for celebrating His Majesty's birthday will be found at page 1329 this week. Knighthoods are to be conferred on four members of the profession. Mr William Girling Ball, surgeon and Dean of the Medical College St Bartholomew's Hospital, has done great work for Bart's, more particularly in securing the Charterhouse buildings for the College. Last year he was appointed Dean of the Faculty of Medicine of the University of London. Dr Henry Howarth Bashford, Chief Medical Officer, General Post Office is well known to the medical profession and the public as a writer of essays and stories. Dr William John Handfield Haskett, a past chairman of the South Middlesex Division of the British Medical Association, receives his honour for political and public services in the Spelthorne Division of Middlesex. Mr Robert Blakeway Wade is President of the Medical Board, State of New South Wales and was elected President of the Royal Australasian College of Surgeons in 1935. He has been a leader in the work of the New South Wales Branch of the British Medical Association of which he was President twelve years ago, and holds many important positions in Sydney.

F. C. PYBUS AND E. W. MILLER. HEREDITARY BONE TUMOURS IN MICE



FIG. 1.—Radiograph of mouse 2223 showing osteogenic sarcoma of both ulnae and one lumbar vertebra also large bony metastases in liver

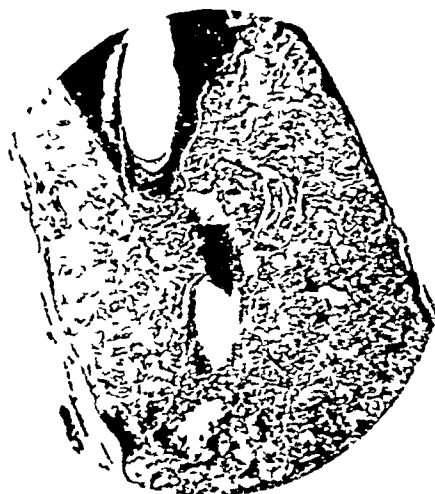
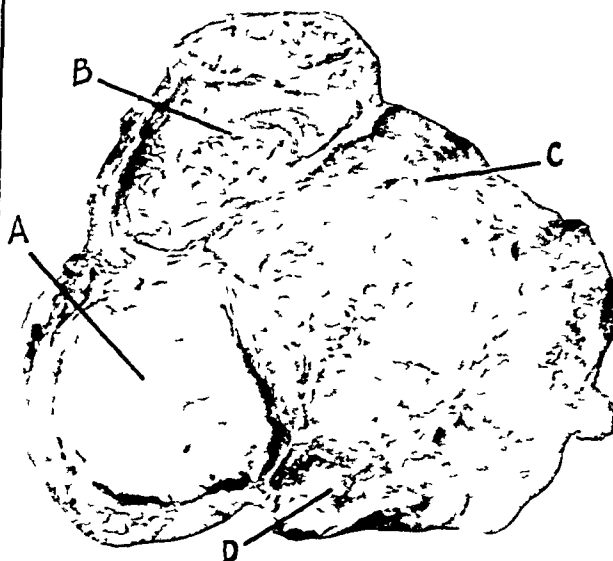


FIG. 2.—Longitudinal section of femur from mouse 2121 osteogenic sarcoma with some normal marrow still remaining. Haematoxylin eosin. Ilford green filter (Micro 3). Obj. 7/3. eyepiece x 5.



FIG. 3.—Mouse 3155. Transverse section of humerus showing osteogenic sarcoma within shaft, surrounded by osteogenic and spindle-celled sarcoma, rapidly growing and infiltrating muscle. Van Gieson. Ilford blue and yellow filters (Micro 2 and 4). Obj. 1. eyepiece x 5.

K. L. JAMES. RUPTURE OF OVARIAN DERMOID



Photograph of the tumour in section. Note fatty sebaceous material (A), green jelly like secretion (B), matted hair (C) and a tooth (D).



A WYNN GREEN A NEW PROSTHESIS

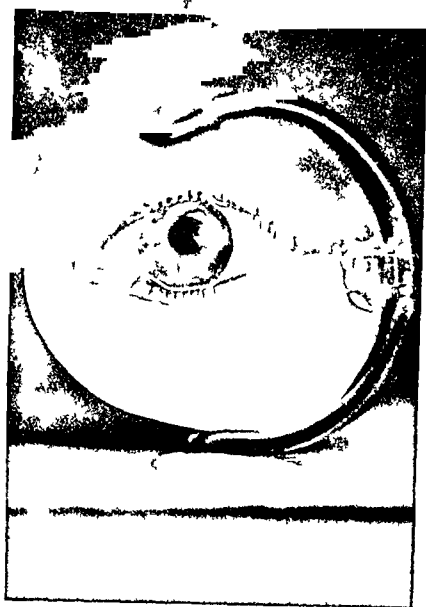


FIG 1 —The prosthesis with clip



FIG 2 —Appearance of patient after enucleation for epithelioma of the left lower lid



FIG 3 —Same patient as in Fig 2 with the new prosthesis in position



FIG 4 —Sarcoma of the left upper lid with avulsion of the left eye



FIG 5 —Showing same patient as in Fig 4 fitted with a Snellen reform eye



FIG 6 —Showing same patient as in Figs 4 and 5 fitted with the new prosthesis

# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## QUINSY AND RETROPHARYNGEAL ABSCESS

BY

R. SCOTT STEVENSON, M.D., F.R.C.S.D.

The term quinsy had in the past a much less restricted application than it has to-day. To medical surgeons, cyanotic meant any kind of a sore throat—indeed what appears to have been diphtheria—and even Merrell Mackenzie (1880) used quinsy as a synonym for acute tonsillitis. To-day, however, we take it that a quinsy is a peritonsillar abscess—suppuration in the tissues of the soft palate outside the capsule of the tonsil. It does not originate in these tissues but results from infection of the crypts of the intratonsillar fossa. The fossa when it is often inaccurately named is confused with the superior tonsillar fossa or sinus above the tonsil and between the pillars of the fauces; it has been called by some authorities the tonsillar recess, superior tonsillar fossa or crypta magna and is situated in the upper pole of the tonsil going right down to the capsule (see Fig. 1). It becomes

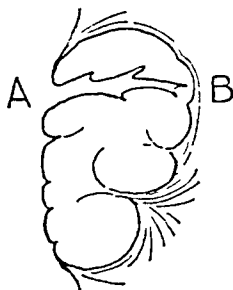


FIG. 1—Diagram of tonsil. A intratonsillar fossa. B site of development of peritonsillar abscess.

infected usually after an acute tonsillitis though this may be transient and the infection may appear to be a primary one in the fossa itself. The mesial end of the fossa is blocked up by the process of inflammation. An abscess forms and bursts through the thin capsule of the tonsil at the deepest part of the fossa. It then spreads into the areolar space between the capsule and the superior constrictor muscle. Sometimes the abscess does not burst through the capsule and a true tonsillar abscess is formed but this is comparatively uncommon and the symptoms are much less severe than those of a peritonsillar abscess. A one-sided swelling of the tonsil should always be carefully examined and palpated: a tonsillar abscess has been known to be confused with a sarcoma and a mixed palatine tumour.

### Symptoms

The condition is most common in young adults and is relatively rare in children. The onset is gradual, though it has been preceded by acute tonsillitis. The temperature is rarely above 100° F. in an acute tonsillitis the temperature may go up to 103° F. or more. Pain increases progressively until it becomes almost unbearable. The patient feels extremely ill and unable to swallow, sometimes almost choking, with saliva dribbling from the mouth—a characteristic sign. The pain may radiate up to the ear and down to the neck, lateral movements of the head

make the pain worse and the patient may hardly be able to open his mouth for an examination of the throat.

He commonly has an anxious expression and his breathing may be interfered with. There is a lot of thick viscid secretion in the throat which the patient finds difficult in removing. One side only is affected as a rule. The soft palate and uvula as well as the pharyngeal mucous membrane are congested and swollen and the tonsil is pushed downwards and backwards. The glands of the affected side of the neck are enlarged and tender. Pus forms about the third or fourth day of the illness which lasts for about five to fourteen days when allowed to run its course. Actually it never should be allowed to run its course. The complications of this condition may be serious and even fatal but immediate relief follows evacuation of the pus. Many surgeons are inclined to wait until the abscess to be definitely formed but it is delayed and not a man to open a quinsy early rather than late even if only blood and not pus flows from the incision.

### Opening the Abscess

Opening the abscess is not always as easy as it may sound. A gag may have to be used to keep the patient's mouth open; the throat is very swollen and the tonsil is congested backwards. The classical site of the incision is a horizontal line drawn across the base of the uvula and a vertical line drawn along the anterior pillar of the fauces (see Fig. 2). If the abscess is a large

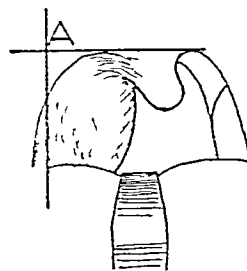


FIG. 2—Peritonsillar abscess. A site of classical incision.

one an incision made at this point will usually evacuate it but it is not uncommon to fail to open the abscess with this technique even after several attempts. In most cases this is due to failure to take into account the fact that the tonsil often extends forwards beneath the anterior pillar of the fauces so that the incision penetrates the substance of the tonsil itself. In my opinion it is much better to make the incision through the intratonsillar fossa where the abscess has originated and to do so with blunt sinus forceps rather than with a scalpel or bistoury or other sharp instrument.

### TECHNIQUE OF INCISION

The patient should be propped well up in bed, his head being steadied by an assistant. A good light is necessary and is best provided by a forehead light which leaves both the operator's hands free. (A very efficient one with a battery that can be put in the pocket can be bought for 7s. 6d.) The light from an electric torch in the hands of an inexperienced assistant is apt to be unsteady and misdirected. The patient if he can may suck a benzocaine lozenge for ten minutes before the incision is made or the throat may be sprayed with a small amount of 10 per cent cocaine hydrochloride solution but no local anaesthetic has much effect in quinsy.

The patient's tongue is depressed with a spatula held in the left hand. A pair of sinus forceps held in the right hand are pushed sharply backwards and upwards under the base of the uvula into the intratonsillar fossa if it can be seen or at least into the upper part of the posterior pillar of the fauces, for a distance of an inch or more until the pus is found (see Fig. 3). The sinus forceps are then opened widely to allow



FIG. 3.—Method of opening peritonsillar abscess through the intratonsillar fossa by means of sinus forceps.

of its evacuation. The forceps are quickly withdrawn the patient's head is bent well forwards to allow the pus to run out of his mouth and he is then given a warm mouth-wash of bicarbonate of soda solution, glycerin of thymol or the like.

#### Tonsillectomy

Sometimes it may be necessary to open a peritonsillar abscess more than once, and if the abscess fills again after a second incision it will be well to consider whether the tonsil should not be removed. There has been a good deal of controversy on this subject of recent years, though as a matter of fact the problem is by no means a new one. Chassaignac, as early as 1859, said that he would not hesitate to remove the tonsil in a case of "tonsil suppuration." It has been suggested by Canuyt and others (1933) that general anaesthesia for this purpose is dangerous on account of the possibility of subsequent pulmonary infection from pus aspirated into the lung, and also that the operation is dangerous because of the "fresh field opened up for infection."

Many American, French, German, and other authorities—along with a few in this country—have put their experience of tonsillectomy for peritonsillar abscess on record. With ordinary precautions there seems no reason to believe that pus is likely to be inhaled by the patient, or that the wound made by the tonsillectomy is liable to be any more dangerous than the usual incision made through the soft palate. However, in the vast majority of cases the question will not arise especially when the abscess is opened in the manner described above. I have personally removed the tonsil for peritonsillar abscess on six occasions only twice under local anaesthesia, 2 per cent novocain being injected after spraying with 10 per cent cocaine and four times under general anaesthesia. In each case the abscess had filled up again after it had been opened apparently thoroughly, on two or more occasions. In one instance the abscess was found to be situated at the lower and not the upper pole of the tonsil.

#### Complications

The complications of peritonsillar abscess, such as oedema of the glottis and haemorrhage, are rare but alarming. There is one type of abscess, fortunately atypical, in which the pus burrows laterally, bursts through the superior constrictor muscle and becomes localized in the pharyngo-maxillary space. Such an abscess is difficult of approach and the pus may burrow still further down-

wards and enter the mediastinum. The great vessels of the neck in such a case are close to the abscess cavity and thrombophlebitis may develop in them. In other cases the abscess may ulcerate one of the large arteries in the submaxillary region, and it has been necessary on occasion to ligate the external carotid artery. An abscess left to mature has been known to give rise to cavernous sinus thrombosis. Such complications, however, should not arise if the importance of early and thorough evacuation of the abscess is realized.

#### Retropharyngeal Abscess

Retropharyngeal abscess is of two types: the chronic, which is of tuberculous origin, usually secondary to tuberculous disease of the cervical vertebrae, and the acute, due to suppuration in the lymphatic glands (the glands of Gillette) situated behind the mucous membrane of the posterior pharyngeal wall. Though present in infancy, these glands gradually disappear as the child grows older, and are seldom present after the age of 2 years. They drain the nasopharynx and pharynx, and their efferent lymphatic vessels go to the upper group of deep cervical glands in the posterior triangle of the neck and beneath the sternomastoid muscle. There are two symmetrical pairs of glands, lying on each side of the vertebral column, so that when they become inflamed, from infection of the nose or throat, the process begins by being one-sided, but it gradually develops in the middle line because of the laxity of the submucous tissue in this region.

Acute retropharyngeal abscess is comparatively rare, but it has been said that probably no acute illness of childhood is more often overlooked. It occurs always in young children and should especially be kept in mind when an infant under the age of 12 months, after an ordinary cold with the usual symptoms of fever and nasal obstruction, shows signs of difficulty in swallowing and in breathing. Dysphagia accompanied by dyspnoea is very characteristic of retropharyngeal abscess. Usually there will be also the signs and symptoms associated with any serious illness in infants, such as high fever, often vomiting, and sometimes convulsions. The infant will try to feed, but chokes, coughs, and cannot drink its milk; it will then put its head back and cry. The dysphagia is caused by the mechanical obstruction due to the swollen pharynx and soon brings about a rapid loss of weight. Dyspnoea is usually noticed later and is also mechanical in origin, the progressive development of the abscess blocking the respiratory tract. The dyspnoea is sometimes spasmodic, and sometimes there is a change in the child's voice.

The condition is often mistaken for some other ailment, such as bronchitis, a foreign body in the larynx or lung, tonsillitis, peritonsillar abscess, oedema of the glottis, diphtheria, or even meningitis. The diagnosis is made by remembering that every sick child should always have its throat examined in a good light. The tongue should be held down by a spatula and the pharynx should be carefully palpated by the forefinger. In retropharyngeal abscess there is a red swelling of the back of the throat, sometimes rather hidden by the uvula, less often the swelling is lower down in the hypopharynx. It feels resistant and rather elastic to the touch; in the later stages fluctuation may be detected.

If the abscess is not opened the outlook is serious. Death may result from oedema of the glottis, asphyxia or heart failure from pressure on the vagus, and if the abscess bursts spontaneously a septic pneumonia will probably follow. Once the diagnosis is made the abscess should be opened, without waiting for fluctuation.

The infant is wrapped up in a blanket or a towel and laid flat on its back with a small sandbag or a rolled towel under its shoulders. Its limbs are held by its wrists and its knees are flexed. A spatula is usually all that is required to keep the tongue back and the child should not be moved. With the aid of a forehead light a pair of sinus forceps is plunged into the most prominent part of the swelling, i.e. the tip of the

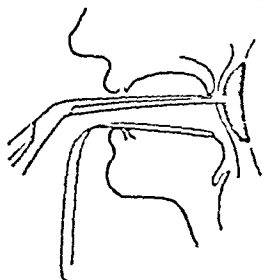


FIG 4—Opening a retropharyngeal abscess with a pair of sinus forceps.

opened widely to allow the pus which may be profuse to amount to four out. The infant is at once lifted up by its legs, so that the pus cannot get down to the lungs. The drainage is usually satisfactory but convalescence is slow because the child is generally in a poor state of health before the abscess is opened.

If the abscess points towards the neck opening through an external incision may have to be considered but it should not be looked upon as the incision of choice as used to be the case, for the dangers of opening the abscess by way of the mouth were formerly exaggerated. With ordinary precautions lung complications should not follow the opening of a retropharyngeal abscess by the method described.

#### REFERENCES

- Barnes H. A. (1923) *The Tonsils*. St. Louis.  
Cruick G. (1933) *Presse med.* 38, 69.  
Chassagnac E. (1859) *Traité de la Suppuration et du Drainage*.  
McKenzie Morell (1880) *Diseases of the Throat and Neck*.

## VOLUNTARY HOSPITALS EMERGENCY BED SERVICE

In our issue of June 4 (p. 1221) we published a short account of the scheme and the objects behind it. The service will come into operation on Tuesday, June 21 at 8 a.m. and it is now possible to give full details so that practitioners may know how it is worked and how to make use of it. The service will be open from 8 a.m. to 10 p.m. seven days a week in the early stages and will subsequently be extended to cover the twenty-four hours.

Since it is not possible to estimate accurately the number of calls which will be received the letters informing doctors that the service is at their disposal and giving the telephone number will be sent out in instalments in alphabetical order so that if necessary the issue can be stopped if it is found that more calls are coming in than the staff can deal with. The issue will be resumed so soon as the staff has been sufficiently increased. In actual fact a larger staff has been appointed than is expected to be necessary to work the day service so that it is not likely that the sending out of letters will be delayed.

#### Procedure for the Doctor

When a doctor desires to obtain admission to hospital for an emergency or acute case he can ring up the service whereupon he will be asked to give his name and telephone number, the patient's name, address, sex, and age and his diagnosis. He should then say to which hospital he wishes to have the patient admitted. With this informa-

tion the operator will be able to inform him whether or not a suitable bed has been reported free at that hospital. If no bed is free there then another hospital can be considered forthwith. When a bed is reported free the operator will obtain confirmation from the hospital in question for it may have been filled since the last report. On receiving confirmation she will book the bed and inform the doctor. There are two points in the course of this process at which it is suggested that the doctor could help the operator and himself: first, by saving at the end of his diagnosis whether it is a medical, surgical, ophthalmic, otolaryngological, orthopaedic or other case; and secondly by giving a choice of hospitals so that if the bed reported free at one has been filled she can ring the other forthwith without further reference to him.

#### How Hospital Accommodation is Indicated

It is perhaps well to explain how the list of free beds of all the hospitals is to be kept before the operators. This will be done by means of a large indicator board on which will be written the names of the hundred co-operating hospitals, against these names tickets will be run, representing the free beds. The tickets will be made in different pairs to indicate the sex—for example all male tickets will be square, the female ones round and the children's triangular. The types of bed—whether medical, surgical, etc.—will be indicated by colours. Thus once the indication of the case is clear the operator will be able to find accommodation almost at a glance.

The operators have not had medical training but a number of them have worked in hospitals or been doctors, secretaries, and nurses have acquired a certain familiarity with medical terms. It is expected therefore that they will all soon pick these up. At first however and always in the case of obscure or rare cases it will be a great help if doctors provide a general classification as well as the diagnosis.

As regards the beds indicated as free it would obviously be ideal if hospitals were to report to the service every time a case was admitted or discharged thus enabling an accurate up to the minute record to be always available. But this would involve such an expenditure of time and money in telephone calls that it would defeat the object of the service. So a compromise has been struck and to begin with the record will be obtained twice daily at times that have been arranged to suit the individual hospitals. Generally speaking the first record will be taken between 8 and 10.30 a.m. and the second between 4 and 7 p.m. Only on practical experience can it be decided whether more frequent records are necessary or desirable.

#### The Service as a Working Experiment

It will be gathered from the foregoing that at first the whole service must be partly in the nature of a working experiment. No service on a comparable scale exists anywhere else so that the details have had to be worked out to suit the conditions and all are open to revision in the light of experience. There is no reason why the scheme should not run smoothly after a fairly short period provided always that the doctors and hospitals alike give it their friendly support.

In conclusion it is perhaps worth while pointing out that for any given case there are probably some twenty-five hospitals to which it could reasonably be sent and a survey of all these can be made in a few minutes. For instance a gynaecological patient in North London could go either to one of the North London general hospitals or to one of the Central London general hospitals or the doctor might prefer to send her to a hospital specializing in diseases of women. It thus seems unlikely that in normal times it will not be possible to find a bed in any of the hospitals in these three groups. It is to be hoped therefore that one call on the bed service will prove an attainable ideal.

## THE DOCTORS' COOKERY BOOK, 1938

AN ASSESSMENT OF THE NUTRITIONAL  
VALUE OF THE DIETS

Recent progress in the assessment of the vitamin and mineral content of foodstuffs, and the acceptance by leading authorities on nutrition of certain standards for individual daily intake of these important constituents of protective foods made it desirable to re-examine the nutritional value of the family dietary (No 16 of the B M A Nutrition Report of 1933) which was used as the basis in the booklet entitled *Family Meals and Catering* before deciding on the publication of a new edition.

In response to a request from the British Medical Association the Ministry of Health indicated that information as to accepted standards of individual requirements for minerals and vitamins, and of values for the content of various foodstuffs in respect of these constituents, could be found in the publications listed at the end of this report. The present assessment of the adequacy or otherwise of the mineral and vitamin content of the three-weeks dietaries for a family of man, wife, and three children aged 6 to 14 years was based on information contained in those publications and can therefore be taken as an assessment of the nutritional value of the diets in the light of most recent scientific knowledge and opinion.

## Minerals

## (a) STANDARDS

Sherman (1937) publishes a table of the mineral and vitamin contents of a diet 'to furnish not only the minimum requirements of the body but an ample margin of safety as well'. The original table is from Stebeling (1933), this table is also used by Orr as his standard in *Food, Health and Income* (Table I).

TABLE I—Quantities of Nutrients for Individuals per Day  
Minimum Requirements with Ample Margin of  
Safety (Stebeling 1933, Sherman 1937)

Individuals by Age, Sex and Activity Groups	Energy Value (Calories)	Dietary Allowance in			
		Protein (Grammes)	Calcium (Grammes)	Phos- phorus (Grammes)	Iron (Grammes)
Child under 4 years	1 200	45	1 00	1 00	0 006 0 009
Boy 4-6 years	1 500	55	1 00	1 00	0 008 0 011
Boy 7-8 years	2 100	65	1 00	1 00	0 011 0 015
Boy 9-10 years	2 400	75	1 00	1 20	0 012 0 015
Child 11-13 years					
Moderately active woman					
Boy 11-12 years					
Girl over 13 years	2 500	75	1 00	1 20	0 013 0 015
Very active woman					
Active boy 13-15 years	3 000	75	0 88	1 32	0 015
Active boy over 15 years	3 000-4 000	75	0 88	1 32	0 015
Moderately ac- tive man	3 000	67	0 68	1 32	0 015
Very active man	4 500	67	0 68	1 32	0 015

On examining the table it will be noticed that there is some apparent discrepancy in the standard for calcium: the moderately active woman having a larger allowance of calcium than the very active woman, but a smaller allowance of phosphorus. On inquiry into this point it was ascertained that the diet from which this table was drawn up was not intended to set a standard but to indicate a possible adequate diet at a minimum cost and that primarily the moderately active woman was classed with the boy 11 to 12 (or girl over 13) on the basis of calorie requirement. Attention was also drawn to the fact that 0 88 or 1 00 gramme of calcium is above the present suggested standard of 0 75 gramme daily for an adult female.

On the basis of this table with the new figure of 0 75 as a minimum Ca the B M A family of diet No 16 would have

the following calorie, protein, and mineral requirements (Table II)

TABLE II

	Calories	Grammes of			
		Protein	Calcium	Phos- phorus	Iron
Man	3 000 (up to 4 500)	67	0 68	1 32	0 015
Wife	2 500 (up to 3 000)	75	0 75 (up to 1 00)	1 20 (1 32)	0 014 (0 015)
Child 6-8	1 500	55	1 00	1 00	0 010
" 10-12	2 500	75	1 00	1 10	0 012
12-14	2 500	75	1 00	1 20	0 014
Daily total	12 000 (up to 14 000)	347	4 43 (up to 4 68)	5 82 (up to 5 94)	0 065 (up to 0 066)
Weekly total	84 000 (up to 98 000)	2 429	31 01 (up to 32 76)	40 74 (up to 41 58)	0 455 (up to 0 462)

As the sex of the children in the B M A family was not stated and as in Stebeling's table boys received a higher allowance of some constituents than girls of the same age, the difference has been split to give an average—that is, child 10 to 12, 1 10 grammes P. The *Family Meals and Catering* variations being of weekly rations, the Stebeling daily allowances have been brought up to weekly ones, to admit of direct comparison.

## (b) CALCULATION OF MINERALS (CALCIUM, PHOSPHORUS AND IRON) IN THE B M A VARIATIONS OF DIET NO 16

The publications quoted by the Ministry of Health give a wide choice for the assessment of the mineral content of foodstuffs, and include all those items listed in *Family Meals and Catering*. The data of mineral content from these sources, together with the appropriate McCance factor to allow for losses through cooking, waste, etc., of meat or fish, fruit and vegetables, have been used in the present assessment of minerals in the three-weeks variations of diet No 16. Hence the resulting mineral content for each week will be practically the net total. The three-weeks variations, when worked out from the analyses chosen, give the following results (Table III).

TABLE III

	Calories	Grammes of			
		Protein	Calcium	Phosphorus	Iron
Week I	98 874	3 003	30 07975	47 77567	0 50398
II	99 377	2 836	28 72247	46 25129	0 48772
III	98 593	2 753	25 18224	42 77382	0 52066
Average weekly	296 844 98 948	8 592 2 864	83 98446 27 99482	136 80078 45 60026	1 51236 0 50412

On comparing these results with the weekly allowances of Table II it will be seen that the average content of the three-weeks diet is well up to the Stebeling diet, which was calculated to 'furnish an ample margin of safety' in everything but the calcium content. Family No 16 contains three children of school age. If these three children drink a third of a pint of milk each at school (five days weekly, at 1<sup>st</sup> d per day = 7<sup>th</sup> d), and the food value of the five pints of milk is added to the weekly average content of the diet, while the monetary equivalent in amount of bread is deducted (4<sup>th</sup> lb of bread at 3<sup>rd</sup> d per 2 lb (cost in 1933) = 7<sup>th</sup> d), the result is as follows:

	Calories	Grammes of			
		Protein	Calcium	Phosphorus	Iron
Less Bread	-4 407	-132 0	-0 576	-1 3700	-0 01512
More Milk	+1 890	+ 93 5	+ 3 400	+ 2 6400	+ 0 00612
	-2 517	- 45 5	+2 824	+0 7700	0 00000

These figures added to or deducted from the averages of Table III will not make all allowances for the amount of the other constituents but will bring the calcium to the required level

Calcium	Calcium		
	Protein	Calcium	Iron
45	104	2505	50
100	100	2514	50
150	218	3000	50

### Vitamins

#### (a) STANDARDS

Only very tentative suggestions for the assessment of standards in vitamins or of the quantity of vitamin foods (evaluated as units) can be had at the present moment. Strehling (1933) gives the following quantities of vitamin A and vitamin C yielded by the adequate diet at minimum cost (Table IV).

TABLE IV—Quantities of Nutrients for Individuals to furnish not only the Minimum Requirements of the Body but an Ample Margin of Safety (Strehling 1933, Sherman 1937)

Individuals by Age Sex and Activity Groups	Vitamin A (S. Sherman Units)	Vitamin C (S. Sherman Units)
Child under 4 years	100	5
Boy 4-6 girl 4-7 years	300	5
" 7-8 " 8-10	300	5
" 9-10 " 11-13	500	5
Very active woman boy 11-12 years	4000	65
Girl over 13 years	4000	100
Very active woman active boy 13-15 years	4000	100
Active boy over 16 years	4000	100
Very active man	4000	100
Very active man	4000	100

Daniel and Munsell (1937) on analysis of diets providing at least the minimum daily requirements for protein calcium phosphorus iron and calories have also estimated the vitamins yielded by such diets and the Bureau of Home Economics is using the results of this calculation as a very tentative standard for the various vitamins (Table V).

TABLE V

	Vitamin A	Vitamin B <sub>1</sub>	Vitamin C	Vitamin D	Vitamin B <sub>2</sub>
Per 1000 kcal/day	6000 Sherman Units	600 Sherman Units	150 Sherman Units	—	600 Sherman Units

For vitamin D they do not attempt to fix a standard

#### (b) CALCULATIONS OF VITAMINS IN THE B.M.A. VARIATIONS OF DIET NO. 16

From tables given by Daniel and Munsell (1937) it has been possible to make a fairly accurate estimation in Sherman units for vitamins A, B<sub>1</sub>, C and B<sub>2</sub> and in international units for vitamin D. In the case of various meats and eggs the vitamins in Daniel and Munsell's tables are estimated separately for lean and fat white and yolk. Where this is the case estimations for the vitamins yielded have been adjusted to the proportions of fat and lean etc. given by Plummer (1921) for the foodstuffs concerned. In the menu for Week III 1 lb rabbit is used. It has not been possible to trace any analyses of vitamins

in rabbit otherwise the lists are complete. In the case of B the vitamin content of a few foodstuffs is given in international units only and as the conversion figure into Sherman units is not standardized no attempt has been made to convert such units. Vitamin B<sub>2</sub> will therefore be present in the various foodstuffs in not smaller quantities than has been stated is the result of the calculations. But it must be emphasized that such calculations may not be accurate and these are however all that is at present available from published data.

From the Strehling table the following requirements for vitamins A, B<sub>1</sub> (daily man value 2891) in vitamins A and C can be constructed (Table VI).

TABLE VI

	Vitamin A (S. Sherman Units)	Vitamin C (S. Sherman Units)
I	4000	100
W	4000	95
C	500	5
" 1-2	500	5
" 3-4	500	5
" 5-6	500	5
" 7-8	500	5
" 9-10	500	5
" 11-12	500	5
" 13-14	500	5
" 15-16	500	5
" 17-18	500	5
" 19-20	500	5
" 21-22	500	5
" 23-24	500	5
" 25-26	500	5
" 27-28	500	5
" 29-30	500	5
" 31-32	500	5
" 33-34	500	5
" 35-36	500	5
" 37-38	500	5
" 39-40	500	5
" 41-42	500	5
" 43-44	500	5
" 45-46	500	5
" 47-48	500	5
" 49-50	500	5
" 51-52	500	5
" 53-54	500	5
" 55-56	500	5
" 57-58	500	5
" 59-60	500	5
" 61-62	500	5
" 63-64	500	5
" 65-66	500	5
" 67-68	500	5
" 69-70	500	5
" 71-72	500	5
" 73-74	500	5
" 75-76	500	5
" 77-78	500	5
" 79-80	500	5
" 81-82	500	5
" 83-84	500	5
" 85-86	500	5
" 87-88	500	5
" 89-90	500	5
" 91-92	500	5
" 93-94	500	5
" 95-96	500	5
" 97-98	500	5
" 99-100	500	5

The actual result of the calculations in the three weeks' period is shown in Table VII.

TABLE VII

	Vitamin A (S. Sherman Units)	Vitamin B <sub>1</sub> (S. Sherman Units)	Vitamin C (S. Sherman Units)	Vitamin D (S. Sherman Units)	Vitamin B <sub>2</sub> (S. Sherman Units)
Week I	1000	70	10	—	10
Week II	1000	70	10	—	10
Week III	1000	70	10	—	10
Average weekly	1000	70	10	—	10
Average daily	1000	70	10	—	10
Average per 1000 kcal	1000	70	10	—	10

Rabbit not included.  
† Vitamin B<sub>2</sub> not included.

The weekly figure is to be compared with the weekly total of Table VI. The daily per man value figure is to be compared with the figures of Table V. According to the Strehling standard vitamin C is low but according to Daniel and Munsell requirements in all vitamins are well covered without the readjustment proposed between bread and milk in the section on minerals which would raise the amount of vitamin A by over 4600 units weekly.

### Costs

Questionnaires were sent out to medical officers of health of various urban and rural districts in England and Wales including those who co-operated in the original investigation into costs in 1933. The questionnaires included all the foodstuffs listed in the three weeks' menus and it was asked that maximum medium and minimum prices of shops or markets in working class districts should be collected at the end of January or beginning of February on a Friday and Saturday. Full replies were received from the medical officers of health of seventeen widely distributed districts. In an average case a price appeared very different from national generally inquiry was made again and the statement was thus checked. From some

centres more than one questionnaire was filled up to represent different shopping districts in the city or county. When this was done the average cost (both maximum and minimum) of each article was worked out for that city or county so that each district might be represented once only in the total. Thus though thirty-five completed questionnaires were returned, the districts represented number seventeen. As so many centres were unable to furnish a medium price, only the maximum and minimum prices were finally averaged out for each article listed. The cost of the articles in the quantity stated in the shopping list for each week was then worked out on the two scales, correct to the nearest farthing. The cost on the two scales is as follows

TABLE VIII

	Cost in Pence	
	Minimum	Maximum
Week I	310 00	424 25
II	330 25	445 75
III	340 00	455 75
	980 25	1 325 75
Stores I	0 50	0 50
II	3 75	3 75
III	—	—
Total for 3 weeks	984 50	1 330 00
Average per week	328 1667	443 333
	27s 4½d	36s 11½d

The minimum price of 27s 4½d may be compared with the figure 22s 6½d (cost in 1933), the percentage increase being 21.3. The mean of the two prices (27s 4½d, 36s 11½d) would be 32s 1½d. It must be remembered that either scale of figures must be liable to considerable variation. The variation may be due to local, seasonal, or other factors.

### General Conclusions

The object of the present investigation was to assess the three-weeks variations of diet No. 16 in the light of present knowledge.

In regard to energy value, proteins, fats, and carbohydrates the diets conform to accepted standards. Of the minerals the requirements in phosphorus and iron are amply covered in each week but having regard to the fact that the family includes three children the calcium content might be increased as recommended in the original foreword to *Family Meals and Catering*—that is, that children of school age should take advantage of the school milk service. Calculations show that if this is done the requirement for calcium for growth is adequately met according to present opinion.

In regard to the vitamins it appears that the only deficiency is in respect of vitamin C, and this only according to one scale of adequacy (Stiebeling) and not to another (Daniel and Munsell). It may be thought desirable to increase the vitamin C content by purchasing according to season more citrus fruits, tomatoes, or green vegetables, and balancing their increased cost by an appropriate reduction in the money spent on meat. This would seem a reasonable modification in a family of this composition. It may be pointed out that in a family of the same man-value made up entirely of adults such modifications would not be necessary.

The present cost of the diets purchased at the minimum prices amounts to 27s 4½d, as against 22s 6½d in June 1933. This figure is 21.3 per cent. above that of the cost at 1933 prices.

### BIBLIOGRAPHY

- Bridges, M. A. (1935) *Food and Beverage Analyses* Philadelphia, Daniel, E. P., and Munsell, H. L. (1937) US Dept Agric Misc Pub No 275 Washington, D.C.  
McCance, R. A., and Shipp, H. L. (1933) *Med Res Cncl Sp Rep Ser No 187*  
Widdowson, E. M., and Shreckleton, L. R. B. (1936) *Ibid*, No 213  
(1932) *Ibid*, No 167  
Plimmer, R. H. (1921) *Analyses and Energy Value of Foods* HMSO London  
Sherman, H. C. (1937) *Chemistry of Food and Nutrition* 5th ed., p 524, Macmillan Company New York  
Stiebeling, H. K. (1933) US Dept Agric Misc Pub No 183, Washington, D.C.

### INTERNATIONAL HOSPITAL ASSOCIATION

The meeting of the Council of Management of the International Hospital Association has been held recently in Frankfurt-on-Main, when eleven countries were represented—namely, Canada, Czechoslovakia, Belgium, Eire, Germany, Great Britain, Holland, Hungary, Italy, Switzerland, and the United States of America.

Dr. Rene Sand occupied the chair, and his knowledge of German, French, and English made for smooth working. Dr. von Deschanden was thanked in his absence for his fine services to the association, and was elected as honorary president. Dr. W. Alter, to whom no one has given more needed help, was secured in his office of honorary secretary, and Miss R. M. Murray as executive secretary. Mr. E. Hirsch was appointed honorary treasurer. Much appreciation was evinced in the quarterly publication of the association named *Nosokomion* of which Dr. Alter is the able editor. Dr. Malcolm T. MacEachern, associate director of the American College of Surgeons, Chicago, was elected president and will preside at the congress of the association to be held next year in Toronto, Canada, from September 19 to 23, 1939. It is hoped that there will be a large contingent from Great Britain and Eire, as well as from Continental countries as the congress will be followed immediately by the Convention of the American Hospital Association.

The congress in 1941 will take place in Berlin, under the presidency of Dr. R. Zeitler of that city. Mr. W. McAdam Eccles M.S., F.R.C.S., brought a unanimous invitation from the United Kingdom Council of the I.H.A. to hold the congress of 1943 in Great Britain, and this was accepted with acclamation. There are forty study committees at work and their reports and resolutions will be presented to the congress in Toronto.

The International Hospital Association is increasing its number of national and individual members and thus growing in influence the world over. Anyone interested is invited to communicate with the joint honorary secretaries, International Hospital Association, 12, Grosvenor Crescent, London, S.W.1.

F. Blumenthal and W. L. Sherman (*Amer J Syph Gon* March 1938) discuss the cutaneous manifestations of gonorrhea. The metastatic manifestations include erythema, urticaria, erythema nodosum-like lesions, purpura, bullae, and hyperkeratoses, the last being associated with conjunctivitis and arthritis. The skin affection is at the extremities, the arthritis multiple and accompanied by only slight pain and not usually followed by ankylosis. A case is reported in which joint pains and penile dyskeratosis developed and disappeared with the exacerbations and remissions of a gonococcal prostatitis. The skin lesions differed from psoriasis in the presence of plasma cells, the arthritis was not associated with bony changes, and it is suggested that the skin and joint conditions were allergic manifestations due to the breakdown of gonorrhoeal metastases. Gonococci are rarely found in the lesions but there is always a positive blood complement fixation test.

## THE BIRTHDAY HONOURS

The Honours List issued on the occasion of the celebration of His Majesty's birthday included the names of the following members of the medical profession:

*Ambulance*

WILLIAM GIRLING BALL FRCS Surgeon to the Medical College St Bartholomew's Hospital  
HENRY HOWARTH BASHFORD MD MRCS C. M. S. Chief Officer General Post Office  
WILLIAM JOHN HANDFIELD HASSELL MRCS L.R.C.P. For political and public services in the Sudan and the Middle East  
ROBERT BLAKEWAY WADE MD FRACS F.R.C.S. (Ed.) the Medical Board State of New South Wales

*CB (Military Division)*

Major General GEORGE ALFRED DUNCA HON. (late R.A.M.C.) Honorary Physician to the King  
Director of Medical Service Western Command

*CMG*

Colonel GEORGE WYKHAM HILTON CBE DSO F.R.C.S. Medical Service Director of Medical Services

*CIE*

Lieutenant Colonel NILKANTH SHIRAM JATAP DSO F.R.C.S. Inspector General of Prisons Central Provinces and Berar  
Lieutenant Colonel EDWARD HUMBLEY VERE HODGKINS FRCP, IMS Professor of Medicine Medical College Calcutta and First Physician to the College Hospital

*CBE (Military Division)*

Colonel PHILIP HENRY MITCHNER TD MD FRCS Honorary Surgeon to the King Assistant Director of Medical Services 1st Anti Aircraft Division Territorial Army

*CBE (Civil Division)*

JAMES FENTON MD MRCP DPH Medical Officer of Health Royal Borough of Kensington  
Miss ELIZABETH HURDON MD Lately Director Medical Services and Research the Marie Curie Hospital Hampstead and now a member of the Advisory Council of the Hospital  
AUGUSTUS LEO KENNY MB ChB FRACS For social welfare services in the State of Victoria

*OBE (Military Division)*

Surgeon Commander JOSEPH ARCHIBALD MAXWELL MB BCh FRCS RN  
Major CHARLES BEVAN CAREW ANDERSON MB FRCS ED R.A.M.C.  
Wing Commander PHILIP CLERMONT LIVINGSTON FRCS ED DPH RAF

*OBE (Civil Division)*

WALTER HAWARD MB BS Assistant Director of Medical Services Ministry of Pensions  
ALEXANDER SHEARER MB CM Medical Officer Department of Health for Scotland  
Mr VERA BROWN MD BS Director of Infant Welfare Public Health Department State of Victoria  
Miss ISABELLA YOUNGER ROSS MB ChB Honorary Secretary Baby Health Centres Association State of Victoria  
Lieutenant Colonel AMBLER NATH BOSE MBE MD FRCP, IMS Professor of Pathology Prince of Wales Medical College Patna Bihar  
Lieutenant-Colonel LLOYD KIRKWOOD LEDGER MRCS L.R.C.P. IMS Civil Surgeon Peshawar North West Frontier Province  
Miss ISABELLA HARDIE CURR MBE L.R.C.P. and SED In charge of the McLeod Hospital for Women at Inuvial near Inuvial Cevlon  
Professor RUPERT MONTGOMERY GORDON MD DSc MRCP Director of Sir A. L. Jones Research Laboratory Freetown Sierra Leone  
ROBERT BEST JACKSON MD Colonial Medical Service Malanogist Medical Department Hong Kong  
ROBERT YELVERTON STONES MC MD MRCP Physician in-Charge of the Church Missionary Society's Hospital at Namirembe Uganda Protectorate

*MBE (Military Division)*

Assistant Surgeon (4th Class) ERNEST PERCIVAL DENTON Indian Medical Department  
Captain JOHN PRIMROSE DOUGLAS MB R.A.M.C.

*MBE (Civil Division)*

Mr J. S. JADWICA SUBRAMANIAM IYER BS MRCS D. Sc. M. A. and Child Welfare Section of the United Provinces Branch of the Indian Red Cross Society  
Captain E. H. BEN AMIN MB BS DPH Assistant Director of Public Health Sir  
Mrs F. E. H. HENPOLETTE MRCS L.R.C.P. F.R.C.S. (Ed.) Department Clinical Assistant to the Professor of Midwifery King Edward Medical College London  
Mr R. H. L. SCUDGON RALPH HOLMES Indian Medical Department Quarantine Medical Officer Bahrain  
Mr D. O. C. CH. Victoria Memorial Hospital  
Mr H. E. C. I. M. MRCS L.R.C.P. Senior Medical Officer Sir John's

## Reports of Societies

## SCIENTIFIC TREATMENT OF DELINQUENCY

The Institute for the Scientific Treatment of Delinquency held its general meeting at the British Industries Exhibition on May 26. Mr NORMAN BIRKETT K.C. President of the Institute said that he thought that the Institute had recently suffered from its name; it probably had not made the scope of the work but it only appeared proper to the initiated. The moment the psychology of crime was mentioned in this country a strong reaction was aroused in the minds of ordinary people. The English habit of mind had been more and more concerned with the need for a scientific approach to the cause and prevention of crime and the treatment of offenders. The English habit of mind had been to treat the causes of crime in a rather haphazard way. It was high time that the problem was dealt with scientifically. One of the most valuable activities of the Institute was the work it did in conjunction with magistrates' courts and probation officers.

Dr DE. IS CARROLL agreed that the name of the Institute was absurd. No treatment was strictly scientific in psychology or in medicine. The Institute would however stick to its name shortened for general use to ISTD. The relations of the Institute with the Home Office were closer than they had ever been. Some types of criminals were theoretically curable but psychologists did not yet know how to cure them. The clinic needed one or two half-time research workers for on the clinical side the best men were in private practice. One great difficulty about research in this kind of work was the storage of the inevitable bulky records. The study of delinquency on psychological lines had now reached a stage at which it could put forward suggestions as to definite lines of treatment.

The annual report showed a steady increase in the work although dealing with the 167 new cases strained the Institute's resources. The waiting list had been satisfactorily reduced by the appointment of a medical registrar and the assistance of a skilled social worker had been invaluable in finding and supervising accommodation for patients requiring inpatient conditions. Early in the year the Institute was asked to co-operate with the British Paramount News in a news reel on Shoplifting. In January the Institute was officially recognized by the Child Guidance Council as a child guidance clinic.

## Week-end Course

A week-end course of lectures for doctors on the causes and treatment of delinquency was held on May 28 and 29. Mr T. H. MARSHALL reader in sociology in the University of London spoke on the sociological aspect and dealt with the social causes of delinquency, the idea of responsibility and the social functions of punishment. Dr C. J. C. EARL opened a group discussion on Intelligence—



subnormal and supernormal—as a factor in delinquency.” He pointed out that the relation of intelligence to delinquency was indirect, and the intellectual factor had always to be considered in relation to the personality as a whole. Subnormal intelligence itself was a rare cause of crime. Dr J. D. W. PEARCE gave two lectures on the psychopathology of delinquency, showing how delinquency was a reaction to negative feelings engendered by the frustration of fundamental urges and how the delinquent gained compensatory satisfactions and escape from difficulty, usually without being aware of what he was doing. He also dealt with delinquency as a symptom of various psychoneuroses, psychoses and metabolic disorders. On the Sunday Dr DENIS CARROLL lectured on the medical treatment of delinquents. A general discussion took place on the topics raised in all the lectures.

### PREGNANCY AND PARTURITION AFTER AMPUTATION OF THE CERVIX

A meeting of the North of England Obstetrical and Gynaecological Society was held in Leeds on April 29. Dr J. W. A. HUNTER (Manchester) read a paper on the effect of amputation of the cervix on subsequent pregnancy and labour.

Dr Hunter made a plea for a more conservative attitude to endocervicitis and cervical lacerations in view of the increasing adoption of extensive plastic procedures in women of child-bearing age in preference to pessary treatment. A study of the literature dealing with the dangerous sequelae of cervical amputation and repair led to the conclusion that these operations in women of child-bearing age might cause sterility, repeated abortion, premature labour, or obstructed labour. His interest indeed was first drawn to the subject by seeing a case under the care of the late Dr Hugh Ferguson. The patient had had her cervix amputated previously by Emmet himself, and subsequently had seven abortions. A first and living child was at last obtained after she consented to remain in bed from the onset of the pregnancy. In the last nine months he had encountered nine further cases of abortions occurring for the first time after cervical amputation. Discussing the question of dystocia, Dr Hunter went on to describe a series of eighteen cases of labour following cervical operations. In ten the labour was uneventful, in three Caesarean section proved necessary, in three vaginal Caesarean section, and manual dilatation of the cervix was needed in two cases. There were three maternal deaths following delivery by the vaginal route, all being due to a rupture of the cervical stump extending up into the lower uterine segment.

#### Modified Plastic Operation

In an attempt to minimize the dangers of cervical plastic surgery Dr Hunter said he had devised a modification of the usual plastic technique to be used in some cases of prolapse occurring in young women, particularly those cases in which there was little cervical hypertrophy present and the length of the uterus did not exceed three and a half inches—cases in which there was relaxation of all the uterine supports. Essentially the operation consisted of one circular incision about half an inch above the external os and another one inch to one and a half inches above this, enabling a complete circle of vaginal skin to be removed. The customary anterior colporrhaphy was then performed and completed by first suturing the cervix to the vaginal skin beginning behind and working round to the front at each side. Thus the Fothergill principle of sliding the uterus upwards and backwards was maintained but with conservation of the cervix. Sometimes after the operation the uterus tended to remain in the vaginal axis. This might be remedied by opening the anterior peritoneal pouch and stitching the uterus to the peritoneum at the level of the anterior colporrhaphy or alternatively by performing a Gilliam's suspension operation.

Professor DANIEL DOUGAL said he had done a similar operation on one occasion. He advocated only a low amputation in these cases of prolapse in young women. Mr JEATFRESON (Leeds) confirmed from his own cases the increased tendency to abortion after cervical amputation. The main technical operative difficulty in dealing with this type of prolapse was that unless something was done to fix the cervix the vaginal walls tended to sag after the operation.

Mr GLYNN DAVILS (Sheffield) stressed the need for removing the unhealthy tissues surrounding the os uteri; he found that removing but a shaving of the cervix sufficed in performing the Fothergill operation. In an analysis of 400 cases he had found that only 60 per cent of the women who could have conceived after the operation did so. Mr BRYAN WILLIAMS (Liverpool) did not consider that cervical repairs had a significantly sterilizing effect, but regarded routine amputation of the cervix as quite unjustifiable in women of child-bearing age. Professor W. FLETCHER SHAW welcomed criticism of the Fothergill operation in view of its widespread adoption. He did not think the operation had a sterilizing effect, rather the reverse. In about one-third of the cases the prolapse recurred after a subsequent labour.

## Local News

### NEW ZEALAND

[FROM OUR CORRESPONDENT IN WELLINGTON]

#### When an Insured Person is Not Insured

Whether tetanus, in a case which ended fatally, was an injury received when a woman fell from a motor-car, or whether it was only the result of the injuries, was one of the questions that arose in an interesting case decided by the New Zealand Court of Appeal in judgments delivered on April 29. The appeal was brought by an insurance company against the decision of Judge Northcroft, who held that the administrator of the estate of a deceased woman was entitled to recover from the company the sum of £1,000, being the amount the woman was insured for at the time she fell from a moving car and suffered slight physical injuries from which tetanus developed. Three judges allowed the appeal and one dissented.

The Chief Justice said that the correctness of the decision depended upon the true construction of the insurance policy. The policy provided that the company should pay to the insured or her personal representative

“(a) if the insured shall within three calendar months of the occurrence of the accident die solely as the direct result of the actual physical injuries received in the accident, the sum of £1,000 provided that no compensation shall be payable under Section (a) when the death is due to a disease which is the direct or indirect result of the injuries received in the accident or which may attack the insured in consequence of his lowered vitality, whether such lowered vitality is due to the accident or not or for death due to a disease from which the insured suffered prior to the accident and which has been intensified by the accident.”

The Chief Justice declared that the disease itself could not be said to be part and parcel of the “actual physical injury” received in the accident. The most that could be said, as the trial judge had found, was that at the time of the accident there was imported into the wound dirt which included germs or spores of tetanus. The case, in his opinion, seemed to be that of a disease supervening and consequent upon the actual physical injuries. In other words, the insured sustained actual physical injuries, the disease of tetanus supervened as a direct result of such injuries, and the insured died as a result of that disease. Thus the case came within the proviso. He also stated in his judgment as follows:

There is no reason why an insurance contract should not be made except on the basis of a contract of indemnity. It would not be appropriate to expect a person to be liable where the death is due to disease, and it is not clear how the death may be caused. That is exactly what has happened in this case. If I am right then even though it is a simple case of the wound at the time of the accident did not contain germs or spores of tetanus, and such information can be said to be part and parcel of the actual physical injury. The death of the insured was admitted due to the disease of tetanus which developed some days after the injury. Such a case was the direct result of the injury—that is, of the introduction of the germs or spores into the wound. The original injury had expressly protected it against liability. The death was due to a disease, even though it was not directly against liability where the death was due to an intervening disease.

The dissenting Judge held that the language of the exception or proviso in the insurance policy was in appropriate to exclude a disease such as tetanus in a case which arising from the accident, and the death of the insured was due to the disease of tetanus, and not merely a result of the injury. Tetanus was not the result of the injury, but it was itself the main injury.

### National Health Insurance

A special session of Parliament was called to discuss National Health Insurance and Superannuation. However, no such legislation was passed because the Government declared that many difficulties had to be overcome and much more consideration of the proposals was required. Therefore a special Parliamentary Committee was set up to take evidence in the recess and advise the Government. Before this committee had time to do more than begin its investigations the Prime Minister announced the Government's policy. There is to be a means test for superannuitants but none at all for the national health service. The latter service is for all rich and poor alike; it will provide no specialist treatment. The health and superannuation scheme will add a shilling in the pound to income tax and an unknown sum in addition will be drawn from the Consolidated Fund. This will assist the redistribution of wealth.

After the Prime Minister's policy was announced the Parliamentary committee continued to take evidence. Testimony from representatives of the medical profession was not very well received. The views of witnesses representing the Hospital Boards Conference were in the main at variance with the Prime Minister's proposals. A representative of the Douglas Credit Group said the whole scheme could be made to cost nothing. At present, therefore, it may be said without fear of contradiction that nobody knows in what precise way national health is to benefit. Facilities for drinking medicine will be increased and the hours extended.

## ENGLAND AND WALES

### King Edward's Hospital Fund

The Duke of Kent presiding over the annual meeting of the President and Council of King Edward's Hospital Fund at St James's Palace announced the start of the new experiment in co-operation in the voluntary hospital service of London—namely, the establishment jointly by the hospitals and the King's Fund of a central office to facilitate the quicker admission of urgent and acute cases (see *Journal* June 4, p. 1221 and p. 1325 of this issue). The annual report showed that the hospitals taken together had increased their income in 1937 by about £350,000. Expenditure had also increased however and the net result was a small credit margin of about £8,000 on a turnover of over £4,500,000. This was better than in 1936 when there was a small aggregate deficit for the first time since 1926 after which year the aggregate income of the London hospitals had increased from a little over £3,000,000 to well over £4,000,000 and the total receipts for capital and maintenance had grown to £5,000,000,

including more than £2,000,000 in voluntary gifts and over £1,000,000 contributed by outpatients. The Duke of Kent added that this result had no been attained without great personal efforts and sacrifices on the part both of hospital volunteers and of members of the public and that still greater effort would be needed in view of the increasing difficulties of the present time. But these were worth while to have were great advantages in the system of having no kinds of hospital the voluntary and the municipal influencing each other and co-operating to form a complete hospital service the voluntary hospitals emphasizing the values associated with freedom elasticity and personal initiative so important in medicine and surgery and the municipal hospitals the values associated with large scale work and centralized administration under a public authority. The voluntary hospitals were trying to increase their income and on the other hand to combine the advantages of organization with those of freedom by means of voluntary co-operation. The King's Fund had from time to time been able to help the hospitals in their efforts to develop new sources of income. Within the last two years the hospitals had agreed to the inauguration of a combined fund which had succeeded splendidly. It was announced by the Distribution Committee that it now had stock of seven cwt grammes of radium most of which was being used in various individual hospitals. A small amount was kept in a pool from which it was lent to hospitals when it was needed for a patient. The new forms of radium treatment could be developed where radium was applied in large quantities and distance from the patient.

### Home Service Ambulances

The annual report of the Home Service Ambulance Committee of the Joint Council of the Order of St. John and the British Red Cross Society states that the ambulances carried 161,840 patients during 1937. In the course of the year under review two new stations were equipped one at Kingston in Herefordshire the other at Ripley in Derbyshire. The report describes the notable increase in comfort and even luxury which is a feature of modern ambulances so that journeys of two hundred miles or more are undertaken without undue distress to the patient. Improvements have also been evolved in methods of loading and unloading stretchers. With regard to the x-ray department it is stated that the mobile x-ray unit is able to carry out in private houses and nursing homes radiographic work of a quality comparable to that produced by the stationary unit of a large hospital. The service provides both a high powered unit for ultra rapid chest radiography and a low powered unit for fine focus maximum detailed investigation of bones and joints. The report stresses the importance of an adequately trained personnel imbued with sympathy, knowledge and judgment. Except in times of special emergency the transference of the ambulance work of the country to municipal or national control is not advocated. It is however suggested that a fuller recognition of a service which carries a growing burden on public view is desirable on the part of local authorities especially those responsible for county administration.

### Sewage in the Mersey Estuary

In a report issued as Water Pollution Research Technical Paper No. 7 by the Department of Scientific and Industrial Research (H.M. Stationery Office 30s.) a detailed description is given of the results of a chemical hydrographic and biological investigation of the effects of the discharge of crude sewage on the amount and nature of the deposits in the estuary of the River Mersey. For many years the possible effects on the concentration of the estuary of the direct discharge of sewage from a population of nearly one and a half million people have given rise to controversy among the local interests concerned. Since 1920 to facilitate the passage of ocean-going ships the sea channels in Liverpool Bay have been deepened by continuous dredging. It had been suggested that the nature

## CORRESPONDENCE

may be shown at the site of operation on the stomach, in the abdominal wound itself, or as a post-operative pulmonary complication. In a recent series of 506 cases of carcinoma of the stomach at St Bartholomew's Hospital, which I investigated, exploratory laparotomy was carried out in 136. Of the cases explored, twenty-nine, or 21.3 per cent, died as the result of the operative intervention. This group, of course, was out of the question for radical and palliative surgery were out of the question. In the majority of cases death occurred within a week of operation, and therefore at a time when the healing of the abdominal wound was not complete. But I believe that whatever the mode of death, be it from peritoneal or pulmonary infection, it represents the failure of the normal reactionary processes to operative and anaesthetic trauma in a patient weakened and wisted by malignant disease.

What is the explanation of the good abdominal scars which Mr Riddell has noted in his cases? The healing of surgical wounds in general in relation to subsequent scar formation depends on several factors. The first of these is that the incision should be so planned that it is parallel to Langer's lines of elasticity of the skin. The second is that the incision should be at right angles to the surface of the skin. The third is that the skin should be undercut to free it from the subjacent muscles. The fourth is that reactionary changes produced by ligatures and skin sutures should be minimal. Finally, of course accurate coaptation of the skin itself is essential. This matter has been dealt with very fully in a recent article by Conway in *Surgery Gynecology and Obstetrics* (February 1938). The good scars that are obtained in patients with advanced malignant disease occur because the local fibroblastic response is subnormal, because there is usually marked laxity of the tissues and because the absence of tension in the skin itself and because the patients are often bedridden or almost so. On the other hand quite apart from operative technical considerations, the patient who gets the broad or the keloid type of scar is usually one who is fairly active or muscular, who has a fair amount of subcutaneous fat or even puts on fat after operation and one who has not an incurable or fatal disease.

The high mortality after exploratory laparotomy for carcinoma of the stomach and the good—that is, cosmetic—scars which are so often seen in those patients who survive operation are both aspects of the same phenomenon—namely a response which is less than the normal to the stimulus of operative trauma—I am, etc.,  
REGINALD T. PAYNE  
London W 1 June 7

## Treatment of Placenta Praevia

SIR—I was very interested in the excellent results in the treatment of placenta praevia recorded by Drs O Lloyd and J E Giesen in the *Journal* of June 11 (p 1258). An analysis of the results seems to show that although a plan is made for plugging the vagina the worst figures were obtained when this technique was followed. Of the ten deaths in 256 cases five were in patients so treated. I was brought up to believe in the value of vaginal plugging but it was scarcely ever done while I was Master of the Rotunda. It predisposes to sepsis and it is better to have the patient prepared for the preconceived treatment which can then be carried out without unnecessary manipulations and without plugging. I believe that every piper on placenta praevia the danger of delivery before the cervix is fully opened should be stressed especially in view of some recent communications in the

*Journal*. My views on treatment are expressed in Tweedy's *Practical Obstetrics* (Bethel Solomons and Falkiner, 1937), and it can be seen there that there were 138 cases during my Mastership with two deaths—a mortality rate of 1.4 per cent. These two deaths occurred early, and were due to errors in technique. This letter is written to praise and not to decry, and especially to point out that the excellent results of Drs Lloyd and Giesen could probably be improved if plugging were omitted. There should be no mortality from placenta praevia—I am, etc.,  
BETHEL SOLOMONS  
Dublin, June 13

## "Gonococcus Antitoxin" for Gonorrhoea

SIR—We have now taken advantage of Dr Anwyl-Davies's invitation to visit the venereal department of St Thomas's Hospital and have there examined the case records of twenty-five patients treated with "gonococcus antitoxin." We ask your permission to summarize our views on this question in the light of the additional information so obtained.  
Dr Anwyl-Davies wrote (*Journal*, March 26, p 701) as follows:

Since December 2, 1937, all the male out patients attending the venereal department of St Thomas's Hospital, suffering from acute gonorrhoea, who can attend regularly have been receiving daily doses of 1 ccm of the antitoxin as routine, with adjuvant treatment. This could not be done, nor would I permit it, were they obtaining no therapeutic benefit or experiencing the severe reactions described in such a high percentage by E T Burke *et al*.

It seems that since December, 1937, all patients receiving injections of "antitoxin" in this department have received, concurrently, sulphanilamide preparations by mouth as part of the routine adjuvant treatment. Therefore it is clear that any discussion of the results obtained in patients who began treatment after that date is irrelevant to the present controversy.

Dr Anwyl-Davies has made the following statements with regard to the results obtained in twenty-five patients who began treatment previous to that date and whose records we were permitted to examine: "the results are comparable to those already published by myself (*Journal*, March 26, p 701), and "the cases were carefully investigated, and 'prontosil or some illud substance' was not used 'by way of adjuvant'" (*Journal*, May 14, p 1069).

Analysis of these twenty-five case records reveals the following points. All these patients had urethral irritations from the first as adjuvant treatment. Two of them received 'prontosil or some allied substance' after they had failed to respond to the initial treatment. In no case did the urethritis subside during the period of "antitoxin" treatment. In fifteen cases there were records of microscopic examinations of smears from urethral discharge after the first few days, and in these fifteen the average duration of known persistence of gonococci was forty-nine days. Others had persistent purulent discharge, but there was no record of microscopic examination. The twenty-five patients may be divided into three groups, six who remain under treatment for approximately eight months, and in two of them the signs of urethritis still persist. The average duration of signs of urethritis in the other four was just under six months. Of the twelve defaulters, one defaulted after the first injection, two in the first month, three in the second month, and one after the third month, two in the fourth month, and one after the

months. At the time of default eight had persistent arthritis and four were at the stage of tests for latency. The third group consists of seven patients who were discharged as cured after periods of treatment which averaged seventy-eight days, but the tests of cure applied were not equivalent to the standard recommended by Dr. Ansell Davies (*The Treatment of Venereal Diseases in General Practice* (1935)) and we regard them as inadequate. Further analysis is limited to twenty-four patients thus excluding the one who defaulted after the first injection. The toxic effects recorded are very similar to those described by ourselves and included pyrexia up to 102° and 103° F, urticaria, joint effusions, arthralgia, malaise, headaches, pains in the back, local pains, etc. Of the total of twenty-four eleven suffered severe reactions as the result of the antitoxin injections. Four others complained of symptoms of moderate severity. Thus fifteen or 62 per cent. of these patients experienced toxic effects.

As regards complications two developed epididymitis, one acute prostatitis, and two acute posterior urethritis subsequent to injections. The complication rate was thus 21 per cent.

Tests showed evidence of latent infection in eleven out of the fifteen patients who remained under treatment until the urethritis had subsided.

It is now quite clear to us that the effects obtained by Dr Anwyl Davies in using this preparation were very similar to those recorded by ourselves and the discrepancy between our reports is one not of results but of interpretation of results. We have failed to find any justification for the claims which Dr Anwyl Davies has made on behalf of this preparation but we are content to leave it to your readers to decide which of these interpretations is more fully justified by the available facts—We are etc

E T BURKE      A H HARNNESS  
J GABE      A J KING

London W 1 May 27

SIR—We accepted Dr Anwyl Davies's invitation and on May 20 visited the St Thomas's Hospital Venereal Diseases Clinic and inspected the records of the twenty-five cases mentioned by him in your correspondence columns. In order not to cause Dr Anwyl Davies further inconvenience we were at the clinic at the same time as Drs Burke, Harkness Gabe and King but we would like to point out that our conclusions are entirely independent of theirs.

From a careful examination of the case sheets the following facts emerged

1 **Adjuvant Treatment**—All patients had urethral irrigations from the first with the exception of one patient who defaulted after the first injection two patients had protosil or some allied substance. (See *Journal* May 14 p 1069)

2. **Toxic Effects**.—Practically half of the cases suffered severe toxic effects from the antitoxin injections our criteria of severe toxic effects being the following: prexia up to 103.2 F, severe malaise in one case necessitating fourteen days in bed, severe generalized urticaria, severe pains and stiffness in the joints, diarrhoea and vomiting in several cases. Injections had to be delayed in order to allow for recuperation. Three cases suffered moderate toxic effects such as pain and swelling at the site of injection, headache, and general malaise of moderate degree.

**3 Defaulters**—Apart from the one patient who defaulted after the first injection seven out of the remaining twenty-four defaulted during the persistence of urethritis of the remaining seventeen two had persistent urethritis after eight months and in the remaining fifteen the urethritis was present on an average for over fourteen weeks in all twelve cases defaulted at various stages of treatment.

• *Complications*—Two cases developed epididymitis or acute proctitis, two acute posterior urethritis—all following antitoxin injection. This gives a complication rate of over 20 per cent.

**Tests of Cure.**—Although we found that seven cases were discharged as cured in our opinion the tests of cure in all cases were inadequate and furthermore inadequate to the standard recommended by Dr. Ansell Davies himself in his book *The Treatment of Venereal Diseases in General* (London, 1935).

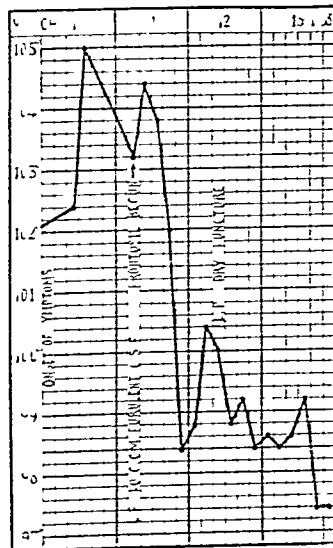
In conclusion it seems obvious to us from the above facts that the results of the antitoxin treatment at the hands of Dr Anwyl Davies are almost precisely similar to those obtained by Drs Burke Harkness Gabe and King. Therefore we find it impossible to accept the claims that Dr Anwyl Davies has made for this form of treatment in acute gonorrhoea.—We are etc

SED DON-TAYLOR  
LESTEP

London W 2 May 50

### Sulphanilamide in Meningitis

SIR—I have been interested in the reports in the *Journal* recently on the treatment of meningitis with sulphamidamide and it may be of value to record my experience in Northern Nigeria, where the meningococcal type of meningitis occurs in epidemic form at the end of the dry season. This year the epidemic was especially severe and the mortality appeared to be practically 100 per cent. The cases were of a fulminating type death



supervening in three to four days as a rule. This was the case until sulphamilamide was secured from the coast and its effect on the next admission is seen in the accompanying chart the temperature remitting within twelve hours of the administration of sulphamilamide and recovery being continuous. Two prontisol album tablets were given every eight hours for three days one tablet eight hourly on the fourth day and one tablet daily for a further four days. A second case made a similar recovery and the treatment was then taken over on his return from leave by the permanent medical officer who has I believe treated about thirty more cases with results well worth recording—I am etc

Late CMS Hospital Zaria  
West Africa

A L CRADDOCK

## CORRESPONDENCE

## The Adrenal Cortex and Intersexuality

SIR—I have read with great interest the account given by Dr H W C Vines of the pathology of the adrenogenital syndrome in the volume *The Adrenal Cortex and Intersexuality* by Broster, Allen, Vines, *et al* (see leading article in the *Journal* of May 14, p 1056). In so doing one was struck by the fact that, with the exception of certain of the cases of Cushing's pituitary feminization (which are of course, on a different footing), feminization of the male and iso-sexual precocity in the female occur, so far as the adrenal is concerned, only in malignant conditions—that is in the so called carcinoma and adenocarcinoma of the cortex. Androgenous development alone occurs in foetal masculinization or "pseudo hermaphroditism," and there is no reliable record of the occurrence of feminization in "post-pubertal and adult virilism" of the type with cortical hyperplasia and hyperfunction. The fact that male sex hormones may have an oestrogenous effect, as is shown, for instance, by the observations of Korenchevsky (*Journal* November 6, 1937, p 896) of feminization of rats by means of the male hormone testosterone propionate, has a bearing on the general question as it could be argued that the very exceptional feminization, etc., in those cases was brought about in this way.

The facts as just adduced are significant, however, from another point of view since the occurrence of malignancy does not signify simply hyperplasia and hyperfunction, by which exaggerated normal effects are produced. I have suggested elsewhere that malignancy means essentially an alteration and mutation of the genes of the cell concerned, whereby modifications are produced in its growth, form, and function. The infinitesimally small number of cases of feminization of the male and of iso sexual change in the female could be explained thus on the basis of alteration in function from androgen to oestrogen formation, brought about by a genic change in the malignant conditions existent.

The cortex of the adrenal, androgenic in the foetus, therefore would seem to retain this capacity through life except in a small proportion of the malignant cases just referred to for the reasons stated. In view of this persistence it would appear that the existence of a neutral somatic castration such as is said to occur, for instance, in the castron is in impossibility, since the adrenal cortex would be there to sway the body to the male side.

Witsch (Allen *Sex and Internal Secretions* 1932) brings evidence to show that the cortical zone of the gonads is a female and the medulla as a male inductor. This would explain the occurrence of the androgens and oestrogens in the urine of both sexes where one sex would be represented by its corresponding sex cells and hormone and the other by hormone alone on the lines of the occurrence of androgens in the adrenal cortex. In this context it would seem that Dr Vines's statement that the sexual changes caused by these pathological states may all be referred to abnormalities of a normal mechanism of sexual development in which the gonad plays a passive part is too sweeping. Doubtless the adrenal cortex (assisted however by the medulla of the gonad) gives a male twist with corresponding vestigial of the male sex organs to a chromosomal female but there remains still to be explained the female sex organs given with corresponding vestigial of the female sex organs to a chromosomal male. It seems that the cortex could do this while a direct action possibly by means of a gland of the pituitary on this cortical zone of the

testicle in the production of feminization of the male in some cases of Cushing's pituitary basophilia has not been excluded. The annotation in the *Journal* of November 13, 1937 (p 974) on gynaecomasty and testicular function possibly has a bearing on the latter point as also on the earlier discussion on malignancy.

Although Dr Vines states that a definite claim cannot be made that the fuchsinophil substance is actually the masculinizing hormone or pro-hormone, it would be interesting to know if a positive fuchsinophil reaction is obtained in the actively functioning testicle—I am, etc.,

J P McGOWAN

Aberdeen, June 2

## Psoriasis

SIR—I have recently investigated the incidence of psoriasis in the out-patient department for diseases of the skin at the Royal Northern Hospital. My results correspond so closely with those of Dr W S W Guthrie (45 per cent) published in the *Journal* of May 21 (p 1125) that I think they may be of interest.

During the five years from 1931 to 1935, out of a total of 5900 recorded new cases of psoriasis—that is, 4.4 per cent—were diagnosed as cases of psoriasis. Of these, 100, or 3.7 per cent were male and 165, or 6.3 per cent, were female. The age incidence of 253 of these cases was also investigated and is tabulated below.

TABLE I

Age in Years	0-10	10-20	20-30	30-40	40-50	50-60	60-70	Over 80
Males	9	18	24	19	11	9	6	2
Females	18	23	41	17	22	18	15	1

The youngest case in this series was a male aged 2 years the oldest was a female aged 81. It will be noted that the frequency is greatest in the age period 20 to 30 and this applies to both males and females. About 42 per cent of all the recorded cases (male and female) were between 10 and 30 years of age. Among women 53 per cent were under 30.

In Dr John T Ingram's most interesting article on some problems in psoriasis (*Journal*, April 23, p 881) it is surprising that no mention is made of the curious relation between psoriasis and joint affections or so called rheumatic pains, a subject greatly discussed, especially by French dermatologists. Whether one regards these arthropathies as being of neurogenic or of rheumatic or gouty origin and the former view appears to be more prevalent now—it is a remarkable fact that joint pains, neuralgias, and myalgias are often complained of by persons with psoriasis. The predilection of the disease for areas around joints (knees, elbows, spines, etc.) is certainly a striking concurrence, and the fact that psoriasis may be provoked by similar factors in common with the various forms of rheumatism (fibrositis, myositis, rheumatoid arthritis, osteoarthritis, and gout) is noteworthy. Both psoriasis and these forms of rheumatism are less prevalent in summer and in warm countries, both are supposed to be rare in the Tropics. A low-protein diet has been recommended for both conditions, and both are supposed to be aggravated by the excessive consumption of alcohol. Foci of streptococcal infection are held to be responsible for the acute exacerbation of both acute attacks of psoriasis. On the other hand, in well established cases of psoriasis in adults it is often impossible to find any evidence of any streptococcal focus of infection whatsoever, which is equally true about many well established cases of rheumatoid arthritis. Apart from these rheumatic associations of psoriasis, a definite syndrome—arthropathic psoriasis—

is well recognized. The fact that Crocker in this country strongly advocated the use of strychn and the same in adequate doses in the treatment of psoriasis is interesting in this respect.

A preliminary investigation of twenty cases of psoriasis with special reference to the situation of the lesions in relation to the presence or absence of localized rheumatic pains and other associated conditions is being made by the author.

TABLE II

Age and Sex	Situation of Lesions	Family History	Rheumatism	Other
1 Female (21)	Wrist, legs, hands, nails, elbows, back (none)	Nil	Nil	Dermatitis of elbows
2 Male (65)	Elbows, knees, legs, nails, feet	Nephritis	xx	
3 Male (4)	Elbows, knees	Nil	Nil	Cutaneous eruptions after measles
4 Male (41)	Elbows, knees, guttate on trunk	Mother and brother have psoriasis	Nil	
5 Male (5)	Arms, elbows, forearms, legs	Nil	Nil	
6 Female (38)	Scalp, elbows, knees, trunk	Nil	x	
7 Female (74)	Elbows, knees	Nil	x	Scaly, verrucous dermatitis of hands
8 Female (71)	Scalp, elbows, knees	Nil	x	
9 Female (33)	Scalp, arms, nails, knees	?	x	
10 Male (74)	Knees, nails, feet	Maternal	x	Variety of scaly dermatitis in both hands
11 Female (12)	Elbows, knees	Nil	Nil	
12 Female (14)	Scalp, elbows, hands, knees, spine	Nil	x	First attack began during menstruation
13 Female (31)	Scalp, elbows, nails, knees, abdomen	Nil	x	Lived in Italy, sunbathed, took malaria medicine
14 Female (70)	Scalp, elbows, nails, knees	Nil	x	First attack noticed after amputation of breast at menopause
15 Female (41)	Scalp, elbows, knees, trunk	Nil	x	First attack after confinement, severe, when worrying
16 Male (25)	Scalp, elbows, legs, body	Brother has psoriasis	x	
17 Female (65)	Elbows, knees	Nil	xx	
18 Female (39)	Elbows, knees, trunk	Mother has eczema and 11 of her brothers and sisters all had eczema	Nil	
19 Male (5)	Elbows, knees	Nil	Nil	
20 Female (22)	Elbows, knees, spine	Nil	xx	

It will be seen from Table II that heredity is not such an important factor in psoriasis as is generally stated. Only three or possibly four cases out of the twenty had any family history of psoriasis and of these only two could have inherited the disease from a parent. On the other hand no

more than thirteen cases out of the twenty gave a history of rheumatism. Admittedly the number of cases investigated in this preliminary review is small and the incidence of pains attributed to rheumatism is high particularly in patients of advanced years and of the hospital out-patient class but even so one cannot fail to be impressed with the high percentage of cases of psoriasis in which there is a history of joint or muscular pains or when actual howlings of arthritis occur.

I have to thank Dr Henry Semon FRCP for his kind permission to publish the above figures—I am, etc,  
M. J. Hill N 10 May 27 I. S. FOX.

### Stored Blood for Transfusion

SIR—I have read with interest Dr T. I. Wilson and Dr J. M. M. Jamieson's article on the use of stored blood for transfusion (*Journal* June 4 p. 1207) as we have been using stored blood here for some time and now use it almost exclusively. The advantages are obvious and I think it only a question of a short time before the practice is generally adopted. We withdraw 15 ounces of blood through a 16 gauge transfusion needle into a 20 ounce U. G. B. screw-capped bottle containing the extra and fitted with a two-way cap to enable suction to be applied and in this way can fill the bottle in under four minutes. Apart from changing the two-way cap for a sterile aluminium one which I think is preferable to a wool plug the blood is never exposed to the air. The blood is then stored at about 3°C and is warmed to about 37°C before use. We have so far experienced no reactions. The blood is filtered through gauze and clots are rarely found on the filter. A small tube of diluted citrated blood and a tube of whole blood taken before the needle is withdrawn allow cross agglutination and a Wassermann reaction to be performed without opening the bottle. We keep in stock two pints of Group 2 (A) and two of Group 4 (O) and have never had occasion to keep it longer than fourteen days.

No the least advantage is in the economy of blood donors of which only one has been used in the last twenty transfusions against the old figure of 40 per cent—I am, etc,

E. BIDDLE  
Transfusion Officer East  
Suffolk and Ipswich Hospital

Ipswich June 7

### Advertisements of Secret Remedies

SIR—Your leading article on June 4 on "The Trade in Secret Remedies" inspired by Professor A. J. Clark's book—is supplemented (whether by accident or design) by an equally apposite dissertation entitled "The Beecham Laboratories." Both articles are written with a restraint which makes them the more effective. But in these as in all other discussions on the subject no mention is made of the fact that many of the advertisements on which this lucrative trade relies make flagrant use (or abuse) of the good name in which the medical profession is held by the general public. Instances of this tendency will spring to the mind of any reader of the daily papers exemplified by such phrases as "then her doctor told her and next day at the surgery" (It is or is not to note that one never sees "then her osteopath told her or his naturopathic healer suggested.") The doctor is always unmistakably portrayed usually with his stethoscope dangling from his ears. It is within the experience and knowledge of all engaged in general practice that this pseudo professional endorsement of the manufacturer's claims is not without influence on many of our patients. How often has one deprecated the spending

of money—ill afforded—on “tonics,” etc., only to be met with the rejoinder ‘But I thought that all the doctors approved or recommended it’”

An advertisement has recently appeared in the papers by which the public is led to believe that a certain secret preparation, apparently equivalent to the Elixir of Life, the ‘discovery of an eminent doctor,’ hitherto prepared by a secret formula known only to a “limited number of medical men” and used by them in hospitals, is now available for the relief of mankind. The inference to be drawn from this advertisement is little short of a libel on our profession, imputing as it does the invention, employment, and eventual exploitation of a secret remedy by a qualified medical man.

Were this and similar advertisements associated with the name of any one practitioner it is easy to foretell what action he would immediately take. But because it is the name of us all collectively which is taken in vain no one apparently considers it to be his duty to protest.

While we are the last to resent any caricature or lampoon—even in a commercial context—we must preserve the right and owe the duty to protect our good name and reputation from that abuse on which the vendors of secret remedies endeavour to found their fortunes—I am, etc.

London W2 June 6

A G EDDISON

### Haemorrhage into Rectus Abdominis

SIR—With regard to the case report by Dr F Bedo Hobbs in the *Journal* of April 23 (p 895) on a fatal haemorrhage into the rectus abdominis muscle during pregnancy the record of a somewhat similar case recently under my care may be of interest.

The patient a white adult male aged 48 while at work on May 5 was suddenly and unexpectedly struck in the abdomen by a block of wood flying from a machine. He felt pain but was able to continue with his work for three to four hours. The pain then became so severe that he reported sick and went home. He was able to walk home—a distance of about a mile—but had several times to stop to rest. He did not sleep at all that night and I was called to see him in the morning of May 6. At this time the temperature was 100.8° F, the pulse rate 84 and the blood pressure 122/80 mm Hg. Examination of the abdomen revealed board like rigidity of the right rectus muscle with marked tenderness in the right lower quadrant. The left rectus was not in spasm and deep palpation caused only slight pain. There was no pain over the liver spleen or left kidney region. There was a slightly positive Murphy's sign over the right kidney, the liver dullness was intact and no peristalsis could be heard by auscultation. There was no blood in the urine. The patient felt sick all that day and vomited in the afternoon.

After consultation with a surgeon it was decided to watch the patient without active interference. On the following day May 7 the temperature was 100° F and the pulse rate and blood pressure were unchanged as were the abdominal signs. An occasional peristaltic wave could be heard following manipulation. The patient vomited twice. On May 8 he felt better, his temperature was 99.4° F, his pulse rate 72 and his blood pressure 120/78 mm Hg. The right rectus was less rigid and the lower quadrant was less tender. On May 9 his temperature was down to 98.4° F, the pulse rate and blood pressure being unchanged, the bowels moved spontaneously for the first time (up to then there had been no movements and cathartics and enemata had been withheld in order to allow peristalsis). The patient's abdomen was slightly less rigid and less tender and active peristalsis was heard for the first time on auscultation.

The following day May 10 the temperature rose to 100° F, again the pulse rate was 68 and the blood pressure 114/72 mm Hg. The patient was more markedly tender in

the right lower quadrant, a hot-water bag was substituted for the original ice bag. On May 11 the temperature was again normal and the pulse and blood pressure were unchanged. Rigidity was less and there was the suggestion of a mass lateral to the right rectus. On May 12 the rigidity of the rectus had passed off and a mass was definitely felt. It was round, very smooth, very tender, about the size of an orange and yielded a fluid thrill.

The next day May 13, the mass had decreased in size by about half. The temperature had been normal for several days now and remained so for the remainder of the illness. The patient's appetite was very poor during the entire time and in the later stages he complained of great weakness. A tonic was administered and his appetite and strength increased. On May 14 there was palpable in the right lower quadrant, about two inches above Poupart's ligament, a mass irregular in outline, firm, of solid consistency and with no fluid thrill, about two inches long by one inch wide, markedly tender to pressure. Two days later the mass was still present and the patient's condition was unchanged.

On May 18 the patient was very much stronger and was up and about. The mass was about half its original size. He felt very little pain and there was very little tenderness over the mass. He returned to work and has been working since. He was seen once again on May 23, when he felt quite well except for some dysuria and frequency of micturition, the mass had almost entirely disappeared. He was placed on a urinary antiseptic, and since he has not returned I expect that these symptoms have also disappeared.

In my opinion this was a case of bleeding beneath the rectus abdominis muscle, with a collection of blood between the rectus and the peritoneum. I believe that due to the severe blow, a vessel in the lower part of the muscle was torn, and as the posterior sheath is absent in its lower part, the blood collected directly between the muscle and the peritoneum and set up the peritoneal irritation that almost caused us to operate for a possible intra-abdominal lesion—I am, etc.,

Brooklyn, New York, May 27

A JAY SNYDER

### British Hospitals in China

SIR—In forwarding to you the enclosed letter, which is being addressed to all members of the medical profession and to the leading pharmaceutical manufacturers in this country, I would like to add a few notes.

When the Lord Mayor's Fund for the Relief of Distress in China first made its appeal to the public, it was realized by our central executive committee in Shanghai under the presidency of the British Ambassador and the Governor of Hong Kong that provision must be made for the application of funds for relief along three lines.

First Cases where British residents in China are rendered destitute. These are being dealt with by the British Women's Association in Shanghai.

Secondly The huge refugee problem. Here the application of relief is being carried out largely through the refugee camps of the International Red Cross Committees in Shanghai, Hankow, etc., through the Salvation Army workers in charge of rice, soup and gruel kitchens, and through the international committees in charge of refugee zones, where hundreds of thousands of women and children have sought refuge. For all these homeless and destitute, money for food and over 1,000 bales of clothing have been sent to China.

Thirdly The hospital work for wounded persons both civilian and military. Here relief is being applied through the hospitals of the various missionary societies which are working both in Chinese and Japanese controlled territory. Grants in money to enable existing hospitals to expand their bed capacity and over £15,000 worth of medical supplies have been sent out. In the



Central China area alone over twenty six British hospitals have been helped to keep going.

But the war goes on the wounding of civilians by aerial bombing is still more extensive and by cable and letter the call comes for further medical supplies. One of the most glorious pages in the history of the profession is being written by our medical colleagues in China—many of them in isolated positions carrying on as the tide of war sweeps over them and keeping their work going whether Chinese or Japanese are in control of the area in which they work. Surely the least that we who live in comfort and safety at home can do is to keep them supplied with the necessary medical stores anaesthetics antisepsics dressings drugs and instruments without which they cannot carry on. Gifts of instruments in good condition will be welcome as well as the necessary money for purchase, and may be sent to me at 121 Westbourne Terrace W2—I am etc,

H. GORDON THOMPSON  
Honorary Secretary and Treasurer  
Lord Mayor's Fund for the Relief of  
Distress in China

June 2.

\*The letter enclosed by Dr Gordon Thompson is in the following terms

You will doubtless have read in the Press the news which has been coming through from the war areas in China but it cannot give an adequate picture of the terrible suffering of the people and the need for help at the present time. Large areas have been rendered desert by complete destruction of farms and villages. Enormous numbers of the population have been on the move—men seeking for safety and others in search of food. In a great many places the chance of a harvest either this year or next has gone for farms are burnt and the beasts for ploughing implements and seed have all been destroyed.

A death rate in a refugee camp for the first few months was 250 per 1000 to a large extent among the children and this gives but a bare statistical picture of an incalculable amount of suffering and anguish both physical and mental. With summer coming on epidemic diseases such as cholera relapsing fever the dysenteries, and small pox are spreading whilst food deficiency diseases such as beriberi are becoming rampant.

British hospitals established by missions of all denominations have been nobly endeavouring to do their part in meeting the need and without a word of complaint they are being overwhelmed with the care of the sick and wounded. Since the early days of the struggle the Lord Mayor's Fund has sent out, apart from cash for starving refugees about £18 000 of medical supplies and drugs to the hospitals but these are now becoming exhausted and we must stand by our medical colleagues in this their need. [The principal requirements are set forth in the appendix to this letter.]

Much has been given by doctors, chemists and manufacturing firms. If you already have been approached for help we beg that you will not take it amiss if we make a further appeal, for stimulated by the efforts of the few we are now trying to reach everyone. We therefore confidently ask for your sympathy and active co-operation to do something for this mass of suffering. Goods in kind or money to buy drugs dressings or instruments will all be welcomed. We anticipate your sympathetic consideration and your active help. Donations of money and gifts in kind may be sent to and cheques or postal orders made payable to: H. Gordon Thompson M.D., F.R.C.S. Honorary Secretary and Treasurer The Lord Mayor's Fund for the Relief of Distress in China 121, Westbourne Terrace London W2.

DAWSON OF PENN	JOHN KIRK
W. MCADAM ECCLES	W. T. LISTER
H. B. FAWCETT	EWEN J. MACLEAN
GEORGE GASK	LOUISE MCILROY
HORDER	JOHN A. RYLE
ROBERT HUTCHISON	CUTHBERT WALLACE
R. E. KELLY	D. P. D. WILKIE

## Assistance to Medical Students from Austria

SIR—I think many of your readers will agree that the suggestion made in Professor J. A. Ryles letter in the *Journal* of June 11 (p. 1256) is a little misguided. Surely sympathy and assistance should be extended in the first place to those refugees who are already practising the profession to which they have devoted their lives and who are now too old to take up another career rather than to youngsters not yet embarked on a career. There are not enough free places in medical schools for our own nationals and every year there are prospective students who state that they can only begin medicine if they obtain a scholarship. Moreover the income of many medical schools depends to a considerable extent on grants from the Government and local authorities and it is doubtful whether these schools have the moral right to expand to the disadvantage of British students money on the training of those who may not be capable of assimilation by the British Commonwealth. It has often been my experience when interviewing candidates for dental bursaries, in the days when these were enough to pay for the complete course to elicit the information that the candidate was taking up dentistry merely because a free education was offered. Our medical schools are full already why then should we encourage a further influx? If a case can be made out for any candidate of outstanding merit no doubt consideration should be given but to ask every medical school to offer a free place is sympathy run riot. Furthermore I cannot agree that by the time these students have qualified the high figure for entry into the profession will have fallen off because as medical schools are still full competition for posts at that time will be at a maximum.

With regard to the question of Austrian Jewish practitioners obtaining a quick qualification in some University in this country I do not think there is any University which will grant a medical degree under three years to any foreign graduate. There is however a licensing body whose diploma may be granted to foreign graduates after only one year provided the necessary examinations are passed and one gathers that this body is creating a certain amount of dissatisfaction not only in this country but in other parts of the British Empire because of the shortness of time in which its qualifications may be obtained—I am, etc,

G. A. CLARK

Sheffield June 11

Dean of the Faculty of Medicine

## Nutrition of Denmark During the War

SIR—Most of what Dr. Johanne Christiansen tells in your issue of May 28 (p. 1174) about consumption of food in Denmark during 1918 is incorrect. There are various wrong assertions in her letter, but not to take too much space I shall only treat one—the high consumption of meat. It is correct that Dr. Christiansen has now succeeded in persuading the Danish Department of Statistics to make a calculation showing that the consumption of meat in 1918 was greater than the normal but the truth remains that it was in fact far lower. The discrepancy is explained thus.

The Department of Statistics bases its calculations on the number of domestic animals reckoning with a normal slaughtering of beasts of normal weight. Actually the cattle were starving for lack of food and were often mostly skin and bone. Moreover the farmers secretly slaughtered many small pigs for their own use. While this of course was illegal the local authorities were unwilling to report their friends to the police. Consequently the farmers had enough



bacon while very little was available for other people. Bacon was in fact rationed—120 grammes weekly for each person—and even this amount often could not be had. No more than 200 grammes of beef was available at the normal price. If more was wanted, thrice the price had to be given. 'Meat is so expensive' wrote a leading Copenhagen paper, 'that common people cannot afford to eat it even on Sundays.' As this shortage of meat was on the verge of inducing revolt among labourers, the president of the Council for Nutrition reported to the Unemployment Committee that it was not possible to procure more than a third of the normal consumption of meat at the ordinary price.

Your readers may not find it easy to decide whom to believe. I venture to remind them that my experiments on a cheap plain Chittenden-like diet were started forty years ago and aroused so much interest that the Government granted me a laboratory for nutrition. When the blockade threatened us in 1917 with starvation, I was appointed counsellor of the Government and issued a pamphlet advising the public to live on a diet consisting mainly of wholemeal rye bread mixed with wheat-bran, potatoes, barley porridge, milk, a little butter, and very little meat and vegetables. Of this pamphlet 40,000 copies were distributed, and in 1918 I spent half my time travelling round the country giving instruction. In the discussions which followed my lectures I often heard housewives say 'That is all very well, but here we all live in accordance with your principles, we are compelled to do so.' On these journeys I had ample opportunity to observe the underfeeding of cattle and its consequences. If anyone at that time had said that people were eating more meat than usual, the statement would have raised a laugh.

After living for forty years on the low-protein diet I do not feel old at 76. Last summer I travelled on cycle from one end of the country to the other, about 80 miles a day—I am, etc.,

Copenhagen May 29

M HINDHEDE

### Identicalness of Finger-prints of Enzygotic Twins

SIR—In a letter in the *Journal* of May 21 (p. 1142) I directed attention to the remarkable discrepancy in the opinions held by high medical authorities respecting the (alleged) identicalness, or total dissimilarity, of the finger-prints of uniovular twins and solicited the opinions of those with special knowledge of the subject. I quoted Dr. Leonard Williams (*Minor Medical Mysteries*) to the effect that "not only their finger-prints but the whole of what is known as the friction surfaces of their hands and feet are frequently found to be identical", and, contrarily, Sir James Crichton-Browne's concurrence with the contention of Inspector Greville's that "in finger-print identifications the authorities never make a mistake. It is impossible to make a mistake even in twins the finger-marks are totally different."

I have had no reply and still adhere to my opinion that neither the finger-prints of monozygotic twins nor of any other persons have ever been shown to be identical, despite the high authority of Dr. Leonard Williams and despite the implied agreement with his statement by Professor J. B. S. Haldane who writes in *The Inequality of Man* "Their finger-prints are generally distinguishable, but those of the right hand of one of them are more like those of his brother's right hand than of his own left." My contention was (and is) that the finger-prints of monozygotic twins are *always* easily distinguishable by experts, and that it is impossible for these specialists to err.

This question may, however, be of such importance in criminology that it is clear that it is not to be decided

on the opinion of any authority, however eminent, but upon the established facts of science. Chief Inspector Cherrill, the official in charge of the finger-print bureau at New Scotland Yard, courteously resolved the problem in the following communication, remarkable alike for its clarity and decisiveness:

In reply to your letter dated May 30, I am directed by the Commissioner of Police of the Metropolis to acquaint you that the finger-prints of twins (including uniovular) are as dissimilar as those of other persons who are in no way related.

The fallacy that the finger-prints of twins are identical arises through the superficial examination of the prints by persons who are not finger print experts.

It often happens that the finger prints of twins are similar in pattern but this is often the case with prints of any other persons. Finger print identification, however, does not end with similarity of pattern, but is attendant solely upon the coincident sequence of the papillary ridge characteristics and these have never been found to agree in prints taken of different fingers whether of the same person, twins, or any other persons.

According to Sir Francis Galton, the chances of any two finger-prints proving identical are less than 1 in 64,000,000,000. There is not any flaw in what has been known to experts for many years to constitute "the most infallible identification system in the records of criminology"—I am, etc.,

Liverpool, June 5

ROBERT COTTER

### "Spontaneous Human Combustion"

SIR—The subject of spontaneous combustion apparently attracted the attention not only of the medical profession but of the laity one hundred years ago. In chapter I of *Jacob Faithful* published in 1834, Captain Marryat gave a vivid account of the spontaneous combustion of the hero's mother. The following passages come from his description:

The lamp fixed against the after bulkhead with a glass before it, was still alight and I could see plainly to every corner of the cabin. Nothing was burning—not even the curtains to my mother's bed appeared to be singed. There appeared to be a black mass in the centre of the bed. I put my hand fearfully upon it—it was a sort of unctuous pitchy cinder. As the reader may be in some doubt as to the occasion of my mother's death I must inform him that she perished in that very peculiar and dreadful manner which does sometimes although rarely occur to those who indulge in an immoderate use of spirituous liquors. Cases of this kind do indeed present themselves but once in a century but the occurrence of them is but too well authenticated. She perished from what is termed *spontaneous combustion*—an inflammation of the gases generated from the spirits absorbed into the system.

Note that Captain Marryat quoted five of the six points mentioned by Dr. L. A. Parry (*Journal*, June 4, p. 1237):

(1) The victim was a chronic alcoholic. (2) She was an elderly female. (3) In the cabin there was a lamp which might have occasioned the fire. (4) Little damage was caused to the combustible things in contact with the body. (5) There was a residue of greasy ashes. Captain Marryat did not mention that the hands and feet escaped combustion. Evidently there were doubts as to the origin of the fire, for 'after much examination, much arguing and much disagreement the verdict was brought in that she died by the visitation of God.'

One can picture the temperance fanatics making much of the phenomenon of spontaneous combustion and pointing out the foretaste in this world of the fate which awaits the drunkard in the next—I am, etc.,

GAVIN THURSTON M.R.C.P.

Clapham Common, S.W. 4 June 8

## Atrophic Rhinitis

SIR—I am indebted to Dr James Adam (*Journal* June 4 p 12.6) for calling my attention to the fact that in my article on the treatment of atrophic rhinitis (May 28 p 1167) I did not make it sufficiently clear that patients with atrophic rhinitis are only susceptible to pulmonary tuberculosis. I did not mean to imply that tuberculosis was an aetiological factor. I cannot agree with Dr Adam when he says that atrophic rhinitis is the result of undiagnosed sinusitis and that the treatment of the sinusitis cures atrophic rhinitis. I have searched a large number of these cases for proof of sinusitis by antral puncture and by x-ray examination and have not found any indication of sinusitis. In my opinion, and that of a large number of my colleagues there is no aetiological connection between the two conditions. The problem of atrophic rhinitis is much more difficult than the treatment of sinusitis. It is significant that true atrophic rhinitis has been much less common in recent years since the great improvement in the feeding and housing of the hospital class of patient. It is true that a pseudo-atrophic rhinitis does occur occasionally after severe operations for chronic sinusitis. I hope that Dr Adam's letter will stimulate the continuance of the investigation of the aetiology of atrophic rhinitis and its relation, if any, to sinusitis—I am etc.,

London June 13

EDWARD D D DAVIS

## Funeral Directors (Registration) Bill

SIR—In your brief reference to the moving of the second reading of this Bill (*Journal* June 11 p 1287) you state that the motion was withdrawn. The motion was not withdrawn but negatived as the *Hansard* report correctly states. I shall be grateful if you can insert this letter in your next issue—I am etc

London W1 June 14

HORDER

## Universities and Colleges

## UNIVERSITY OF CAMBRIDGE

At a congregation held on June 9 the following medical degrees were conferred

MD—J F Fox J S S Fairley G Simon  
MChir—P H R Grey  
MB, BChir—C G Jobbins R D Teare  
MB—P G Levick A Innes S H Barnett

\* By proxy

## UNIVERSITY OF LONDON

The entry fee for the MB BS examination under the revised regulations is £15 15s—that is £5 5s for each of the three parts. Part I will be held for the first time in November 1938 and Parts II and III in May 1939.

The first two paragraphs of the regulations for the MSc examination Branch I (*Red Book* 1937-8 pp 289-90 *Blue Book* September, 1937 p 833) were amended to read as follows

"A candidate for the degree of Master of Surgery Branch I must have taken the degrees of Bachelor of Medicine and Bachelor of Surgery in this University. The candidate must forward to the Registrar in form (1) a certificate of having held for at least two years an approved surgical appointment or appointments at a hospital with an associated medical school recognized for this purpose. In special cases the University is prepared to approve a candidate whose appointment in a special surgical clinic at a hospital as one of the two years' experience referred

to above and (2) a record of operations performed by him signed by the surgeon or surgeons under whom he has worked.

The Senate on May 18 awarded the degree of PhD in Biochemistry to A E Kellie (Lister Institute of Preventive Medicine).

The following appointments were made. Mr Philip Turner to represent the University on the Educational Board of the British Social Hygiene Council. Dr R A Young to represent the University at the twenty fourth Annual Conference of the National Association for the Prevention of Tuberculosis to be held in London from June 30 to July 2. It was reported that as a matter of urgency the Vice-Chancellor had nominated Dr A M H Gray and Mr W Girling Ball for appointment to represent the University on the Council of the London (Royal Free Hospital) School of Medicine for Women. Sir Cooper Perry has been appointed representative of the University on the governing body of the Battersea Polytechnic Training School for 1938-9.

Lieutenant Colonel H E Shortt has been appointed to the University Readership in Medical Parasitology tenable at the London School of Hygiene and Tropical Medicine and is assigned to the Faculties of Medicine and Science.

The following candidates have been approved at the examination indicated

Third MB BS—W H J Baker \*†K P Ball \*†J P Bentley \*†J Bernfield \*†J M Hall (University Medal) \*†L A Ives \*†T Parkinson \*†W M L Turner Sheila M Anderson Evelyn G Ashton C E Aston A H Bacon Janet E Bottomley C M Bowker Katharine M H Branson F J Bruce K P Brown J C McC Brown Marjorie G Bran J A Chamberlain L J Clapham E M B Clements J W C Cochrane A Cohen A L Collins H Cooper Frances M Cox R V Coxon W A Cruden Eleanor Davies Jones E C Day J de Swet Nancy K Dick J H Dobson E G Dolton Cecile R Doniger J J Dubash Gertrude L E Duddridge Avis M Dyar D F Eastcott G F Edwards T K Elliott Winifred M Emmet P G Epps G A Fairlie Clarke D W Fell W B Foster Audrey L Frazer E D B Freedman A S Garrett Edin Gilbert B F B Gulliver H E Hobbs M A Inmyr J G H Ince Stella M Instone H Jackson S Jackson Ursula James Lapha T H Jenkins R C Jenkinson P H Johnson E C Jones G B Jones J M Jones J H Keall H A Kess J W L Kemp B W Lacey L P Lasman J D Laycock J A Lewis B G A Lilwall E L Loewenthal W H McDonald Norma M MacLeod Constance A Mahett A D Mesent Agnes M D Milne D N B Morgan D W Movnagh G M Muller F L E Musgrove W M Owen Elven B Palmer W M Philip Frances J Pound A W Powell K J Powell R E A Price Dorothy M Pritchard S H Raza E G Reynolds R Rhydder Gwen Richards H J Richards Mary C Rowe S T Ruthertord J M Smith's D J N Smith K Smith F E Stock Alison F Stooke B D Stutter N G G Talbot K H Taylor I E J Thomas P Tomlinson Eileen W Town G C Tresidder Ivy M Tuck D M Wallace H P Watts J C Watts Aileen E M Whitall D I Williams T G Williams A D Willi A R Wood Group I B S S Acharya J D F Armstrong E A Atkinson R G Bartolot C A Bathfield K M Bhanali W E W Bridger A A G Clarke J C A L Colenbrander J H L Corway Hugh A H Cutting A P Dale Russell A S Dodd A M Edwards J A P Evans R W Evans C G Fagg W Fine H Foster Jobel M Garland S Garmjana Goonchorn G N L Goddard L J Grant L A T Hamilton S R T Headley R N Heaton C W Horncastle N C Horre S T H Jenkins C C Kirby R P Lawson C V Lewis E M Lloyd Davies S Loxet V D Logue M C W Long Elizabeth C Marshall I J Mathias P S Meyrick G S Moore J N M Parr K G Pascall Nancy Perry Gloria H Platt A B Pollard Nancy E Robson Margaret D Sneling C J Stewart R L Thompson D C Tomlins P E R B Unwin F H Vieira Betty Walker M H G White R A White R J Whiting Nona E Wright Group II W E Clarke Dorothy L Crossley D G Evans E O Evans C C Evill D S Foster M Halberstadter Violet E N Harris Mary C Hopper Doreen Jameson P H Javes Ruth Jones G Kruatrachue R J H McVlahon S W Maxwell M T Reed H M Rice K S Richard R B K Rickford D K Sambrook J R Simpson D A Swan G R Staley K B Thornton J W Warnock W R W West Watson R F Watt

\* With honours † Distinguished in Medicine ‡ Distinguished in Pathology § Distinguished in Forensic Medicine and Hygiene ¶ Distinguished in Surgery

## UNIVERSITY OF SHEFFIELD

At its meeting on June 10 the Council appointed Professor G A Clark MD the representative of the University on the General Medical Council.

The Council accepted with regret the resignation of Dr Duncan Cameron of the post of honorary demonstrator in anatomy and accorded him its thanks for his services to the University.

## Obituary

### JAMES CHAMBERS M.D., MCH

By the death of Dr James Chambers, at his residence in Highdown Road, Roehampton, the medical profession, and especially the Royal Medico-Psychological Association has lost one of its outstanding members. His early life was at Belfast. He took the M.A. of the Royal University of Ireland in 1882, the L.R.C.P.I. in 1885, was senior scholar, first medical scholar, and Dunville Student



at Queen's College, Belfast, and won the first medical exhibition of the Royal University of Ireland. For many years he was the resident physician to The Priory, Roehampton. He became an ordinary member of the Royal Medico-Psychological Association in 1882, was assistant editor of the *Journal of Mental Science* in 1900-5, and co-editor 1905-14. He was president in 1913-14 and treasurer during the period 1917-31; his presidential address was "On the

#### Prevention of the Insanities

Dr Chambers was formerly lecturer on mental disease at the Middlesex Hospital Medical School, became consultant in mental disease to the London military hospitals and physician to the special hospital for officers at Latchmere House, Ham Common. He had been a member of the British Medical Association since 1887, and when the Association held its Annual Meeting in London in 1895 he acted as honorary secretary of the Section of Psychology and in 1901 he was vice-president of the Section of Psychological Medicine at the Cheltenham Meeting.

Since his retirement from The Priory a few years ago Dr James Chambers had been gradually failing in health, and at last passed peacefully away on June 7. The deepest sympathy is expressed to Mrs Chambers and her sons and daughters. To those of us who were familiar with his kindness and constant care for patients under his treatment at The Priory it is a great sorrow that Dr Chambers should have passed away after such a long and trying illness, always borne with the greatest fortitude.

R. PERCY SMITH

### V. H. WYATT WINGRAVE M.D.

The death of Dr Vitruvius H. Wyatt Wingrave took place at Lyme Regis on June 1, just two days after his eightieth birthday. His was an example of indomitable will-power over a very prolonged period of chronic illness. Added to this after some attacks of Meniere's symptoms he became stone deaf. I remember him pathetically telling me he would never hear his children's voices again. Furthermore he was attending an out-patient in the Central London Throat, Nose and Ear Hospital and while her throat was being examined the patient accidentally coughed violently in his face, setting up an acute inflammation in one of his eyes which left him permanently blind in that eye. He retired to Lyme Regis in 1920.

He was born in Coventry in 1858, the son of Joseph Wingrave, a chemist, and Jane, daughter of James Wyatt of Leamington. He married three times and leaves two sons and a daughter by his second wife. He was educated at Coventry Grammar School and at the Middlesex Hospital, taking the L.S.A. in 1882, M.R.C.S. in 1886, and proceeding to the M.D. Durham in 1900. He became lecturer in physiology at Cooke's School of Anatomy, which position he held for twenty-five years. After passing through various posts in the Central London Throat, Nose and Ear Hospital, he eventually found a congenial home in the hospital's pathological laboratory. The fact of the matter was that his complete deafness terribly handicapped him in his profession. It was also a constant danger to him, and twice when crossing the street unattended he was run over. On one of these occasions I was summoned to attend him, and I came away with the impression that he bore a charmed life, for anyone else would most probably have been killed. In the pathological laboratory he did excellent work and some special research work on the connexion between tuberculosis and nasal disease. He became also pathologist to the Medical Graduates Club and President of the British Laryngological and Otological Association. He was a Fellow of the Palaeontographical Society, and in 1928 presented to the Royal College of Surgeons Museum specimens showing rheumatoid disease in extinct saurians. He was an original thinker, and was in many ways an extraordinary man. Being an omnivorous reader with a colossal memory his knowledge became encyclopaedic and there was hardly a subject in science or art with which he was not intimately conversant, and he would enter into any discussion with a scholar's knowledge and enthusiasm. I remember when one of my sons and I were paying him a visit at Lyme we were one day standing with him on the Cobbe and watching cartloads of ballast being removed from the beach to the Cobbe for purposes of strengthening the sea's defences. He had been talking about Monmouth's rebellion and had pointed out that the place on the beach from which they were removing the stones was the very place where they had erected a gibbet for hanging the rebels. At that moment he stooped down and from some of the rubble picked up—a human patella! It looked for all the world as if it were to corroborate what he had been saying.

On January 13 of this year Dr Wyatt Wingrave was presented with the honorary freedom of Lyme Regis, but on account of his illness the Mayor, with a little speech, was obliged to hand him the scroll in his study. That this honour was to be paid the *Times* (November 10, 1937) had already given notice. Dr Wingrave had been the founder of, and honorary curator to, the Lyme Regis Museum for ten years until ill health had prevented him from continuing. He had taken the keenest interest in the geology of the district and he discovered a rare form of ammonite and was the first to describe it. Scientists courteously gave it the name of *Oryoceras wingravei*. Dr Wingrave had previously received the freedom of his native city—Coventry. The funeral service took place at Coventry Cathedral on Saturday, June 4, and a memorial service was held at St Michael's Church, Lyme Regis on June 6.

T. WILSON PARRY

The unexpected death on May 31 at the age of 59 years, of Dr WILFRED ALEXANDER STEEN removes from the medical community of Ilford and district a practitioner of unusually wide repute, a colleague of unswerving loyalty and a character distinguished by its generosity and broad humanity. The youngest son of the Rev George Steen of Keady, Co. Armagh, Wilfred Steen came

to London at an early age and started immediately his medical course at the London Hospital qualifying before he had reached the age for admission to the *Register*. Undoubtedly he received in these early years material encouragement from his eldest brother—James Ross Steen—who was already well established in practice first in Poplar and later in Ilford where Wilfred ultimately joined him. The two brothers were gifted with a rare clinical instinct and a faculty for organization and these combined with an assiduous application to work resulted in their building up a practice of unusual dimensions. Ross Steen died in January 1934 and was at the time of his death the senior practitioner in Ilford and now Wilfred S. En—probably claiming a similar distinction in point of seniority—passes from our midst mourned not only by a number of colleagues intimately associated with him in practice but by the local medical profession as a whole to many of the younger members of which he extended valuable help and encouragement. His death will also be much regretted by a host of patients and a large circle of friends to whom he was affectionately known as Wilfred. His friends will always cherish memories of his unstinted generosity a generosity equalled only by his invigorating sympathy as a doctor. Those who knew him most intimately at work marvelled at his patience and his ability to deal with a difficult situation by his timely joke and by the soft answer which turneth away wrath. It had often been said of him that he was never heard to give expression to an unkind word about anyone and this tribute was paid to him on one of the two occasions when he held in consecutive years the presidency of the Ilford Medical Society. There are many who will have a sense of personal loss in the passing of so genial a personality. He had been a member of the British Medical Association since 1910. To his widow and their son Pit—not long survived his curriculum as a medical student—there will be a volume of sympathy in their great bereavement.

J A M

## Medical Notes in Parliament

### Epidemics of Milk borne Diseases

On June 1 the Ministry of Health circulated statistics on epidemics of milk borne disease from 1933 to 1937 as under

Place	Year	Disease	Notifications	Deaths
H	1933	Scarlet fever	43	4
W Ham-pest	1933	Paratyphoid B	24	1
Epsom	1933	Paratyphoid B	22	None
Chesham	1935	Scarlet fever	48*	6
E. 7	1935	Scarlet fever	100	2
Area of 2 UD and 3 free dist. distinct	1936	Eritema, forearm (cakes thought to be vehicle)	9 cases in UD and 23 in district	1 death among the 9 UD cases. Deaths in district not stated
Barnborough, Pooe and Chesham	1936	Enteric	718	51 among the residents. No information as to visitors
D. 100000	1936	Scarlet fever and tonsillitis	135 cases of scarlet fever 24 of 1 case throat	2 deaths definitely associated with the outbreak
W. 7 (Wills)	1936	Gastro-enteritis	About 100 (disease not notifiable)	None

### Pensions for the War-Disabled

On the motion for the White-tinted adjournment Mr TINKER opened a debate on the treatment of ex-Service men. He asked that a psychologist should be called in to examine claimants and he criticized the treatment of pensions appeals

After discussion Mr RAMSBOTHAM said the war disabled man meant the man in respect of whom there was reasonable evidence that the disablement had a war origin. In appeal cases the independent medical expert was generally a Hurler Street physician or surgeon who did the work at a small fee and performed a great service for the country. In most cases the expert did not want to see the man because the question was not one of diagnosis but of the perusal of all the documents in the case and of the war service records. The independent medical expert had to decide whether there was reasonable evidence to connect the present condition of the man with the war service shown on his records. This must be primarily a medical decision. It he induced the medical officers of the Ministry to relax their medical examination and their standards of evidence, the pensions system of the country would never recover.

**Veneral Disease Clinics**—Mr GALLACHER asked on June 2 whether the remuneration of medical officers in attendance at veneral disease clinics in London was fixed on the basis of the number of attendances per medical officer. Dr ELLIOT in reply said he was informed by the London County Council that the remuneration of medical officers at clinics at present participating in the veneral diseases scheme for London was not determined on the basis indicated. Mr GALLACHER further asked whether the monetary grants made to veneral disease clinics in the London area were made in proportion to the total individual attendances in the course of a year instead of to the number of patients treated. He suggested that this was calculated to lead to over treatment which in these diseases could be almost as dangerous as no treatment. Dr ELLIOT said he was informed by the London County Council by whom the payments were made that the number of attendances was only one of many factors taken into consideration in determining the amounts of the payments. The question of altering the basis of the grants did not therefore arise.

Mr GALLACHER on June 2 asked what were the circumstances in which St Paul's Hospital lost its grant of £8,000 from the London County Council leading to its having to close down several wards and why no public inquiry was held into the events which led to this action being taken. Dr ELLIOT answered that the grant referred to was payable by the London County Council to St Paul's Hospital in pursuance of arrangements made annually between the county council and the hospital for the diagnosis and treatment of veneral diseases. In reviewing their veneral diseases scheme for the year 1937-8 the county council decided that it was no longer necessary to continue the arrangements with St Paul's Hospital. The discontinuance or renewal of such arrangements was a matter within the discretion of the county council.

**Blood Tests for Paternity**—Answering on June 2 a suggestion by Sir Ernest Graham Little that magistrates should be informed by circular of the validity and value of blood tests, Sir SAMUEL HOARE said further action on his part was not called for. The courts were aware of the value of the tests.

### Notes in Brief

The service of salaried midwives under the Midwives Act 1936 may now be said to be in effective operation throughout England and Wales though there is a small number of areas in which the local authorities have not finally completed their arrangements with other bodies.

The Secretary of State for Scotland is considering the report of the committee of inquiry appointed to examine the request submitted by the Scottish Universities for a grant from the Education (Scotland) Fund, and hopes to announce a decision at an early date.

The numbers of insured men and women in Great Britain between the ages of 35 and 65 at January 1 1938 were about 1,000,000 and 400,000 respectively. Of these about 105,000 men and 50,000 women were then in receipt of disablement benefit.

Of 176,466 houses affected by lum clearance orders, 104,600 had been abolished by the end of 1937.

## INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended June 4, 1938

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for (a) The 126 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland

A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(i)	(b)
Cerebrospinal fever Deaths	29	2 1	13 1	5	1	17	— 1	10 —	1	—		
Diphtheria Deaths	986 24	139 2	149 6	56 2	28 —	925 29	119 4	192 4	40 2	21 —	921	147
Dysentery Deaths	52	18	72	—	—	33	4	12	—	—		
Encephalitis lethargica, acute Deaths	1	— 2	1	1	—	5	— 1	—	—	—		
Enteric (typhoid and paratyphoid) fever Deaths	31 1	4 —	16 —	1 —	—	39 1	5 —	6 —	10 —	1 —	39	—
Erysipelas Deaths		—	71 /	6	3		1	44	5	1		
Infective enteritis or diarrhoea under 2 years Deaths	42	15	12	9	4	46	13	11	6	2		
Measles Deaths	20	7	271 10	4	16* 1	7	—	198 1	—	1 —		
Ophthalmia neonatorum Deaths	117	22	27		1	115	13	29		—		
Pneumonia influenzal & Deaths (from Influenza)	919 38	72 8	3 1	3 —	32 —	652 17	40 4	11 5	3 1	4 1	837	70
Pneumonia, primary Deaths		16	240	11 14	10		16	203	11 11	11		
Polio-encephalitis acute Deaths	—	—				1	—			/		
Polio-myelitis, acute Deaths	5	2 —	4		—	3	2 —	—		—		
Puerperal fever Deaths	7†	7 —	13	5	1	33	8 2†	18	1	1		
Puerperal pyrexia Deaths	172	24	26		2	124	18	29		1		
Relapsing fever Deaths	—	—			—	2	—	—		—		
Scarlet fever Deaths	1 967 6	188 1	396 3	103 —	91 —	1,517 —	146 —	368 4	116 1	38 1	1 804	212
Small pox Deaths	—	—	—	—	—	—	—	—	—	—		
Typhus fever Deaths	—	—	—	—	—	—	—	—	—	—		
Whooping cough Deaths			102 2	2	18 —			232 8		6 —		
Deaths (0-1 year) Infant mortality rate (per 1,000 live births)	318 53	61 50	81	41	19	305 50	55 46	74	31	19		
Deaths (excluding stillbirths) Annual death rate (per 1 000 persons living)	4 504 11 1	849 10 8	616 12 5	185 12 5	119 10 5	4 188 10 4	800 10 1	591 12 1	174 11 9	133 12 7		
Live births Annual rate per 1 000 persons living	7,083 17 4	1 349 17 2	989 20 1	352 23 8	290 25 7	7,275 18 0	1 410 17 8	974 19 9	346 23 6	270 25 8		
Stillbirths Rate per 1 000 total births (including stillborn)	310 42	51 36				313 41	52 36					

\* Deaths in the last alone.  
† After Oct. 1, 1937, puerperal fever was made notifiable only in the administrative county of London.

\* Deaths from puerperal sepsis.  
† Includes primary form in figure for England and Wales, London (administrative county) and Northern Ireland.

## EPIDEMIOLOGICAL NOTICES\*

## Small pox

On June 9 a case of small pox was reported at Graveland and admitted to the Isolation Hospital. In recent weeks 2000 people in the town have been vaccinated.

During the week ended June 4 there were 12 (9) cases of small pox with 10 (10) deaths reported in Hong Kong. During the same week 5 cases with 3 deaths were notified in Burma—2 (67) cases with 44 (53) deaths in Calcutta 272 (291) cases with 55 (52) deaths in the Presidency of Bombay 26 (38) cases with 14 (7) deaths in the Presidency of Madras and 92 (100) cases with 15 (20) deaths in Siam. In Indo China in the same week 55 cases of small pox were reported in Tonking and 4 in Hanoi.

## Enteric Fever

During the week under review there were 31 notifications of enteric fever in England and Wales compared with 17 in the previous week—of these 4 (2) were in London—1 each in Bethnal Green Islington Kensington and St Pancras. In Scotland 16 cases of enteric fever were notified—2 more than in the previous week. 13 were cases of typhoid fever 7 of which occurred in Roxburgh County belonging to the Hawick outbreak 4 (1) in Glasgow and 1 each in Ayr County and Perth and Kinross County. There were no deaths from enteric fever in Scotland during the week.

## Diphtheria and Scarlet Fever

In England and Wales notifications of diphtheria during the week under review dropped from 1002 to 986 while in London they rose from 128 to 139. There was a marked drop in notifications for Scotland and considerable increases were noted in Eire and Northern Ireland. Deaths in the 126 Great Towns of England and Wales fell from 29 to 24 and in London from 5 to 2. Of the 24 deaths from diphtheria recorded in the 126 Great Towns 4 each occurred in Liverpool (2) and South Shields (0). There were 6 deaths from diphtheria in Scotland during the week under review—the same number as the previous week—3 of which occurred in Glasgow (2) and 1 each in Edinburgh (1) Clydebank (0) and Ayr (0). There was a fall in the notifications of scarlet fever in England and Wales during the week—2048 to 1967—and in London from 218 to 188—the figures for England and Wales were slightly in excess of the median value for the last nine years but for London they were appreciably less. In the Great Towns of England and Wales 6 deaths were recorded from scarlet fever compared with 3 in the previous week, while in London the number was the same—namely 1. In Scotland there were during the week 3 (0) deaths from scarlet fever. Notifications in Scotland rose from 362 to 396 while in Eire they fell from 112 to 103, and in Northern Ireland from 114 to 91.

## Primary and Influenzal Pneumonia

Notifications of primary and influenzal pneumonia were lower both in England and Wales and in London for the week under review than they were in the previous week—919 as against 1082 in England and Wales and 72 as against 82 in London—both these figures however are in excess of the median values for the last nine years. Fewer deaths from influenza were reported in England and Wales—London and Scotland during the week. In the West Riding (Yorks) 107 (140) cases were notified of which 35 (44) were in Sheffield 19 (24) in Leeds and 18 (12) in Bradford. In Warwickshire there were 59 (61) cases of which 36 (36) were in Birmingham. Of the 180 (186) cases reported in Lancashire 53 (49) were in Liverpool and 43 (42) in Manchester. There were 38 deaths from influenza in the 126 Great Towns of England and Wales during the week of these 5 (2) were in Birmingham and 3 each in Liverpool (1) and Man-

chester (2). In Scotland 240 cases of primary pneumonia were notified compared with 246 in the previous week—there were 3 cases of influenzal pneumonia (6 more than in the previous week) and 1 death which occurred in Coatbridge. In Eire there were 14 deaths from pneumonia of which 8 (9) were in Dublin and 2 (2) in Limerick. There were 10 (13) deaths from pneumonia in the ten principal towns of Northern Ireland during the week 6 (11) in Belfast and 2 (1) in Portadown and 1 each in Londonderry (1) and Lurgan.

## Measles and Whooping-cough

In the 126 Great Towns there were 20 deaths from measles compared with 16 in the previous week—of these 16 (6) occurred in London and 1 each in Acton Brentford and Chiswick Enfield Tottenham Barnsley Kingston upon Hull Leeds Newcastle upon Tyne St Helens Sheffield Stockton on Tees Exeter Rhondda. During the week 512 cases were reported from the L.C.C. elementary schools compared with 949 in the previous week. The average daily admissions to the L.C.C. fever hospitals were 31 compared with 46 in the previous week and the number of cases of measles under treatment in these hospitals on Friday June 3 was 1171 compared with 1252 on May 27. On the same day there were under treatment in the L.C.C. fever hospitals 1012 (1009) cases of diphtheria 824 (841) cases of scarlet fever 259 (272) cases of whooping-cough. Notifications for the week ended June 4 in the eleven metropolitan boroughs in which measles is notifiable were 341 (460) distributed as follows: Battersea 14 (45) Bermondsey 3 (20) Finsbury 13 (35) Fulham 23 (55) Greenwich 96 (104) Hampstead 28 (18) Lambeth 61 (45) St Pancras 76 (74) Shoreditch 18 (20) Southwark 14 (23) Stepney 20 (23). In Scotland 271 cases of measles were notified compared with 380 in the previous week—the figures for Glasgow were 65 (121) Dundee 68 (65) Kirkcaldy 43 (57) Lanark County 20 (45) Falkirk 25 (38) Edinburgh 17 (13) Aberdeen 14 (44). During the week there were 10 (11) deaths from measles in the 16 principal towns of Scotland—of these 4 (5) occurred in Dundee 2 (4) in Glasgow and 1 each in Aberdeen (2) Paisley (0) Greenock (0) Coatbridge (0). In Northern Ireland there was 1 death from measles in Londonderry County Borough and in Eire there were 4 deaths all in Dublin.

In England and Wales there were 13 (11) deaths from whooping cough during the week under review of which 2 (3) occurred in London. In Scotland 102 cases of whooping cough were notified compared with 80 in the previous week while the deaths remained at 2—1 each in Glasgow and Kirkcaldy. In Northern Ireland 18 (16) cases of whooping cough were notified with no deaths compared with 5 deaths in the previous week.

## Cholera

During the week ended June 4 13 cases of cholera were notified in Shanghai and 2 cases with 1 death in Hong Kong. In the same week in Burma 11 (6) cases with 6 (4) deaths were reported in Calcutta 122 (102) cases with 37 (55) deaths in Bombay 16 (9) cases with 4 (3) deaths in Delhi 42 (41) cases with 19 (31) deaths in Cawnpore 13 (2) cases with 5 (4) deaths in Allahabad 2 (2) cases with 2 (1) deaths. In Indo China during the same week 162 cases were reported in Annam 375 cases in Tonking 35 cases in Hanoi.

## Plague

During the week ended June 4 there were 4 cases of plague with 8 deaths reported in Burma—in British India in the same week 3 cases with 2 deaths were notified in Bombay (Presidency) and 2 cases with 1 death in Madras (Presidency).

## Typhus

During the week under review 2 cases of typhus were reported in Alexandria and 11 in Cairo—in Palestine in the same week 2 cases were notified—1 each in Haifa

\* Except where otherwise mentioned figures in parentheses refer to the week preceding the one under review.

and Jaffa During the previous week—that is, week ended May 28—185 cases with 21 deaths were reported in Morocco, mainly distributed as follows Chaouia, 45 cases, 6 deaths, Marrakesh, 36 cases, 6 deaths, Oued Zem, 35 cases, 6 deaths, Rabat, 24 cases, 2 deaths, and 9 each in Casablanca and Dukkala During the same week in Tunisia there were 78 cases of typhus notified, mainly distributed as follows Tozeur 21, Susa 16, Suk-el-Arba 12, Gafsa 10 During the week ended May 14 136 cases of typhus with 7 deaths were reported in Poland distributed mainly as follows Wilno, 34 cases, 1 death Stanislawow, 26 cases, 2 deaths, Lwow, 16 cases 1 death, Wolhynia 16 cases, 1 death, Nowogrodek, 12 cases Warsaw, 9 cases During the week ended May 7 in the United States of America 32 cases of typhus were notified—Georgia 11, Florida 9, Texas 8, and 2 each in Alabama and North Carolina

## Medico-Legal

### A FRAUDULENT CONCERN EXPOSED.

Medical men in this country who have suffered from the predatory activities of what the Americans term the 'book agent' will be interested in the resounding defeat in India of a Mr M S Cohen, sole proprietor of the "Dominion Research Foundation"

A gentleman who claimed that he had been defrauded by Mr Cohen's concern into paying Rs 125 in instalments brought a successful action\* in the court of the principal city civil judge of Madras and asked for his money back. The evidence showed Mr Cohen's methods very clearly. An agent visits the victim and says he represents the

"Dominion Research Foundation," which has been started to link up the research which scholars are doing all over the world and which hitherto has been largely unco-ordinated. The "Foundation," he says, is a society which has as its members eminent physicians, scientists, and scholars all over the world. Membership is open to certain selected persons—of whom the 'prospect' is naturally flattered to be considered one—and a member has the benefit of the pooled research of all the others. This is contained in the 'New Educator Encyclopaedia,' which is kept up to date by a quarterly extension service. The agent's proposal is that the 'prospect' shall join the Foundation and receive the ten volumes of the encyclopaedia as a free gift. For the sum of Rs 250, payable in instalments the member is supposed to receive the quarterly extension service for ten years, with loose-leaf binders and the benefits of membership of the 'New Educator Bureau of Research' for the same period. These benefits are the educational benefits and privileges of the Bureau for research and special information, and an answer to one inquiry a week on any subject within the scope of the encyclopaedia. The member undertakes to give his unbiased opinion on the value of the encyclopaedia and service. If the fish bites, the agent produces a blue form and a white card. The card says, "I will accept one of your complimentary sets of the New Educator Encyclopaedia and agree that after delivery of same to me I will give you my unbiased opinion of the value of the said reference work and service. Even if the prospect signs the card the matter goes no further unless he also signs the blue form. Under this he agrees to buy the encyclopaedia, and becomes entitled to certain services. A white form is also shown, but it is never used. It gives the price of the encyclopaedia as Rs 210 and the price of the services at Rs 33 a year for ten years, a total of Rs 540. Its only purpose would appear to be to make members think they are getting special terms, as selected people under the blue form. On the back of the form a paragraph says that much of the value of the extension service and the research privileges for which

the member has been enrolled will come from his personal relationship with the "Foundation," and requests his help in "tying the service as closely to his personal and business problems as possible."

Having imprudently signed the contract, the victim duly gets his encyclopaedia. If he has any discrimination in these matters he will be seriously disappointed, for it has very little relation to scientific research. Except for its front page, which has been changed to bear the name "Dominion Research Foundation," it is merely a work called the "American Educator," which was prepared for school children, especially in America. The information is meagre, elementary, and often quite inaccurate. The quarterly supplements, which are to be filed in the loose-leaf binders, have nothing to do with the encyclopaedia and are mere journalistic matter. Like the encyclopaedia itself, they come *en bloc* from Chicago, and they bear the title "World Topics Quarterly, Loose Leaf Extension Service—a condensed record of important events and developments of special interest throughout the world," with the name of United Educators, Inc., Chicago.

The quality of the answers to the one question a week which a member is allowed was not tested by the plaintiff in this action, as he asked no questions. A witness from the "Foundation" said that one Dalal of Bombay, who had become a member in 1935, had been constantly asking questions and that the "Foundation" had spent Rs 3,500 in obtaining opinions for him, that one Pushpraj had asked three questions, the answers to which had cost Rs 5 each, and that one Hansotia had also asked a large number of questions. He stated that opinions were being obtained from prominent people like Mr Alfred Topham, K C, Mr Susil C Sen (a lawyer) of Calcutta, and others. The judge could not find from this evidence that the concern was seriously engaged in obtaining opinions and advice for its members, and he was inclined to believe the suggestion that the three inquisitive members had some sort of understanding with the company and that their inquiries were merely so much eye-wash.

The judge was impressed by a clause in the blue form, "This agreement is not subject to cancellation and will not be affected by any representations, warranties, or stipulations not endorsed hereon." Such a clause, of course, can never have legal effect, and, to quote the judgment, "the very existence of the clause is clear evidence of the scheme being fraudulent." Taking all the circumstances into consideration, the judge found that the entire scheme was conceived and planned in fraud and carried out by fraud. There was no society, body of persons, or institute—only Mr M S Cohen. There was no research staff, merely a few clerks in an office in Calcutta, peddling some worthless books and pamphlets. The judge found the evidence wholly insufficient for him to hold that the "Dominion Research Foundation" had any connexion with any scheme, fraudulent or otherwise, in England or elsewhere. Nevertheless, it bears a strong resemblance, in form and method to a concern to which we have from time to time referred in these columns and to which we shall refer again if necessary.

### IMPULSE AND INSANITY

The law on insanity and criminal responsibility is blamed for many injustices, by which persons whose crime is obviously due to mental disorder are punished as though they were fully responsible. A difficult problem may also, however, be created by the medical view of a criminal's mental state.

Mr Justice Humphreys had before him at the Old Bailey on May 19 a man of 40 named O'Sullivan who pleaded guilty to the attempted murder of a small boy in Epping Forest. The man had got into conversation with the boy, pulled a piece of string tightly round his neck, and gone away. He had then telephoned to the police saying he had found a boy in the forest who had been suffocated. The police found the lad semi-conscious and rescued him and O'Sullivan later gave himself up. He had had five previous convictions.

\* Thiruvengatachari v. Cohen 1937/420



had been given ten years penal servitude at the Old Bailey in 1925 for wounding with intent to murder and later had been sent to Broadmoor. Dr Grierson, medical officer at Brixton Prison, said that the prisoner had been certified insane during his sentence. While in Broadmoor he had it was understood suffered from delusions. He thought he had to murder young children especially those whose parents could not bring them up properly in order to ensure their eternal salvation. After leaving Broadmoor he had been sent to Brixton Mental Hospital and was discharged in 1935. Dr Grierson said he thought O'Sullivan invented his delusions to avoid imprisonment. He seemed quite unable to find his feet and rehabilitate himself and would perhaps sooner be in a mental hospital than at large. He would not certify him as insane on the available evidence. The judge suggested that the desire to be in a mental hospital seemed in odd relation to attempting to murder a boy and asked whether he could not go in at any time as a voluntary patient. Dr Grierson agreed but said he would not be there very long.

#### *The Judge's Comments*

The judge remarked that O'Sullivan was an extremely dangerous person to be at large and ought to be shut up in a lunatic asylum rather than in prison. It was one of those cases which gave a great deal of trouble to those who had to sentence prisoners who admitted their guilt. It was difficult to understand why the prisoner had committed the act but the act was plain. Sentencing the prisoner he said that O'Sullivan had been let loose on society and whether as a result of his discharge or not had committed the second act. He did not want to treat the prisoner as he would a vicious criminal like an armed burglar but as he had no power to send him to a lunatic asylum he could only send him to prison. If it were there found that he ought to be detained in a mental institution rather than in a place of mere punishment the authorities had ample power to take the necessary steps. All the judge could do was to ensure that for a period of years O'Sullivan could not attempt to murder someone else through his impulse whether it arose from criminality or insanity.

The published report of the case suggests that the prisoner was a psychopath and that the medical officer's difficulty arose from the tendency of a certain type of patient to show his insanity intermittently. Undoubtedly many patients behave rationally in the protected environment of a mental hospital or even of a prison and cannot stand the pressure of life outside but react in some anti-social way with the purpose often quite unrealized of getting under cover again. Once inside they cannot be called certainly insane. There was no doubt that O'Sullivan was a public danger. Perhaps such difficult problems of delinquency will only be solved when prisons become really reformatory and provision for mentally or table prisoners can be made without the rigid formality of certifying them insane.

#### AN IMPERSONATOR CONVICTED

One Lionel William Weekes was convicted last month before the Resident Magistrate of Nairobi of making a false declaration for the purpose of procuring a passport and with posing and practising as a doctor. He made out a passport declaration form under the name of William Edwin Weekes and stated that he was a physician. He put a signboard outside his house in Nairobi with the inscription 'Dr W E Weekes'. Pleading guilty he said that when he came to the country he had no intention of posing or practising as a doctor. The police agreed that in his five years in Kenya he had worked at various mission stations and done quite a lot of surgery and there had been no complaints against him. He said he really did know his job as he had been within four months of his final examination when he had taken up a position. He was fined 200s with one month's imprisonment in default. He owes an apology to the real doctor William Edwin Weekes who is on the Colonial list of the Medical Register and practises at Exeter, Ontario.

*Times* May 20 1938  
*East African Standard* May 2 1938

## Medical News

Professor John Beattie will deliver three Arris and Gale Lectures at the Royal College of Surgeons of England, Lincoln's Inn Fields, W.C. on June 24, 27 and 29 at 5 p.m. His subject is 'Recent Work in Experimental Surgery'. The lectures are open to medical practitioners and advanced students.

Dr Robert Hutchison, President of the Royal College of Physicians of London and consulting physician to the hospital, will present prizes to successful students of the London Hospital Medical College on Thursday, June 30 at 3 p.m.

H.R.H. the Duchess of Gloucester will open an exhibition of photographs illustrating African progress in Kenya at the Imperial Institute, South Kensington on Monday, June 20 at 5 p.m.

The Prosser White Annual Oration before the St. John's Hospital Dermatological Society will be delivered by Professor Charles Flandin at the Royal Society of Medicine, 1 Wimpole Street, W. on Wednesday, June 22 at 5 p.m. His subject is 'Recent Advances in Leprosy and the Methods Adopted for Dealing with the Problem in France'.

The thirteenth annual Macalister Lecture will be delivered at the National Temperance Hospital on Thursday, June 30 at 9 p.m. by Dr Leonard Williams whose subject is 'This Mortal Coil'. All medical practitioners are invited to be present, and may bring friends (ladies or gentlemen). Smoking tea and coffee.

The eighth meeting of the Conferences of the International Committee of Military Medicine will be held at Luxemburg from July 1 to 4. Official acceptances have already been received from twenty-five nations. In addition to the various technical discussions, consideration will be given to the sanitary organization involved by a mobilized nation and the protection of the civilian part of the community. Various excursions are being arranged. Fuller details of the programme of this meeting may be obtained from Colonel Voncken, Office International de Documentation de Médecine militaire, Liège.

The International Congress of Light will be held at Davos in Switzerland on July 29 and 30 under the presidency of Dr Morikof. The subjects for discussion will be light and climatology, the action of natural and artificial light on healthy organisms and physiological and physical study of the therapeutic sources of light. Further information can be obtained from the secretary, Dr Schreiber, Robert Koch Platz 1, Berlin.

On Thursday, June 23 at 5.30 p.m. the Marchioness of Carisbrooke will open the new premises of the Children's Centre of the Institute of Child Psychology at 6 Pembridge Villas, W. and at 6.30 p.m. Mr Kenneth Lindsay, M.P., Parliamentary Secretary to the Board of Education will open an exhibition of the work of the institute. The chair will be taken by Professor Winifred Cullis.

The Industrial Eye Injuries Committee of the Royal Eye Hospital has arranged an exhibition dealing with the prevention of industrial eye injuries. This will be opened at the hospital on Wednesday, June 22 at 3.15 p.m. by the Earl of Athlone, K.G.

H.R.H. the Duchess of Kent has consented to become President of The Babies Club (Chelsea), 35 Danvers Street, S.W. 3. This is the first infant welfare centre for the better-to-do classes; there are now three others in London.

The fourth international postgraduate course on x-ray diagnosis for physicians and surgeons will be held at Munich from July 8 to 14. Further information can be obtained from Akademie für ärztliche Fortbildung, Robert Koch Platz 2, Berlin N.W. 7.

Dr Fred M. Smith, professor of medicine at Iowa University, has been appointed editor of the *American Heart Journal* in succession to Dr Lewis Conner, professor of clinical medicine at the Cornell University, New York, who has retired after acting as editor since the establishment of the journal in 1925.



## Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL BMA HOUSE TAVISTOCK SQUARE WC1

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### QUERIES AND ANSWERS

#### Snoring

Z asks for suggestions for curing snoring. My patient is a healthy young man aged 30. He has led an open air life and is accustomed to sleep very soundly. He has always snored and hitherto it has been merely amusing—but he has recently married. He has no nasal obstruction or enlarged tonsils. He can snore on his side as well as on his back—he is even able to snore with his mouth tied up. Is there perhaps some sort of self retaining speculum for keeping the jaws open?

#### Human Embryos Wanted

Dr MARY CRIPPS writes to thank those readers who very kindly forwarded specimens of early human embryos. As she still requires a few more from the fifth to the seventh week of pregnancy she will be glad of even preserved specimens from retiring colleagues who have no further use for them. Specimens should be addressed to her at the Histological Department, Royal College of Physicians, Forest Road, Edinburgh. They must be packed in accordance with Post Office regulations.

#### Income Tax

##### *Expenses—Schedule E*

Major R.A.M.C. explains that he is allowed 4d per mile for the use of his car while on duty but regards that rate as insufficient to cover the cost. Can he make a claim to deduct the balance as an expense for income tax purposes? Also can he not claim a deduction for the cost of professional books?

The allowance is governed by the Rule in Schedule E that deductible expenses must be incurred wholly exclusively and necessarily in the performance of the duties of the office. It is settled law that this does not extend to the cost of travelling from the residence to a fixed place of employment but only to travelling about while on duty. Consequently it happens frequently that the income tax allowance is smaller than the total cost of running a car, the latter covering private or semi-private use and sometimes the use of a more expensive car than is necessary. What our correspondent would have to do to succeed would be to show that 4d a mile was inadequate for the necessary official use and so far as our experience goes such an attack

on the employing authority's rate of allowance would not succeed before the Income Tax Commissioners. The question of professional literature came up in the case of *Simpson v Tate* and in deciding in favour of the Revenue, Rowlatt J said: 'All taking in of professional literature and all that sort of expense which enables a man to keep fit for what he is doing are things which can none of them be blamed. That decision would conclude an appeal against our correspondent.'

### LETTERS, NOTES, ETC.

#### The Horse-shoe Club

In 1930 there was instituted an exchange of resident house physicians between the Children's Hospital and the General Hospital, St. Louis and the East London Hospital for Children (now the Princess Elizabeth of York Hospital for Children). To commemorate this association of medical workers on both sides of the Atlantic and to cement the friendships that had been made, a club called 'The Horse-shoe Club' after a popular game played at St. Louis, was founded, and held its first meeting in May, 1932. This year it was felt by some of the founders that the membership was not representative enough and that it had not the power for bringing together the American and British peoples that it could have if it were to consist of all medical men and women who had worked and resided in each other's country. And as a start at the creation of this larger organization a dinner was held at the Langham Hotel which was attended by British medical men and women who had studied in America or who have been concerned in providing study facilities in this country for American colleagues and by those who have been instrumental in providing financial and moral assistance for this type of work. Several American colleagues at present resident in London also attended. At this dinner those present were unanimous regarding the desirability of the aims of the club. Dr Geoffrey Bourne who was elected chairman suggested that to make the most of the organization there should be two branches complementary to one another, one in America and one in England. So far as the British branch of the club is concerned it will consist of three types of members: (a) medical men and women who have studied in America under a scholarship or otherwise for a period of at least six months; (b) medical men and women who grant facilities for American research workers in their departments; (c) non-medical men and women who give moral or other support for facilities for the above work. The honorary secretary Dr Leonard Findlay, 14 Wimpole Street, London W1 would be glad to hear from anyone who is eligible for membership. The subscription is one guinea per annum.

#### Death from a Wasp Sting

Dr F. ALEXANDER (Wraybury Bucks) writes: I was called to a riverside bungalow on Bank Holiday at midnight to see a lady aged 56 who had been stung by a wasp. She was dead on my arrival and had been so for half an hour or more. She had been sitting in the lounge after supper when two queen wasps flew into the room. The patient took off her shoe and knocked them to the floor. She thought both wasps had been killed. A few minutes later when she stepped across the room she trod on one of the wasps with her bare foot and was stung on the big toe. She complained of much pain and about twenty minutes later she collapsed and died without regaining consciousness. It is very seldom that a wasp sting proves fatal in such a short time but I believe the sting of a queen wasp is always more poisonous than that of an ordinary one. As the patient was suffering from cardiac disease and hyperpiesis this may have accounted for her collapse.

#### Medical Golf

The eighth spring meeting of the Sussex Medical and Dental Golfing Society was held on the links of the Crowborough Beacon Golf Club on June 5. The Rolls-Royce Cup was won by P. G. Roberts with a score of 88-17=71 and A. R. Elliott was second with 81-8=73. The afternoon round was a 4 ball foursome against bogey, which was won by A. C. Rumsey and P. G. Roberts with a score of 3 up and J. McWhirter and F. N. Strange were second with 2 up.

# EPITOME OF CURRENT MEDICAL LITERATURE

## Medicine

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### Psittacosis

E. HAUGEN and G. MAUER (*Deutsch. med. Wschr.* April 15 1938 p 561) give an account of the laboratory examinations for psittacosis conducted at the Robert Koch Institute during the year ended September 30 1937. It seemed at first that the prohibition of the import of parrots in 190 would do much to stamp out the disease more especially when the legislation of 1934 imposed certain restrictions on the sale and purchase of parrots. But these measures have been partly nullified by the fact that infected birds remained carriers while seemingly quite well and also by the versatility shown by purchasers of parrots in giving wrong names and addresses and so rendering difficult the tracing of suspect birds. In the year under review the laboratory findings were positive in nine of the eighty three samples of sputum examined. None of the twenty four samples of suspect blood gave a positive finding and this was also the case with the fourteen throat swabs examined. Gargled water in four suspect cases yielded one positive result in this particular case the examination of the sputum had proved negative. A negative laboratory report cannot therefore invalidate a clinical diagnosis in a well defined case but in a clinically ill-defined case a positive laboratory finding is most useful. The authors deplore the lack of any specific serological treatment and they note that chemotherapy is also ineffective. Treatment must therefore be purely symptomatic.

### 507 Constitutional Factor in Agranulocytosis?

R. RAYMOND C. IMBERT and J. R. DESHOLLES (*Sang.* 1938 12 : 327) believe that there is a constitutional familial factor in the pathogenesis of agranulocytosis. They describe the fatal case of a woman aged 23. In her childhood she had suffered from numerous attacks of severe epistaxis later the epistaxis was more frequent during the premenstrual period. The mother one sister and one brother all showed anaemia with leucopenia—particularly a polymorphonuclear leucopenia—thrombopenia and a tendency to haemorrhages. The authors regard these relatives of their patient as potential cases of agranulocytosis. The predisposition to this disease in this family seems to have been transmitted by the females as the oldest child, who died, and the two younger had different fathers. The patient her mother her sister her maternal grandmother and a maternal aunt also had either acquired or hereditary syphilis.

### 508 Urticaria from Inhalation of Milk Protein

P. HANSEN (*Ugeskr. Laeg.* March 3 1938 p 226) cannot find in the literature any reference to urticaria due to the inhalation of finely divided milk, although the consumption of milk is well known to cause urticaria in certain persons. He gives an account of a dairymaid aged 27 who had worked in a dairy for some thirteen years during six of which attacks of urticaria had grown more and more frequent. They never troubled him on holidays and occurred only when he was at work. The attacks were independent of his food and the consumption of milk products failed to provoke them. They were at times very severe and accompanied by a feeling of slight suffocation. No signs of disease were demonstrable on his admission to hospital but as soon as he was put back for about half an hour into one of the rooms of the dairy urticaria appeared. Violent cutaneous reactions were obtained to most of the substances including various milk proteins commonly used for allergic skin tests and it was therefore impossible to incriminate any one exciting factor. But

when he was tested by the spray inhalation of one component after another of milk and of the chemical employed in the disinfection of the dairy it was found that urticaria appeared only in response to the inhalation of fine particles of fresh whole milk, sour milk, buttermilk and to a less extent of skimmed milk. The lively urticaria provoked by the inhalation of a spray of cream could not have been due to its fat content as no reaction followed the intracutaneous injection of an emulsion of cream fat.

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### Post vaccinal Orchitis

I. H. ALANAR (*Mscr. Kinderheilk.* 1938 72, 5 and 6 390) describes a case of orchitis following vaccination. The patient was a boy of 3 months bottle fed on a mixture of cow's milk and rice water. After a first vaccination which was unsuccessful he was revaccinated fourteen days later. A normal reaction followed, but seven days later he was admitted to the author's institute with high fever and swelling of both testicles. Without any treatment the fever gradually abated the swelling decreased, and in four days had completely disappeared. The author discusses the various possible explanations of this occurrence and comes to the conclusion that in spite of the fact that it happened after a previous abortive attempt at vaccination this was not an anaphylactic phenomenon but must be regarded as directly due to the vaccinia virus.

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### Pyloritis

F. BACH (*Fortschr. Ther.* March 1938, p 127) discusses the aetiology and treatment of heartburn. He maintains that this is not invariably due to hyperacidity but may on the contrary occur in the presence of normal acidity and even of achlorhydria. Many diverse factors contribute to the causation of pyloritis the two most important of which according to Bach are abnormal sensitivity of the oesophageal and gastric mucosa and also muscular spasms particularly of the pylorus. The author reports on the results obtained in treatment with a new preparation, Siodan, which contains a spasmolytic buffer of low acidity. Thirty patients were treated. In many cases the acid secretion curve showed the objective improvement while in all cases the subjective symptoms were completely relieved.

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### Atypical Addison's Disease

H. REINWEIN (*Med. Klinik.* March 25, 1938 p 381) found that adynamia was the most frequent symptom in masked cases of Addison's disease. Lymphocytosis was practically constant but leucocytosis was never found. The blood sedimentation rate was generally slightly increased. The blood content of sodium chloride was diminished and achylia was usually present. Reinwein points out that in atypical cases of Addison's disease the symptoms are often attributed to myocarditis. In the former the blood pressure is lowered and radiographically the heart appears small and narrow. Long febrile periods are also uncommon in Addison's disease. Disturbances of the gastro-intestinal tract with abdominal pain and diarrhoea sometimes mask Addison's disease. Hypernephromata may give rise to symptoms similar to those of Addison's disease.

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### Avitaminosis B<sub>1</sub> in Alcoholic Polyneuritis

P. GOVAERTS (*Scalpel.* Liege March 5 1938, p 289) discusses the part played by vitamin B<sub>1</sub> deficiency in the aetiology of alcoholic polyneuritis. He points out the similarity of the nervous hepatic and cardiac symptoms of alcoholism to those of beriberi which is admittedly due to deficiency of this vitamin. STRAUSS (*Amer. J. med. Sci.* 1935 189 378) showed that alcoholics could be cured of polyneuritis by large doses of vitamin B<sub>1</sub> by mouth and parenterally even while they were continuing

to consume considerable quantities of whisky Joliffe, Colbert, and Joffe (*ibid*, 1936, 191, 515) found that in alcoholics with polyneuritis the supply of vitamin B<sub>1</sub> was insufficient, that when there was an adequate ingestion of vitamin B<sub>1</sub> no neuritis developed, and that neuritis developed in several weeks if the vitamin B<sub>1</sub> in the diet was reduced, and in seven days if the vitamin lack was absolute. There are two factors in the production of neuritis: lack or imperfect assimilation of vitamin B<sub>1</sub> and an unknown hepatic factor. In the absence of vitamin B<sub>1</sub> the disintegration of carbohydrates intracellularly is arrested at the stage of formation of pyruvic and lactic acid and these products accumulate in the tissues. Their presence in excess has been noted in the nerve centres in pigeons with B<sub>1</sub> deficiency polyneuritis. This explains the fact that excess of carbohydrate in the diet favours the development of polyneuritis when the diet is already deficient in vitamin B<sub>1</sub>.

### 513 Myelitis following Rheumatic Fever

A. MORCH CHRISTENSEN (*Hospitalsindende*, April 5, 1938, p. 327) gives a detailed account of two patients—a newspaper vendor aged 46, and an engineering apprentice aged 18—treated in the neurological department of the municipal hospital in Copenhagen for disease of the spinal cord (myelitis) which had developed after typical rheumatic fever. He discusses the frequency of such a sequel and comes to the conclusion that it is quite rare whereas chorea minor and the so-called “cerebral rheumatism” are comparatively common. He notes however, that in the *Journal de Médecine de Lyon* for 1936 (p. 315) Bouchut, Froment and Ronzier have collected twelve such cases of myelitis following rheumatic fever, some acute, others chronic. Although in the author's second case considerable improvement was achieved complete recovery could be claimed in neither case.

### 514 Acute Aniline Poisoning

J. CATHALA, R. HAZARD, H. MASCHAS and R. JEQUIER (*Ann de Méd*, March, 1938, p. 187) report the case of a child, aged 18 months who drank a quantity of shoe-stain containing an aniline dye. The main symptoms of poisoning were vomiting, convulsions, hyperpnoea, cyanosis and periods of violent excitement. Dehydration was marked. The liver was enlarged and symptoms and signs of bronchopneumonia appeared. In spite of treatment the child was in a dying condition when she was removed from hospital by her parents. The authors have carried out experiments on rabbits in an endeavour to determine if the acidosis and lowering of the alkaline reserve which they found in this case could be directly attributed to the action of aniline, and if the hyperpnoea was due to the direct action of aniline on the nerve centres. They found that in addition to the production of methaemoglobin, aniline causes a disturbance of the acid-base equilibrium and of the blood sugar level. Unfortunately these changes are not always in the same direction, so that no precise indication as to treatment is given. Aniline affects the nervous system directly, causing asthenia, hyperpnoea, somnolence, excitement, coma, and collapse. These symptoms cannot be explained solely by the methaemoglobinaemia or by the alteration in the acid base equilibrium.

### 515 Habitual Hyperthermia

C. V. MEDVEI and V. STERN (*Wien klin Wschr*, March 18, 1938, p. 326) review the problem of habitual hyperthermia, which manifests itself by a body temperature above normal, up to 99.5° F or even 99.7° F, in apparently healthy individuals. The authors classify this condition into (1) hyperthermia caused by focal infection, (2) hyperthermia without infection which may be due to a disturbance of the vegetative nervous system or to hyperthyroidism or to a combination of both (neurothyroidism). 1348 B

origin) and (3) mixed forms, which may be either simultaneous or successive. Lund distinguishes between cases of protracted post febrile hyperthermia, where the infective process still persists in an attenuated form, and cases of post-febrile hyperthermia without residual infection. In the first group the temperature returns to normal after the administration of a dose of pyrimidon, whereas the cases of the second group are uninfluenced by pyrimidon, but return to normal spontaneously on the resumption of normal habits. In exceptional cases, however, the temperature fails to return to normal even after large doses of pyrimidon, although there may be definite evidence of persistent infection.

## Surgery

### 516 Surgical Treatment of Coronary Disease

A. OCHSNER and M. DE BAKRY (*New Orleans med surg J*, March, 1938, p. 520) gives the results obtained by the various surgical procedures used in the treatment of 172 cases of coronary disease. There are three main methods of surgical attack: by operation directed at the sympathetic nervous system by thyroidectomy, and by the development of a collateral blood supply to the heart. The first procedure is based upon interruption of cardio-sensory and motor pathways. Sympathectomy is indicated for patients who are obviously poor risks. These are usually elderly people with marked sclerotic changes and fibrotic myocardial degeneration. It is also suitable for patients who have very severe pain, or in whom the angina is aggravated by emotional disturbance rather than by effort, and for those cases in which the basal metabolic rate is very low. Paravertebral alcohol injection has an almost negligible mortality and the technique, which is relatively simple is fully described. Thyroidectomy has a much higher mortality but the proportion of successful results is also higher. This method of treatment is indicated for patients who have a normal or high basal metabolic rate, who are relatively good risks, and whose angina is one of effort rather than of emotion. Treatment of coronary disease by the development of a collateral circulation has a 50 per cent mortality and is suitable for patients who have had a recent thrombosis, or show little evidence of arteriosclerosis or fibrotic muscular degenerative changes. It is suggested that improved technique and a careful selection of cases may reduce the high mortality. In the whole series reviewed a little over 70 per cent of cases showed improvement to a greater or lesser degree.

### 517 Gas Gangrene

F. KOCH (*Hygiea*, Stockholm, March 31, 1938, p. 194) has undertaken a study of the twenty-four cases of gas gangrene, six of them fatal, observed at a surgical hospital in Lund, Sweden, during the seventeen-year period from 1920 to 1936. In as many as nineteen cases the gas gangrene was associated with compound fractures, and in two other cases with injuries from accidents. In the remaining three cases it was associated with a secondarily infected diabetic carbuncle, with senile gangrene, and with the operation wound in a case of incarcerated hernia. During the same period some 700 cases of compound fractures and serious injuries to the soft tissues were treated in the author's hospital, where the frequency of gas gangrene could accordingly be put at about 3 per cent. There were also 193 amputations of the limbs for senile gangrene, diabetic gangrene, emboli, or varicose ulcer in the same period. While the mortality from gas gangrene during the great war was about 40 per cent, and remained in peace-time until 1932 as high as 42 per cent, there has since been a change for the better, and Brundberg's survey, published in 1937, showed a mortality of about 32 per cent. In all the author's cases admission to hospital was effected within two and a half hours of the accident, and

the routine surgical treatment consisted of careful wound to let and irrigation with chloramine or hydrogen peroxide. Anti-tetanus serum was invariably given unless the patients had already received it within the last two or three years. As many as nineteen cases were treated by amputation and of the five patients receiving no more radical treatment than incisions only one died.

## 518 Nailing Limb Fractures

E. CHRISTIDI (*Zbl. Chir.* March 5, 1938 p. 529) states that in Rumania nailing of fractures of the epiphyses in children, or the ends of long bones in adults, is often adopted with satisfactory results. Projection of the nail through the skin has not been found to favour infection and the projecting nail is much more easily removed than that inserted subcutaneously. Except in fractures of the neck of the femur the nail used is 8 cm. long and 2 mm. in diameter. After reposition of the fragments through an adequate skin incision two nails are driven in obliquely—and crossing each other obliquely—from the epiphyseal side, and often a third is introduced entering the diaphysis. One end of each nail projects between the stitches or through a specially made slab. After operation a light plaster bandage is applied for ten days and movement is then begun; the nails are taken out between the twentieth and twenty-fifth days. It is said that redisplacement never follows nailing and that infection or pseudoarthrosis have not been seen. The cases illustrated include fracture dislocation of the head of the humerus, supracondylar fracture of the humerus, epiphyseal dislocation at the lower end of the radius and compound tibiofibular fracture near the ankle. Residual loss of movement is said to be particularly slight.

## 519 Prevention of Post-operative Thrombosis

W. KNOTT (*Zbl. Gynäk.* March 26, 1938 p. 679) discusses the results obtained in the prevention of post-operative thrombosis and embolism by raising the foot of the bed. In the years 1933 to 1935 after the 630 operations performed at his hospital the patients were given sympatol, but the beds were not raised. There were twenty cases of embolism—six of which proved fatal—and in the same period four cases of phlebitis and ten of thrombosis. In the period 1935 to 1937 the patients received the same medical treatment but the foot of the bed was raised 25 cm. on wooden blocks. In these two years 670 patients were treated and there were only five cases of embolism (four fatal) and one of phlebitis. There were however thirteen cases of thrombosis.

## 520 Ulcus Cruris

S. TAPPEINER (*Derm. Wschr.* March 26, 1938 p. 353) describes a new method of treatment of intractable ulcus cruris. The ulcer is first cleaned by alternate applications by compresses of a 1 per cent solution of boric acid and a weak solution of hydrogen peroxide. When the ulcer has been sufficiently cleaned it is scarified and painted repeatedly with a 2 to 5 per cent solution of silver nitrate until healthy granulation tissue appears. The hard rim which often surrounds these ulcers and which is the cause of an inadequate blood supply is opened by means of numerous deep radial incisions. After about a week the ulcerated area is ready to receive a Thiersch graft. The graft is taken from the thigh of the opposite healthy limb. Just before the skin grafting the ulcer is again scarified. The denuded area on the thigh and the skin graft on the leg are covered with silver foil which encourages epithelialization and checks secretion and tetor. The author gives further details of his method of treatment and stresses the importance of after-treatment in view of the tendency of the ulcers to recur. Of ten cases treated by this method six were permanently cured, in two cases the ulcer recurred, and two cases remained unimproved.

# Therapeutics

## 521 X-Ray Treatment of Lobar Pneumonia

E. V. POWELL (*J. Amer. med. Ass.* January 1, 1938 p. 19) reports results of x-ray therapy in 104 cases of acute lobar pneumonia; only five of the patients died. In broncho-pneumonia (number of patients treated not specified) x-ray therapy was responsible for a reduction of the mortality from 30 to 13 per cent. X-rays should not be applied before the stage of consolidation. The author used rays produced at 135 kilovolts and filtered through 3 mm. of aluminium; 250 to 350 r units were applied anteriorly or posteriorly over an area slightly larger than the involved portion of the lung. If the temperature and the leucocytosis have not dropped to normal within thirty-six to forty-eight hours, a second treatment is given to an opposite field. The improvement usually sets in within a few hours after the treatment. So far the only contraindication seems to be a definite leucopenia, such as is encountered occasionally in patients with post-influenzal pneumonia.

## 522 Pernicious Anaemia

L. HEILMEYER (*Med. Klinik* February 18 and 25 and March 4, 1938 pp. 209, 249 and 295) discusses the diagnosis and treatment of pernicious anaemia at the present day and at his instance six German authorities, as well as Meulengracht of Copenhagen and Röhr of Zurich have dealt with certain specified questions. From the answers the following conclusions may be drawn: (1) In diagnosis halometry is valuable and reliable when megalocytosis is well marked; measurement of the colour index and examination of the stained blood film are more generally reliable; sternal puncture although decisive, is rarely necessary. (2) Gansslen's finding that in some cases minimal liver doses are effective is confirmed, but is regarded (even by Gansslen himself, one of the contributors) as of more scientific than practical importance and is useful in pharmacological assessments. (3) Stomach and liver preparations are equally effective. Meulengracht reckons that a year's treatment by a dried detrital and pulverized preparation of pig's pyloric mucosa costs 230 Danish crowns and by liver extract given orally 750 crowns on an average. Henning advocates a combination of intrinsic factor from antral glands (3 to 5 grammes daily) with extrinsic factor from vegetable proteins. Vitamin therapy alone is never effective. (4) It is to an increasing extent recognized that in the causation of nervous symptoms additional aetiological factors are concerned such as iron and vitamin B deficiency; occasionally striking therapeutic successes are noted from vitamin B therapy. Hoff distinguishes between first funicular myelosis developing gradually and resistant to therapy, and on the other hand symptoms due to small or large intracerebral bleeding—symptoms which occur relatively acutely and respond to treatment of the anaemia. (5) A syphilitic aetiology may now be rejected and Addisonian anaemia from liver disease (for example cirrhosis) rests on a doubtful basis. (6) True pernicious anaemia may occur (although very rarely) in pregnancy and is then curable by liver. (7) Megalocytic hyperchromic anaemia apart from a few cases of endemic sprue does not occur as a dietary deficiency disease in Central Europe. The principles of treatment, as laid down by Heilmeyer and generally endorsed by the contributors are as follows. The urgent case is given one or more blood transfusions, rightly grouped and in quite small doses and at the same time daily injections of campolon or a similar preparation in large doses. With appearance of the blood crisis parenteral administrations are gradually reduced in amount and frequency and supplemented by raw liver. In their subsequent

career the patients show great individual variations in their requirements of liver. Rarely interruptions last for years in spite of no treatment at all. Some patients do well on "depot treatment"—single injections of large doses of a concentrated liver extract at intervals of one to eight weeks. Others require continued oral administration. Regular medical supervision is required and routine examination will at some time reveal incipient nervous symptoms in a surprisingly large proportion of cases—50 per cent or more according to some. A considerable number of patients, especially women, have a combination of hyperchromic and hypochromic anaemia, the former first responding to liver but the total anaemia not responding until the latter has been treated by large doses of ferrous iron. A ferrous salt of ascorbic acid has lately been much used.

### 523 Local Vitamin A for Radiodermatitis

H. SOHIER and L. GINIEYS (*J. Radiol. Électrol.* March, 1938, p. 112) report a case of severe ulcerative radiodermatitis which had resisted all forms of therapy for six years. The ulceration, which affected the epigastric region supervened as a result of repeated radiographic examinations. Among the treatments unsuccessfully tried were diathermy, ultraviolet irradiation, heliotherapy, local serotherapy and all kinds of ointments and antiseptics. Infra-red irradiation had a definite analgesic effect. Insulin was applied locally with partial success. Vitamin A was then applied directly and caused rapid cicatrization and epithelialization of the ulcer.

### 524 Cardiospasm

J. DOBERER (*Wien Klin. Wochschr.* April 1, 1938, p. 384) contrasts cases of slight cardiospasm yielding readily to the passage of a sound and antispasmodic medication with the more common severe cases, in which the patient's suffering may be so great as to cause suicide and in which the incidence of carcinoma is twenty five times greater than in the normal oesophagus. He describes three long standing cases, with marked wasting, treated successfully by dilatation with the 'cardiodilator' described by Professor Stark, of Karlsruhe, in 1934. This is made entirely of metal and has a thin shaft, towards the end is an expanding dilator manipulated from the handle and terminally it is provided with a 'pathfinder' which is screwed on and consists of fine rubber tubing filled with mercury. Sudden and forcible stretching is requisite, so that the muscular ring, beneath the mucous membrane is torn. A ductile ring may require repeated dilatations before it can be torn.

### 525 Alcohol Therapy of Traumatic Shock

G. D. OBRASTOSOV (*Vestnik khirurgii imeni Grekova* (Russian) 53, 140, 10, 123) found that persons suffering injury while under the influence of drink stand the traumatic shock much better than sober persons. He was able to confirm this observation experimentally on rabbits. For the treatment of shock the author used either a 42 per cent alcoholic liquor given by the mouth in quantities of 70 to 100 ccm or an intravenous infusion of 200 to 500 ccm of a 10 per cent solution of alcohol. The experiments on animals have proved that the crushing of limbs which usually causes shock in untreated animals, does not produce a fall of blood pressure in drunk rabbits. The alcohol therapy of shock was ineffective only where there were multiple injuries incompatible with life. In cases of acute traumatic haemorrhage the proper treatment is blood transfusion but even in these cases the administration of alcohol as a preliminary to blood transfusion may prove useful.

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## Anaesthesia

### 526 Pantocain Spinal Anaesthesia

H. ZUMIELDE (*Zbl. Chir.* April 9, 1938, p. 791) has found the 10 per cent hypobaric solution of tropacocain satisfactory for operations below the umbilicus, though it cannot safely be used in the Trendelenburg position and its effect lasts only about an hour. An excellent hypobaric solution effective up to three hours is pantocain L, the makers (IG Farbenindustrie) of which have now produced a preparation of the dry salt in ampoules of 10 mg. This is dissolved in 3 to 4 ccm of cerebrospinal fluid obtained by puncture between the third and fourth lumbar vertebrae and reinjected, it is recommended that the injection be made rather quickly in order to mix the heavy solution with the cerebrospinal fluid. The patient is placed on his back with the head raised, and anaesthesia is usually complete in fifteen minutes. Though the level may be controlled by altering the position of the patient the author has not attempted to obtain anaesthesia above the level of the umbilicus. He reports favourably on sixty cases aged from 40 to 85; his failures were in the younger persons, and he considers the method unsuitable below 40 years. Of the sixty, fifty-three were completely successful and two total failures, in five supplementary anaesthesia was required. Only one case of collapse occurred, and this responded promptly to coramine. Two cases of severe headache were successfully treated by the intravenous administration of 40 per cent urotropin. An advantage of the method is that patients can get up on the day of operation.

### 527 Divinyl Ether Anaesthesia

E. W. BEACH (*Anesth. & Analges.* March-April, 1938, p. 90) has carried out 1,852 more administrations of divinyl ether, for eye, ear, nose, throat, and oral surgery, since previously reporting on 2,632 administrations, and he continues to find it a safe and satisfactory agent. His patients' ages have ranged from 2 to 84 years, and the duration of anaesthesia has been up to thirty minutes. It has been used alone, as a supplement to avertin or nitrous oxide and oxygen, and as a preliminary to ethyl ether. Its advantages are quick induction, easy control, and prompt recovery without nausea or vomiting. Considerable practice is necessary to obtain the best results owing to its high volatility and rapid action; the respiratory signs of depth of anaesthesia are the most important. Adequate oxygenation must be ensured. A mixture of 25 per cent divinyl ether with 75 per cent diethyl ether has been used in a number of cases, and has certain advantages over either anaesthetic used alone. The divinyl ether in the mixture does not evaporate early, as might be expected, but its effect is prolonged throughout the anaesthesia.

### 528 Nitrous Oxide

E. RYDBERG, H. HALDBO and A. LAURIDSEN (*Ugeskr. Laeg.* March 24, 1938, p. 303) have investigated at the maternity department of the Rigshospital in Copenhagen the claims made on behalf of a new Swedish apparatus, called 'sedator', for the administration of nitrous oxide during labour. It provides a graduated supply of pure nitrous oxide which the patient regulates herself. As she inspires atmospheric air between the inhalations she administers to herself during labour pangs she avoids deep anaesthesia, asphyxia, and marked cyanosis. The authors' report on their first 100 confinements thus treated shows that the results were most satisfactory in sixty to sixty-five cases, in a score of which labour was rendered almost completely painless. In many cases, however, it was found advisable to give chloroform

towards the completion of labour and there were fourteen or fifteen patients who derived little benefit from the nitrous oxide. This may have been so because some of them lacked the necessary self control or intelligence to make the best use of the apparatus. The nitrous oxide was given on the average for three hours and in some cases for five to eight hours. There were two stillborn babies whose deaths were evidently unconnected with the anaesthetic and three who were slightly asphyxiated at birth. All the other babies cried vigorously as soon as they were born. There was no delay in the birth of the placenta. The only disquieting observation concerned two cases in which pains became suddenly very frequent. But this condition did not amount to tetany of the uterus and it could be promptly checked by a small dose of morphine. Several cases of this complication have already been observed in Stockholm by other obstetricians testing the new apparatus.

529 M. RAPIN (*Schweiz. med. Wschr.* April 9 1938 p. 378) outlines the history of nitrous oxide anaesthesia and points out that it is very little used in Switzerland although it has been so popular for many years in England and the U.S.A. He has carried out about 100 administrations of nitrous oxide and oxygen sometimes with ether for minor operations particularly in children. His results have been good and he has had no accidents. He recapitulates the well known advantages and drawbacks of the gas—for example the rapid induction and recovery without after effects absence of toxicity or inflammability preservation of the laryngeal reflex etc. On the other hand, the anaesthetic is unsuitable for children under 5 years its use has not spread owing to difficulties in the supply of a pure gas and of suitable apparatus in the past. The technique of administration is not so difficult as has been sometimes suggested and he recommends the beginner to try it on himself in the presence of a third person. In laryngology he particularly recommends it for curing adenoids guillotining tonsils incising drums, anal puncture and opening peritonsillar abscesses. It is also useful for dental extractions and in minor surgery for opening abscesses etc.

from 9 to 82 years and weights from 66 to 175 lb. None has shown signs of idiosyncrasy and the two deaths were quite unconnected with the anaesthesia. In two cases only was there slight cyanosis which responded to carbon dioxide and oxygen. There was usually a slight fall of blood pressure and occasional slowing of respiration. Operation was followed by apparently normal sleep lasting up to six hours.

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## Sbrechts's Spinal Anaesthesia

R. LINDLEY (*Zbl. Chir.* March 26 1938 p. 704) discusses the problems of high spinal anaesthesia and reports favourably on Sbrechts's method after an experience of 150 varied operations on patients aged from 21 to 72. Of these operations 104 were above and forty three below the umbilicus. Three complete failures required other forms of anaesthesia. The author considers the Howard Jones hypobaric solution of percaine the best on account of its high dilution with minimum toxicity its intense and lasting effect its positive control of the height of anaesthesia and its slight effect on blood pressure due to the fact that percaine has relatively less effect on the sympathetic than other agents. He considers Sbrechts's fractionated dosage essential as it allows the correct doses to be given to ricini sensitive and ricini resistant persons thus avoiding failures or disasters due to under or over dosage. In this procedure after puncture between the third and fourth or fourth and fifth lumbar vertebrae the patient is turned on the face and injections of 5 c.c.m. of percaine are made at five minute or ten minute intervals until the required level of anaesthesia is obtained. To allow for possible errors and for the rise in level that sometimes occurs during operation the author considers that anaesthesia above the sixth dorsal segment should not be aimed at. Sbrechts's method allows of much higher dosage than would otherwise be safe. The lowest amount given in the series reported was 5 c.c.m. for amputation of a foot the highest 50 c.c.m. for duodenal ulcer. On eighteen occasions the dose exceeded 20 c.c.m. There were no cases of collapse in 21 per cent there was nausea and vomiting on the table headache occurred in six cases.

530

## Rectal Evipan Sodium

M. L. WEINSTEIN (*Surg. Gynec. Obstet.* February 1, 1938 p. 227) reviews the history of the rectal administration of anaesthetics and gives details of his experience with rectal evipan sodium. He has modified Gwathmey's dosage of 1 c.c.m. of 10 per cent solution for every 5 lb. of body weight although he considers this is within the limits of safety. Individual cases may also require modified dosage—for example robust young alcoholics need more and cachectic individuals less than the standard. Excessively fat individuals are given the dose corresponding to the normal weight for their age. The author's dosage table is as follows:

Weight	Evipan (10 per cent solution)	Preliminary Dilaudid (Hypod.)
45-60 lb.	6 c.c.m.	1-40 grain.
60-75	10 "	1-40 "
80-95	13 "	1/30 "
100-115	16 "	1/30 "
120-135	20 "	1/20 "
135-150	26 "	1/20 "
155-175	30 "	1/10 "

The injection is made with a funnel and catheter, and the patient is usually asleep in ten to twenty minutes even if the patient is only semiconscious. Amnesia is always complete. In all but minor cases supplementary anaesthesia regional local or inhalational is required. Sixty cases comprising various operations have been dealt with in this way with very satisfactory results, their ages have ranged

## Obstetrics and Gynaecology

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## Sterility

M. RODECURT (*Zbl. Gynäk.* April 2, 1938 p. 757) quotes Schulze's findings from analysis of 1000 cases at a Berlin women's hospital that in 40-50 per cent of cases sterility is due to bilateral occlusion of the Fallopian tubes and that there is then only a 4 per cent chance of successful treatment. The necessary investigations and treatment in the remaining cases he points out, are both costly and time consuming. In point of fact the average cost of a child born as a consequence of skilled treatment of sterility has been reckoned at RM 3500. Rodecurt pleads for investigation and treatment of sterility by the private (specialist) practitioner without the necessity for authorization of the treatment and its expenses by medical officials of the insurance organizations. He analyses the records from his own practice, of 136 women seeking treatment for sterility at an average age of 29 with an average duration of sterility of two to six years. In six out of sixty four cases in which semen was examined azoospermia was found. Double tubal occlusion was proved in 19 per cent but was probably present in others also. Out of eighty patients in whom examination and treatment could be fairly satisfactorily carried out no fewer than twenty two became pregnant within six months. In nearly all these, treatment had been given for a combination of two or more of the following factors: tubal occlusion adiposity, menstrual

abnormalities adnexal inflammation trichomoniasis, cervicitis, vitamin deficiency, hormone deficiency. Laparotomy done in seven cases, led to five radical and two conservative operations being undertaken, one pregnancy followed.

### 533 Haematogenous Ovarian Infection

M FOSSEL (*Wien klin Wschr* March 25, 1938 p 357) mentions the rarity of haematogenous oophoritis but records three examples noted at Graz this year. In the first a patient with chronic otitis media died from an acute streptococcal purulent peritonitis originating from an acute purulent oophoritis on one side. In the second, lethal peritonitis arose from multiple ovarian abscesses in a patient under treatment for bilateral acute otitis. The third patient suffering from acute otitis and pneumonia had pus in an ovarian corpus haemorrhagicum. Circumstances favouring haematogenous ovarian infection were present in the three cases in that (1) the general resistance had recently been impaired by an acute epidemic influenzal infection and (2) pelvic hyperaemia had favoured bacterial invasion of the ovary—the first patient showed pelvic premenstrual congestion the second was eight months pregnant and the third was menstruating at the time of the acute pelvic symptoms.

### 534 Tetany and Osteomalacia

E KEHRER (*Z Gebirsh Gynak* 1938 116, 2 141) records the case of a female patient in whom tetany and osteomalacia were combined. He discusses the pathogenesis and treatment of both conditions. Tetany may be due to (1) hypoplasia or atrophy of the parathyroids, (2) deficiency of calcium, (3) the administration of certain poisons—for example, phosphates, oxalic acid, or sodium bicarbonate, (4) gastro-intestinal disturbance as in coeliac disease and sprue, and (5) pituitary dysfunction. Modern therapy includes the administration of Collip's parathyroid hormone, vitamin D, and large doses of calcium—10 c cm of a 20 per cent solution of calcium gluconate injected intravenously over a period of five minutes is probably the method of choice. Osteomalacia has been considered to be due to (1) hyperfunction of the ovaries, (2) hypofunction of the adrenal medulla, (3) hypofunction of the thymus, (4) thyroid dysfunction acting on the phosphorus calcium metabolism, and (5) hypofunction of the parathyroids. Treatment consists in (1) fresh air and sunlight and a well-balanced diet, (2) the administration of tricalcium phosphate, vitamins A and D, adrenal and thymus extracts and thyroxine, (3) castration by operation or x rays, and (4) operative and orthopaedic treatment of skeletal deformities. The author is of the opinion that castration, sterilization, total extirpation of the genital apparatus, and termination of pregnancy are methods which, on account of newer forms of therapy, will fall into disuse in the future.

### 535 Traumatic Prolapse

T PETRESCU (*Gynec si Obstet* November-December, 1937 p 127) describes an unusual case of acute prolapse of the uterus following rape. The patient was a nulliparous woman showing multiple stigmata of degeneration both physical and intellectual. She had a small infantile uterus, and the pouch of Douglas was abnormally deep. The prolapse occurred immediately after repeated and violent assaults by a number of drunken men and was accompanied by haemorrhage. The patient was at first able to reduce the prolapse but it recurred on the slightest exertion and rapidly became more pronounced, so that it was eventually impossible to replace the parts in position and the patient was admitted to hospital with complete procidentia. She also complained of disturbances of micturition and leucorrhoea. The prolapsed parts consisted of the cervix and extruded vagina, there was a

definite cystocele and a rectocele, which remained after the reduction of the tumour. After ten days rest and local antiseptic treatment a laparotomy was undertaken. The "isthmic hysterectomy" of Debrei, is advised by Lapcyrc, was performed and both tubes were ligated, since hysterectomy does not of course eliminate the possibility of pregnancy. Although the prolapse occurred immediately after the trauma the latter was only the accidental or determining cause, the predisposing cause being the hypoplastic condition of the parts.

## Pathology

### 536 Pneumoclonosis and Pulmonary Carcinoma

A J VORWALD and J W KARR (*Amer J Path* January 1938 p 49) claim that before dust can be assigned an aetiological significance in pulmonary carcinoma it is necessary to prove (1) that the incidence of pulmonary tumours in individuals who have for prolonged periods inhaled a particular dust is significantly higher than in the general population, and (2) that the dust in question is irritating to the pulmonary parenchyma and is actually capable of producing proliferation and carcinomatous changes in epithelial tissues. From an analysis of x ray reports on over 70 000 individuals exposed to industrial dusts, and from the necropsy reports on over 3 700 others similarly exposed they found that the incidence of pulmonary carcinoma—0.019 per cent and 0.8 per cent respectively in the two series—was lower than that in routine necropsies on the general population. Of 3,338 animals exposed for long periods to different dusts, only two guinea-pigs developed a pulmonary neoplasm in each case a benign adenoma. All the other animals failed to show irritation, hyperplasia or tumour transformation of the respiratory epithelium. The authors conclude therefore, that inhaled dusts except those containing recognized carcinogenic substances such as radium and tar, cannot in general be considered as aetiological factors in the development of pulmonary carcinoma.

### 537 Vitamin A Assay

P P SWANSON, G T STEVENSON and P M NELSON (*J Nutrit* February, 1938, p 103) have investigated the possibilities of increasing the precision of vitamin A assay. They adopted as a criterion the average standard deviation from the mean gain in weight of the rats used during the test period, the results being statistically analysed throughout. With a standard deviation of 18.1 grammes large groups of rats had to be used. As a result of analyses of factors and data involved, a "regression equation" was calculated from which it was possible to predict the gain in weight during the test period of any rat used. Using this equation, it was thus found possible to eliminate rats likely to give an erratic response to the test and so to obtain a more homogeneous group with a lower standard deviation of gains and consequent economy of work. Next the question of reducing the test period to five weeks was studied, and it was found that in the first five weeks a lower standard deviation was obtained than in the longer period, since variations in growth response occurred mostly in the later weeks of the longer period. Further when unsuitable animals were eliminated from the test by means of a new "regression equation" calculated for the five-week period, the standard deviation dropped to 12.0 grammes. Hence the authors recommend that rats giving indications (as judged from the "regression equation") in the depletion period of erratic response to the feeding of the test substance should be eliminated, and that the assay period should be reduced to five weeks. By these means greater uniformity and therefore reliability are obtained.



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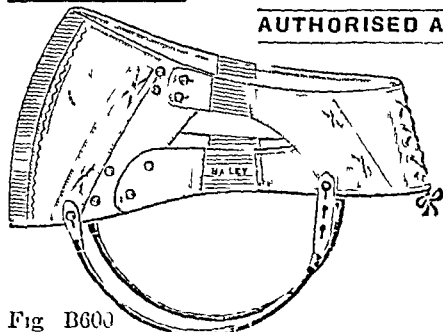


Fig B600

**BELT (Bailey's Patent) FOR  
FLOATING KIDNEY**

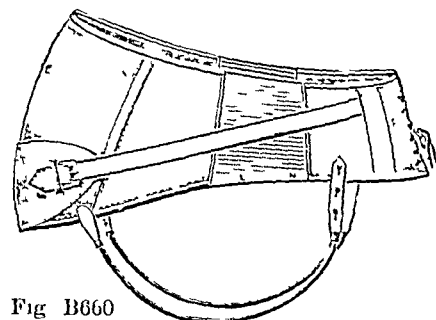


Fig B660

**BELT FOR ENTEROPTOSIS**

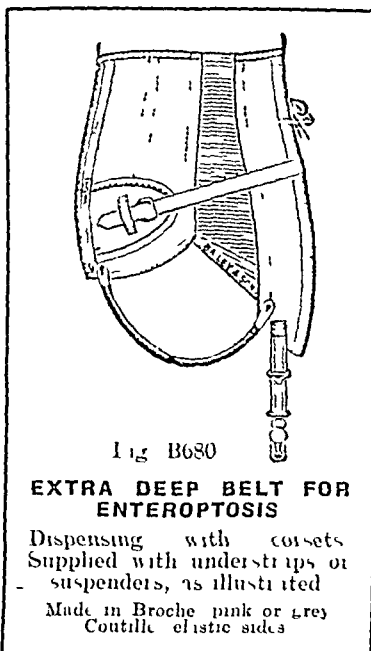


Fig B680

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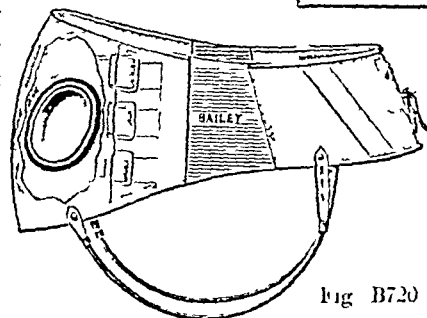


Fig B720

(Showing Interior of Cup)  
**SPECIAL BELT FOR AFTER  
COLOSTOMY**

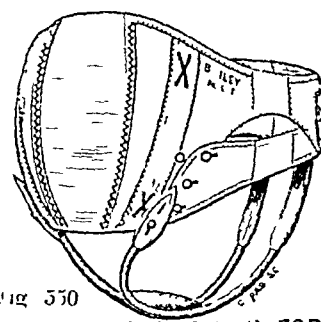


Fig 550

**BELT (Bailey's Patent) FOR  
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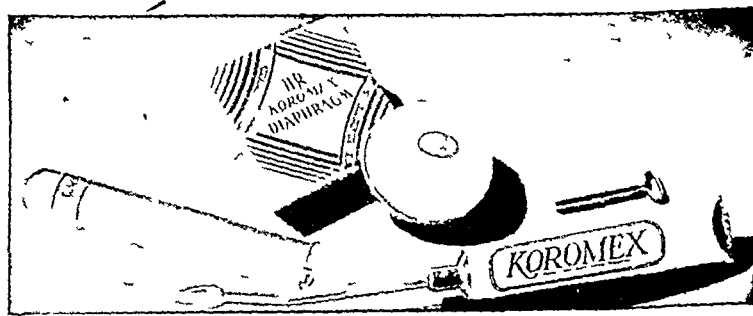
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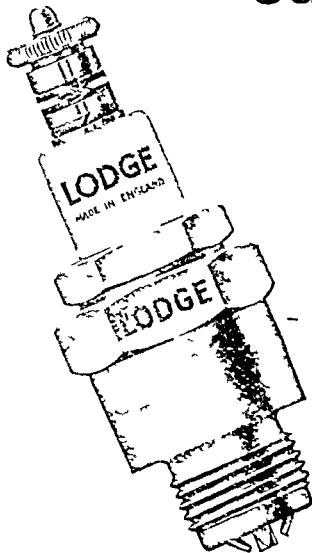
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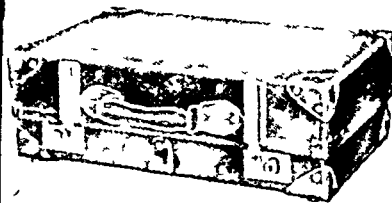
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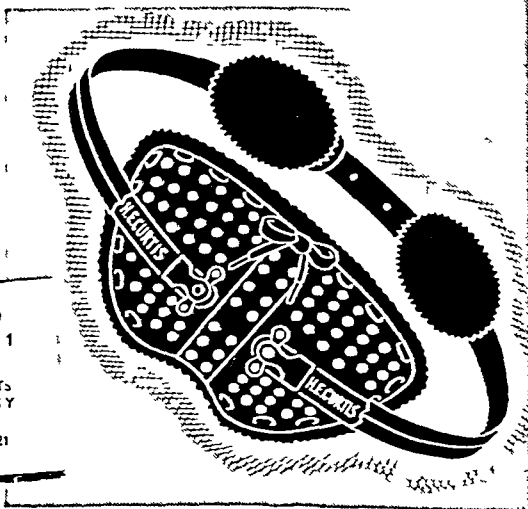
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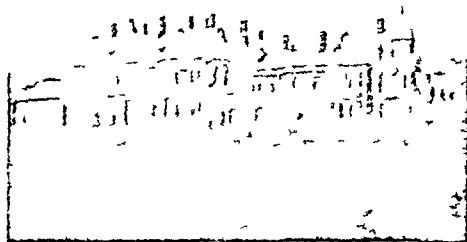
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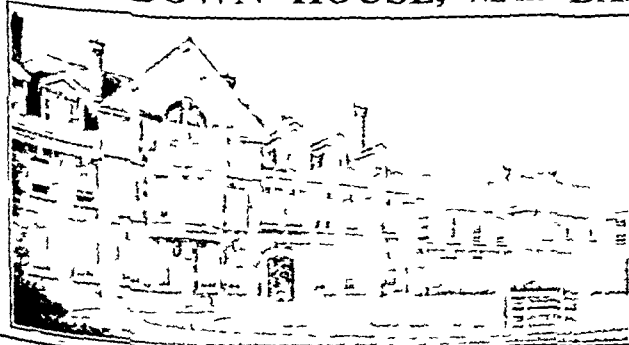
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ANNUAL GENERAL MEETING  
JUNE 17th, 1938

### RESULT OF ELECTION

At the Meeting of the CONJOINT COMMITTEE held on May 25th 1938 the following Candidates were elected to FOUNDATION SCHOLARSHIPS AND PENSIONS —

FOUNDATION SCHOLARSHIPS  
ANDREW Alfred F JACKSON Markham A  
BESWEATHERICK MACLEAN Robin W  
Anthony F MACKINTOSH Jan B  
BISSET Norman C OLDERSHAW  
COLLINGWOOD Kenneth L  
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\* EYTON JONES Dr John A

\* Formerly in receipt of Ordinary and Dr

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Mrs CURRIE to assist in the education of her

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THE CONJOINT COMMITTEE further decided

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Mrs WALKER to assist in the education of her

daughter £24

Mrs ALLEN to assist in the education of her

son £15

Mrs ANDREW to assist in the education of her

son £4

Major AUSTIN to assist in the education of his

son £24

Mrs BISHOP to assist in the education of her

son £10

Mrs BROWN to assist in the education of her

son £4

Mrs COIT to assist in the education of her

son £30

Mrs COOPER to assist in the education of her

son £24

Mrs GOSS to assist in the education of her

son £10

Mrs MACBETH to assist in the education of her

son £16

Mrs MCCROSSIN to assist in the education of

her son £4

Mrs MOXON to assist in the education of her

son £24

I J Oldershaw Esq to assist in the educa-

tion of his grandson £4

Mrs SCOTT to assist in the education of her son

£4

Mrs SERGIE to assist in the education of her

son £4

Mrs TREVES to assist in the education of her

son £8

Mrs WATKINSON to assist in the education of

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£307

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# UNIVERSITY OF LONDON

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RALPH B. CANNINGS Secretary

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## UNIVERSITY OF LONDON

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Obstetrics and Gynaecology

Surgery

Oto Rhino Laryngology—two

*First Examination for Medical Degrees*

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Pharmaceutical Chemistry

Pharmacognosy

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Applications will also be invited for Associate Examiners in Medicine, Obstetrics and Gynaecology, Pathology and Surgery. A separate application form must be used for Associate Examinerships and the word Associate must be written on it.

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar.

Candidates must send in their names to the External Registrar, A. Clow, F.R.C.S. (B.A.), with any attestation of their qualifications they may think desirable on or before Monday, July 4th 1938. (Envelopes should be marked "Examinerships").

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership. The appointments will be made by the Senate in November. Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application.

HERBERT L. EASON

Principal

University of London  
Senate House W.C.1  
June 1938

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MEDICAL SCHOOL, W.2  
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The First Year subjects are taught in the three Departments of the Faculty of Science and those of the Second and Third Years in the new Medical Department. This includes the Hablestree Department of Anatomy and an extension to the Department of Physiology recently completed at a cost of £40,000. These new buildings and those of recent years provide the College with a completely new and modern Medical Department which embodies the newest ideas in laboratory construction and equipment.

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The Hostel for men students (The Platanes, Chipping Hill, S.E.5) contains accommodation for 80 students. The Hostel for women students is at 55 Queenborough Terrace, Bayswater.

For detailed prospectus of the Medical and Dental Courses and for further information apply to the Dean of the Medical Faculty or to

S. T. SHOVELTON, M.A.

Strand W.C.2 Secretary

ROYAL FACULTY OF PHYSICIANS  
AND SURGEONS OF GLASGOW

## FINLAYSON MEMORIAL LECTURE

The Dr. James Finlayson Memorial Lecture will be delivered in the Faculty Hall, 242 St. Vincent Street, Glasgow, on Wednesday, June 9th, at 5.30 p.m. by Professor Ludwig Aschoff. The subject of the Lecture will be "THE HISTORY OF THE CIRCULATION".

All members of the Medical Profession are invited to attend.

JOHN HENDERSON

President

242 St. Vincent Street, Glasgow C.2  
June 14th 1938

INSTITUTE OF PATHOLOGY AND  
RESEARCH

## ST MARY'S HOSPITAL, LONDON, W.2

In addition to the recently advertised programme of lectures on PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE the following lecture has been arranged to take place on TUESDAY, JUNE 21st at 5 p.m.

Hofrat Prof. Dr. Gustav Singer (of Vienna)

Subject

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This lecture is open to all members of the Medical Profession and to all Students in Medical Schools without fee.

## UNIVERSITY OF HONG KONG

Applications are invited by July 30th 1938 for the CHAIR OF OBSTETRICS AND GYNAECOLOGY. Salary £1,000-£750-£1,250 per annum.

Further particulars from the Secretary, University Bureau of the British Empire, 85a Gower Street, London W.C.1.

## ESSEX COUNTY COUNCIL

## JUNIOR RESIDENT MEDICAL OFFICER

The County Council of the Administrative County of Essex invite applications for the appointment of Junior Resident Medical Officer at the Old Church County Hospital, Romford. The appointment is for a period of one year and the salary will be at the rate of £250 per annum together with the usual indoor emoluments valued at £160 per annum. The successful candidate will be required to pass a medical examination and will be subject to the Council's Sick Pay Rules and Regulations. A copy of which will be forwarded on application.

Applications on the prescribed form obtainable from the undersigned should be addressed to me and delivered at the County Hall, Chelmsford, not later than 10 a.m. on Wednesday, June 22nd 1938.

County Hall  
Chelmsford  
June 7th 1938

E. S. HOLCROFT  
Clerk of the County Council

## RESEARCH INTO RHEUMATIC DISEASE

THE EMPIRE RHEUMATISM COUNCIL will be appointing shortly a RESEARCH FELLOW to carry out a task of research into the bacteriology and epidemiology of acute Rheumatism. Special experience of acute Rheumatism and in the bacteriology of the haemolytic streptococci will be a valuable qualification.

The Fellowship will be for a term of at least one year to be extended if advisable. Laboratory facilities will be provided. Salary £750 a year.

Applications with a statement of qualifications, previous experience, etc. should be addressed promptly to Secretary, Empire Rheumatism Council, 1 Mitre Court Buildings, Temple, E.C.4.

## CITY OF BIRMINGHAM

## DUDLEY ROAD HOSPITAL

## PHYSICIAN

Applications are invited for the above whole time appointment from fully qualified registered medical practitioners who have had good medical experience and who are members of the Royal College of Physicians of London. Preference will be given to those who in addition hold the degree of Doctor of Medicine of one of the Universities of the United Kingdom.

Furnished quarters, rations, laundry and attendance can be provided for a single officer or alternatively a cash allowance of £750 will be paid if the officer appointed be non-resident.

Salary will be £650 rising by annual increments of £10 to a maximum of £900 per annum together with the emoluments stated above.

The appointment will be dependent on the candidate passing a medical examination and be subject to the Birmingham Corporation's Superannuation Scheme and the Birmingham Municipal Officers' Widows and Orphans Pension Scheme (if applicable).

The appointment will be terminable by one month's notice on either side.

Further particulars of the appointment may be obtained from the Medical Superintendent of the Hospital.

Applications, stating age, experience and qualifications, accompanied by copies of recent testimonials endorsed by a Physician, should be sent to the Medical Superintendent not later than Thursday, June 23rd 1938.

The Council House, Birmingham F. H. C. WILTSHIRE  
Town Clerk

## EAST SUSSEX COUNTY COUNCIL

SOUTHLANDS HOSPITAL  
Shoreham by Sea

## ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified male registered Medical Practitioners (unmarried) for the post of Assistant Resident Medical Officer at Southlands Hospital, Shoreham by Sea, near Brighton. The appointment is for one year. Salary £300 per annum with board, residence and laundry. Preference will be given to candidates who have had special experience in obstetrics and gynaecology. The Hospital (350 beds) is a general hospital under the administration of the East Sussex County Council. The duties of the post are mainly concerned with obstetrical cases (40 maternity beds) but there are general duties in addition.

Application should be made on a form obtainable from the undersigned at the County Hall, Lewes, and must be returned to him by Saturday, June 25th 1938.

HUGH J. T. McILVEEN  
County Hall, Lewes Clerk of the County Council  
June 3rd 1938

## HOLLAND (LINCOLNSHIRE) COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER OF HEALTH  
(Male)

Applications are invited from duly qualified and registered medical practitioners (under 40 years of age) for the above appointment.

The salary will be £600 per annum rising by annual increments of £25 to £700 per annum.

The duties of the post include school medical inspections, the carrying out of work under the Maternity and Child Welfare and Tuberculosis schemes and such other duties as may be required by the Council.

The person appointed will devote the whole of his time to the duties of the office, act under the direction and supervision of the County Medical Officer and reside in such part of the district as may be required.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of not more than three testimonials must be addressed to the County Medical Officer of Health, County Hall, Boston, Lincs. and received by him not later than June 25th 1938.

W. G. ROOTH  
County Medical Officer of Health  
County Hall, Boston  
June 6th 1938

# INDIAN MEDICAL SERVICE

## RECRUITMENT OF EUROPEAN OFFICERS

Applications are invited from Medical Men for Permanent Commissions in His Majesty's Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or of £2,500 after 12 years' service together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

British subjects of pure European descent who are under 32 years of age and who are registered under the Medical Acts in Great Britain and Northern Ireland are eligible to apply.

### CAREERS

The Indian Medical Service offers a permanent career with wide opportunities of medical experience, including clinical, preventive, perialist and research work. At the beginning of his career an officer is employed on the military side which has medical posts in the Indian Army. Promotion is on a time scale up to the rank of Lieutenant Colonel and by selection to the ranks of Colonel and Major General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres to provide for the medical needs of Civil Officials and for general medical administrative purposes, to specialist (for example, in health and bacteriological) services, to research posts and to professorships at the Medical Schools.

### RATES OF PAY

Years of Service	Rank	Basic Pay Rs per mensem	Overseas Pay £ per mth	Total £ per annum
1	Lieutenant	450	15	55
2	Captain	500	25	75
3	"	550	25	75
4	"	600	25	95
5	"	650	25	95
6	"	700	30	100
7	"	750	30	100
8	"	800	30	100
9	"	850	35	105
10	"	900	35	110
11	Major	950	35	110
12	"	1000	40	120
13	"	1050	40	120
14	"	1100	40	120
15	"	1150	40	120
16	"	1200	40	120
17	"	1250	40	120
18	"	1300	40	120
19	"	1350	40	120
20	"	1400	40	120
21	Lieut. Col	1450	40	120
22	"	1500	40	120
23	"	1550	40	120
24	"	1600	40	120
25	"	1650	40	120

(1) The rate is at present stabilized at a rate equivalent to 1s. 6d. (2) An officer promoted to the rank of Lieut.-Colonel before completion of 20 years' service will receive pay at the rate of Rs. 1,400 per mensem (basic) plus £40 per month overseas pay.

Extra—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side and may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments in officers in both branches of the Service.

### ANTEDATES IN COMMISSION

Candidates possessing certain higher medical qualifications or holding the Diploma in Public Health may be granted an antedate in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate. Persons holding or about to hold resident posts at recognized

hospitals may be seconded in those posts for a period. The maximum period of antedate, secondment or antedate and secondment combined admissible under this paragraph is limited to 18 months.

### OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £75 towards the cost of outfit.

### PRIVATE PRACTICE

With the exception of Administrative Officers, military or civil and officers holding certain special appointments, officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

### LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed twelve months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a postgraduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom, £1 a day on the Continent of Europe and £1 10s. a day in the United States of America and Canada is granted to an officer in addition to ordinary rates of leave pay.

### PENSIONS

The rates of pensions are as follows —	Per annum
After 17 years' service for pension	£372 0s.
18 "	£400 0s.
19 "	£428 0s.
20 "	£465 0s.
21 "	£502 0s.
22 "	£539 10s.
23 "	£576 10s.
24 "	£614 0s.
25 "	£651 0s.
26 "	£697 10s.
27 "	£744 0s.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

### PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India subject to the payment of messin charges. Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

### INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately three months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the UNDER SECRETARY OF STATE FOR INDIA, MILITARY DEPARTMENT, INDIA OFFICE, LONDON, S.W.1. The Selection Committee will meet at the India Office about July 26th next, and the selected candidates unless seconded for hospital appointments will be required to join a course of instruction commencing about September 1st prior to sailing for India in December 1938. Applications should reach the India Office as soon as possible.

# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in September, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board.

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty.

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000.

At the end of five years' Short Service, permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax).

Full opportunities exist for transfer to the permanent list, and periods of unemployment or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances.

Opportunities are available for officers on the permanent list for post-graduate study, to specialise, to take higher examinations and to obtain further qualifications.

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers.

Copies of the regulations for entry and conditions of service, including rates of pay, allowances and retired pay, may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than 31st August, 1938.

## WOLVERHAMPTON EDUCATION COMMITTEE

Applications invited for appointment as SENIOR ASSISTANT SCHOOL MEDICAL OFFICER (full time). Salary £700 per annum rising by two annual increments of £25 and thence by two further annual increments of £50 to a maximum of £850.

Applicants should have had experience in the practice of their profession subsequent to qualification and should hold a Degree or Diploma in Public Health in addition to full medical qualifications. Preference will be given for experience in the School Medical Service and of diseases of children. Practical experience in certification under the Mental Deficiency and other Acts and a knowledge of Special Schools requirements will be an additional qualification.

The person appointed will be on the staff of the Education Committee functioning through the Director of Education and the Medical Officer of Health who is also School Medical Officer.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Further particulars and conditions may be obtained on sending stamped addressed foolscap envelope to the undersigned to whom completed applications must be sent by July 2nd.

Education Officer F A WARREN  
North Street  
Wolverhampton  
June 1938

## SUDAN MEDICAL SERVICE

Applications are invited for the post of JUNIOR BRITISH LABORATORY ASSISTANT male, married in the Strick Medical Research Laboratories Khartoum to commence duty on November 15th 1938.

The salary commences at £E 324 or £E 360 (£E -£1 0s 6d) according to age and qualifications rising by two three yearly increments to £E 780 after eighteen or twenty years depending on the initial rate. The appointment carries prospects of pensionable service after five years' service. A free passage to the Sudan will be provided.

Candidates should be between 22 and 30 years of age and should hold the Laboratory Assistant's Diploma of Bacteriological Technique and preferably have some experience in Clinical pathology.

Application stating age, qualifications and copies of testimonials should be sent to Dr H C SQUIBB 93 Harley Street W 1.

## CITY AND COUNTY OF NEWCASTLE UPON TYNE

The Health Committee invite applications from duly qualified and registered Medical Practitioners for the appointment of SENIOR CHILD WELFARE OFFICER.

Salary £750 per annum rising by three annual increments of £50 and one of £37 10s to £937 10s per annum.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass the necessary medical examination.

The officer appointed will not be concerned with the administration of the City's Maternity Scheme but will be required to devote his or her attention entirely to the supervision of the Child Welfare Services.

Applicants for the appointment  
(1) Must have been qualified at least three years.  
(2) Must have experience in child welfare work.  
(3) Must have held a resident appointment in a recognized teaching children's hospital.

The possession of the Diploma in Child Health granted jointly by the Royal College of Physicians and the Royal College of Surgeons will be regarded as an additional qualification.

The City's Child Welfare Scheme is organized in such a way as to provide special opportunities for research work in sociological and clinical problems. Candidates either directly or indirectly will be considered a disqualification.

Further details of the appointment and special application forms can be obtained from the Medical Officer of Health Health Department Town Hall Newcastle upon Tyne 1 to whom all applications should be submitted not later than Saturday June 25th 1938.

## THE SOLDIERS SAILORS AND AIRMEN'S FAMILIES ASSOCIATION

A MEDICAL OFFICER is required for a MATERNITY HOME at Devonport recognized as a Training Institution Part I under new scheme of training Central Midwives Board. Must previously have held obstetric post. Appointment for one year renewable at option of Committee but terminable at one month's notice either side. The post is non-resident and inclusive salary £500 £600 according to experience and qualifications.

Apply Secretary S S and A 1 23 Queen Anne's Gate Westminster S W 1.

## BOROUGH OF EALING

### MATERNITY AND CHILD WELFARE SERVICES

#### WOMAN ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified medical practitioners for the position of Woman Assistant Medical Officer.

The duties will mainly consist of work in connexion with the Council's Maternity and Child Welfare Scheme embracing attendance at the health centres and medical attendance on patients in the Perivale Maternity Hospital. The person appointed will reside at this hospital board and furnished rooms being provided for her.

Applicants must have had previous experience of maternity and child welfare work and particularly of work in a maternity hospital.

The person appointed will be required to devote her whole time to the duties and will not be allowed to engage in private practice.

The salary will be at the rate of £450 per annum rising by £25 per annum to a maximum of £550 plus board and residence as indicated above and valued at £150 per annum. A deduction of 5 per cent will be made in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922 which has been adopted by the Council and the appointment will be subject to the candidate passing the Council's medical examination in connexion therewith. Candidates will be a disqualification.

Copies of the application form and terms of appointment can be obtained from Dr THOMAS ORR Medical Officer of Health Town Hall Ealing W 5 to whom applications accompanied by copies of not more than three recent testimonials must be delivered not later than Thursday June 30th.

Town Hall R H WANKLYN  
Ealing W 5 Town Clerk

## DENTAL SURGEON

Applications are invited for the post of SENIOR DENTAL SURGEON to the METROPOLITAN POLICE. Salary £700 per annum rising by annual increments of £50 to £1,000 per annum. Applicants must hold a Medical Qualification.

Application forms and full particulars of the appointment may be obtained up to June 24th from the Secretary (Room 166) New Scotland Yard London S W 1.

To n Hall E TABERNER  
Cro con Town Clerk  
Jun - 2 19 3



## THE ARMY DENTAL CORPS

1 from DENTAL to a limited number of my Dental Corps

Candidates who should not be over 29 years of age will for the present be selected for commissions without competitive examination but will be required to present themselves in London for interview and physical examination. They must hold the degree or diploma of a British University or College of Surgeons and be registered under the Dentists Acts or Medical Acts.

Successful candidates will in the first instance be given short service commissions for six years at the end of which period they will retire with a gratuity of £1000 unless they have been granted permanent commissions. Permanent commissions will be given to officers selected from among those who wish to make the Army their permanent career.

Particulars including Regulations for Admission pay and allowances and forms of application may be obtained on request either in writing or in person to the Director Army Dental Service The War Office London SW1

## NUFFIELD DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

## THE RADCLIFFE INFIRMARY OXFORD

Applications are invited for the post of HOUSE SURGEON to the DEPARTMENT OF OBSTETRICS which will become vacant on July 1st. The appointment will be for six months with salary at the rate of £120 per annum if the candidate appointed has held a previous House appointment. Candidates must be male and qualified.

Applications with copies of testimonials must be sent to the undersigned not later than Saturday June 25th 1938

A G E SANCTUARY  
Administrator

## LANCASHIRE MENTAL HOSPITALS BOARD

COUNTY MENTAL HOSPITAL  
Prestwich near Manchester

## APPOINTMENT OF DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the whole time appointment of Deputy Medical Superintendent at the above Mental Hospital.

The salary is £750 per annum rising by annual increments of £25 to a maximum of £850 per annum. An additional £50 per annum will be paid for the possession of a Diploma in Psychological Medicine.

The appointment will be subject to the provisions of the Asylums Officers Superannuation Act 1909.

Applicants are required to submit their applications on a form to be obtained from the undersigned and applications endorsed. Deputy Medical Superintendent should be sent to or delivered at my office not later than 12 noon on Saturday July 2nd 1938.

Canvassing either directly or indirectly will be a disqualification.  
County Offices  
Preston  
June 1938

GEORGE ETHELTON  
Clerk of the Board

## CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL  
(800 Beds)

## TWO HOUSE SURGEONS and ONE HOUSE PHYSICIAN (Male or Female)

The above posts will shortly become vacant and applications are invited from duly qualified and registered Medical Practitioners.

The salary in respect of each of the appointments which are tenable for six months is at the rate of £150 per annum with board lodging etc.

Applications stating age and qualifications together with copies of not more than three recent testimonials must be submitted to the Medical Officer of Health Town Hall Newcastle upon Tyne 1 not later than Saturday July 2nd 1938.

## CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL  
(800 Beds)ONE MEDICAL REGISTRAR (Part Time)  
ONE SURGICAL REGISTRAR (Part Time)

Applications are invited from duly qualified and registered Medical Practitioners for the above posts. The salary in respect of each appointment is £250 per annum.

Further particulars may be obtained from the Medical Officer of Health Health Department Town Hall Newcastle upon Tyne 1 to whom applications accompanied by copies of three recent testimonials must be submitted not later than Saturday July 2nd 1938.

RHONDDA URBAN DISTRICT COUNCIL  
WOMAN ASSISTANT MEDICAL OFFICER

Applications are invited from unmarried or widowed women medical practitioners not exceeding 45 years of age for appointment as ASSISTANT MEDICAL OFFICER under the direction and supervision of the Council's Medical Officer of Health and School Medical Officer at a salary of £500 rising by annual increments of £25 to £700 a year the first annual increment being payable on April 1st following the completion of six calendar months service under the Council travelling expenses necessarily incurred in the performance of the duties will also be allowed. Candidates must have had not less than three years professional experience subsequent to registration and must be experienced in the diseases of children the possession of a Diploma in Public Health is also considered desirable.

The appointment which is designated under the Local Government and Other Officers Superannuation Act 1922 will be subject to the passing of a medical examination and will be terminable by two calendar months notice on either side. The Officer appointed will be required to reside within the Rhondda Urban District and will not be allowed to engage in private practice.

Applications are to be made on forms obtainable from the Medical Officer of Health Tydfil House Llewellyn Street Centre Rhondda by whom they must be received endorsed Assistant Medical Officer and accompanied by copies of three recent testimonials not later than the first post on Thursday June 30th 1938.

The Council Offices D J JONES  
Centre Rhondda Clerk of the Council  
June 15th 1938

## CITY OF COVENTRY

ASSISTANT SCHOOL MEDICAL OFFICER  
AND ASSISTANT MEDICAL OFFICER  
OF HEALTH

The Coventry City Council invite applications from registered medical practitioners under 40 years of age for the post of Assistant School Medical Officer (male) in connexion with the medical inspection etc of school children. When not engaged in school work the officer will be required to assist in the general work of the Public Health Department.

Applicants must possess a Diploma in Public Health and preference will be given to those with appropriate previous experience.

The salary will be £500 rising by annual increments of £25 to a maximum of £700 per annum.

The post is designated under the Local Government and Other Officers Superannuation Act 1922 as intended in regard to annuities to widows by the Coventry Corporation Act 1936 and the successful applicant will be required to pass a medical examination as to fitness and to contribute to the superannuation fund. The successful applicant will also be required to contribute to the Coventry Staff Widows and Orphans Pension Fund.

Applications together with copies of three recent testimonials must be made on the prescribed form (which may be obtained from the undersigned) and must be delivered not later than June 29th 1938.

The Council House Coventry  
June 14th 1938

FREDERICK SMITH  
Town Clerk

## CITY OF PLYMOUTH

MEDICAL OFFICER OF HEALTH'S  
DEPARTMENTMOUNT GOLD ORTHOPAEDIC AND  
PULMONARY TUBERCULOSIS HOSPITAL  
(200 Beds)

Applications are invited from duly qualified and registered unmarried medical men or women under 40 years of age for the post of Resident Medical Officer at the above named Hospital. The duties of the successful candidate will be in connexion mainly with the orthopaedic section (120 beds) but the person appointed will be expected to undertake other duties as directed by the Medical Superintendent. Previous experience in orthopaedics and radiology will count as added qualifications and there are ample opportunities for experience in this type of work.

The appointment is for twelve months at a salary of £300 per annum plus full residential emoluments. The post is subject to the Local Government and Other Officers Superannuation Act 1922 and is terminable by one month's notice on either side. The successful candidate will be required to pass a medical examination. All fees received by the Officer other than the above must be refunded to the Council.

Forms of application are not provided and applications with copies of three recent testimonials must be sent to the undersigned not later than noon on Saturday June 25th.

Town Hall  
Stonhouse  
Plymouth  
I PEIRSON  
-Medical Officer of Health

AMENDED ADVERTISEMENT  
THE URBAN DISTRICT COUNCIL OF  
ABERDARE EDUCATION COMMITTEE

## APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from registered medical women under the age of 40 years (unmarried or widowed) for the above post.

It is desirable that candidates should have had special experience in Obstetrics and Gynaecology.

The duties will include school medical inspection supervision of midwives attendance at Ante-natal and Infant Welfare Clinics and other public health duties as may be prescribed from time to time. The duties of the respective offices will be carried out under the general direction of the Medical Officer of Health and the successful candidate must devote her whole time to the service of the Council and Education Committee. She will be required to reside in the district and contribute to the Council's Superannuation Fund.

The salary will be at the rate of £600 per annum rising by annual increments of £25 to a maximum of £700 per annum.

Application forms may be obtained from the Medical Officer of Health 43 High Street Aberdare.

Applications together with copies of three recent testimonials must reach the undersigned on or before July 2nd 1938.

Education Offices T J LEWIS  
Aberdare Glam Director of Education  
June 14th 1938

## COUNTY BOROUGH OF MIDDLESBROUGH

ASSISTANT MEDICAL OFFICER OF HEALTH  
MATERNITY AND CHILD WELFARE

The Corporation of Middlesbrough invite applications from fully qualified medical men and women for the post of Assistant Medical Officer of Health Maternity and Child Welfare.

Applicants must have had experience in ante-natal work midwifery and diseases of children with not less than three years postgraduate experience.

Commencing salary will be at the rate of £350 per annum with residence board and laundry valued at £150 making £500 in all and rising subject to satisfactory service by annual increments of £25 to a maximum of £700. The appointment is a designated one under the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination.

The successful candidate will be required to reside at the Municipal Maternity Hospital and to devote the whole of his or her time to the duties of the office and to act under the directions of the Medical Officer of Health.

Applications stating age and experience together with copies of three recent testimonials must be received by me not later than June 22nd 1938.

PRESTON KITCHEN

Municipal Buildings Town Clerk  
Middlesbrough June 11th 1938

## LONDON COUNTY COUNCIL

Application invited from Medical Practitioners of at least one year's standing to undesignated position. Experience in a resident appointment in a general hospital for at least six months desirable. Married quarters not available.

ASSISTANT MEDICAL OFFICER (Grade II)  
—Salary £250 per year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

COLINDALE HOSPITAL The Hyde Hendon NW9—Experience in pulmonary tuberculosis desirable (there is no accommodation for a woman officer).

Application forms obtainable (stamped and dressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2a County Hall S E 1 returnable by June 20th.

Canvassing disqualifies.

WARNEFORD GENERAL HOSPITAL  
Leamington Spa  
(164 Beds)

Applications are invited from qualified registered Medical Practitioners for the POST OF SENIOR RESIDENT SURGICAL OFFICER. The appointment is for a period of twelve months from June 30th 1938 which on application may be extended to two years.

Salary £200 per annum rising to £250 for second year other fees estimated at £50 per annum with board residence and laundry.

Candidates for the post should have held at least two Resident House Surgeons' appointments and preferably possess an F.R.C.S. qualification.

Applications stating age and full particulars together with three testimonials should be sent to the undersigned by Tuesday June 21st 1938.

EDWARD L. WIRGMAN  
House Governor and Secretary

# COUNTY BOROUGH OF ROTHERHAM MEDICAL SERVICES COMMITTEE 1 ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of hospital work for the position of a future Resident Medical Officer at the Alma Road Hospital. The salary is £100 per annum with board and laundry. The appointment is made for a period of twelve months. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

## JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are also invited for the post of Junior Assistant Resident Medical Officer at the Alma Road Hospital. The salary is £75 per annum with board and laundry. The appointment is made for a period of twelve months. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

Applications may be obtained from the Medical Officer of Health, Town Hall, Rotherham. The closing date for applications is June 18, 1935. Applications should be sent to the Medical Officer of Health, Town Hall, Rotherham.

# CITY OF LIVERPOOL ASSISTANT VENEREAL DISEASES MEDICAL OFFICER (M.D.)

The Health Committee of the City of Liverpool invite applications for the post of Assistant Venerereal Diseases Medical Officer (M.D.) at the Central Venerereal Diseases Clinic and Male Venerereal Diseases Ward at the M.D. Road Infirmary at a salary of £100 per annum with board and laundry. The appointment is made for a period of one year.

Applications may be obtained from the Medical Officer of Health, Town Hall, Liverpool. The closing date for applications is June 18, 1935. Applications should be sent to the Medical Officer of Health, Town Hall, Liverpool.

# COUNTY MENTAL HOSPITAL LANCASTER

Applications are invited for the post of Assistant Medical Officer (male). The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# COUNTY & WARWICKSHIRE HOSPITAL (45 Beds)

Applications are invited for the following positions: HOUSE SURGEON, salary at the rate of £150 per annum; CASUALTY OFFICER, salary at the rate of £100 per annum. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

Applications may be obtained from the Medical Officer of Health, Town Hall, Warwick. The closing date for applications is June 18, 1935. Applications should be sent to the Medical Officer of Health, Town Hall, Warwick.

# BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN (Incorporated under the Children's Hospital Act, 1909)

The Executive Committee of the Institution are invited to receive applications for the appointment of an HONORARY INPATIENT SURGEON. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN (Incorporated under the Children's Hospital Act, 1909)

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# MANCHESTER ROYAL INFIRMARY JUNIOR ASSISTANT MEDICAL OFFICER IN RADIOLOGICAL DEPARTMENT (LOCAL TENNIS)

The Board of Management invite applications for the post of Junior Assistant Medical Officer in the Radiological Department. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# ROYAL INFIRMARY BRADFORD

Applications are invited for the post of Resident Surgical Officer (male). The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# GROSVENOR SANATORIUM (Ashford Kent (26 Beds) (General Medical Officers)

Applications are invited from fully qualified men for the appointment of RESIDENT HOUSE PHYSICIAN from July 1st. The appointment is for a period of at least 3 months at a salary of £100 per annum with board and laundry. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# BURTON-ON-TRENT GENERAL INFIRMARY

Applications are invited for the position of CASUALTY OFFICER AND HOUSE PHYSICIAN. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# LONDON HOSPITAL STONE-ON-TRENT (50 Beds)

Applications are invited for the post of HOUSE SURGEON. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# THE ROYAL HOSPITAL Wolverhampton (Incorporated under Charter)

Applications are invited for the post of Resident Anaesthetist. The appointment is for a period of six months renewable and the salary is £100 per annum with board and laundry. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# THE ROYAL HOSPITAL Wolverhampton (Incorporated under Charter)

Applications are invited for the post of HOUSE SURGEON. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# THE ROYAL HOSPITAL Wolverhampton (Incorporated under Charter)

Applications are invited for the post of HOUSE PHYSICIAN. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# ROYAL SOUTH HAMPSHIRE AND SOUTHAMPTON HOSPITAL (256 Beds)

Applications are invited for the following positions: One RESIDENT ANAESTHETIST, One CASUALTY OFFICER, who shall have had some experience in the reduction and treatment of fractures. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# MONTAGU HOSPITAL MEXBOROUGH (113 Beds) (Residents)

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (L.D.S.). The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# NORWOOD AND DISTRICT COTTAGE HOSPITAL

Applications are invited from Medical Practitioners for the post of HONORARY ANAESTHETIST. These should be sent to the Hon. Secretary at the Hospital, Norwood. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

# SALFORD ROYAL HOSPITAL (256 Beds)

Applications are invited for the post of HOUSE SURGEON. The salary is £100 per annum with board and laundry. The appointment is made for a period of one year. The successful candidate must be a member of the Royal College of Physicians and have had a recent qualification in hospital or municipal medical work.

**GLASGOW ROYAL INFIRMARY**

**RESIDENT MEDICAL OFFICER** required at CANNIESBURN AUXILIARY HOSPITAL Salary £200 per annum with board lodging and washing. Applicant with previous hospital resident experience preferred.

Particulars as to duties etc. may be obtained from the Superintendent Royal Infirmary Castle Street Glasgow C4.

Candidates are requested to lodge applications and three recent testimonials with the undersigned. No canvassing either directly or indirectly.

R MORRISON SMITH C.A.  
Secretary and Cashier

Royal Infirmary Office  
135 Buchanan Street Glasgow C1

**DURHAM COUNTY HOSPITAL**  
(100 Beds)

**Male HOUSE SURGEON** required. Duties to commence July 1st 1938.

Salary at the rate of £150 per annum with board residence and laundry.  
Appointment for six months subject to renewal for similar period.

Applications stating age, experience and nationality accompanied by three recent testimonials should be addressed to the undersigned not later than Friday June 24th 1938.

NORMAN BROWN

Secretary

**GRIMSBY AND DISTRICT HOSPITAL**  
(164 Beds)

Applications are invited for the post of **RESIDENT SURGICAL OFFICER (male)**. Salary £225 per annum with board residence. Appointment for six months option of renewal.

Candidates must be registered under the Medical Acts and previous hospital experience is desirable. Applications with copies of three testimonials to the undersigned.

H B COATES

June 11th 1938 Secretary Superintendent

**THE STAFFORDSHIRE GENERAL INFIRMARY STAFFORD**  
(145 Beds—Three Residents)

**SECOND HOUSE SURGEON** required. Salary £175 per annum with board residence.

Applications stating age and experience accompanied with copies of three recent testimonials should be sent to me on or before first post on Thursday the 23rd instant.

A E COLLINS

Secretary

Stafford June 13th 1938

**BECKETT HOSPITAL AND DISPENSARY**  
Barnsley (153 Beds—4 Residents)

Applications are invited for the post of **JUNIOR HOUSE SURGEON (male)**. Candidates must be fully qualified and registered.

Salary £150 per annum with board residence and laundry.

Applications stating age, qualifications accompanied by testimonials should be addressed to the undersigned.

ARTHUR L BOURNE

May 26th 1938 Secretary Superintendent

**CONSUMPTION SANATORIUM**  
Bridge of Weir (15 miles SW of Glasgow) and  
**COLONY FOR EPILEPTICS (near by)**

**MALE RESIDENT MEDICAL OFFICER** wanted immediately. Apply Medical Superintendent stating age and previous experience and enclosing testimonials. Appointment for six months in the first instance at rate of £200 per annum renewable at £250 per annum with rooms board laundry etc.

**EAST SUFFOLK AND IPSWICH HOSPITAL**  
350 Beds—8 Residents

**WANTED** July 1st **HOUSE SURGEON (male—British)** to the Orthopaedic and Fracture Department. Salary at the rate of £144 per annum with board apartments and laundry.

Applications stating age, qualifications and experience to be sent to the undersigned together with copies of three recent testimonials.

ARTHUR GRIFFITHS

The Hospital Ipswich Secretary  
May 28th 1938

**DURHAM COUNTY AND SUNDERLAND EYE INFIRMARY**

**HOUSE SURGEON** required immediately. Must have Ophthalmic experience. Salary £350 per annum rising by two annual increments of £50. Non resident. Must devote whole time to the duties of the Institution. Applications with copies of recent testimonials to be sent to JOHN BUTTERFIELD Eye Infirmary Stockton Road Sunderland.

**MANCHESTER ROYAL INFIRMARY**  
**ASSISTANT MEDICAL OFFICER TO THE DERMATOLOGICAL DEPARTMENT**

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment which will become vacant on August 1st 1938.

Applicants must be registered and hold a Medical and Surgical qualification.

The appointment (non resident) is for twelve months renewable for two further periods of one year subject to the provisions of the By Laws as to notice.

Attendance is required on Tuesday mornings from 9 o'clock to 12 noon.

Applicants must state age and address fifteen copies of their application and testimonials to the undersigned by June 30th 1938.

By Order

F J CABLE

General Supt and Secretary

**KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL**  
Maidstone (109 Beds)

Applications are invited for the post of **OPHTHALMIC HOUSE SURGEON** which post becomes vacant on July 1st 1938. The appointment is for six months but a senior post at a higher salary may be given after that period if mutually agreed upon.

Candidates must be duly qualified and registered Medical Practitioners single and of British birth and nationality and should have experience of refractions. Salary at the rate of £200 per annum with board residence and laundry. The Hospital is recognized by the Examining Board for the D.O.M.S.

Applications stating age and qualifications together with copies of not more than three testimonials should be sent to the undersigned.

JOHN W STRICKLAND

Secretary

**HULL ROYAL INFIRMARY**

Applications are invited for the post of **SECOND CASUALTY OFFICER (male)** vacant June 30th. Salary £150 per annum plus board residence and laundry.

In addition to carrying out duties in the Casualty Department the officer appointed will act as House Surgeon to one of the Honorary Assistant Surgeons and will thus obtain Ward and Theatre experience. He will be eligible for promotion to a more senior post when a vacancy occurs.

The appointment will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications giving particulars of age, experience and nationality together with copies of testimonials should be addressed to the undersigned.

R J CARLESS

June 13th 1938 House Governor

**LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL**

Applications are invited from duly registered candidates (male and unmarried) for

a **HOUSE SURGEON** salary £150 per annum from August 1st

a **HOUSE PHYSICIAN** salary £125 per annum from July 1st

The appointments are for six months and include apartments board and laundry. The House Surgeon must be an experienced anaesthetist.

All applications stating age etc. with copies of testimonials to be sent to me at once.

FRANK H TOONE

Secretary

9 Leicester Road

Loughborough

**HERTFORD COUNTY HOSPITAL**  
(169 Beds)

Applications are invited for the post of **HOUSE SURGEON (male)** (three Residents). Salary £200 per annum with board residence and laundry. The appointment is for six months in the first instance and duties commence on July 4th.

Applications with three recent testimonials should be sent to the undersigned not later than Monday June 27th 1938.

TERCY G BROOKS

Secretary

**LEEDS PUBLIC DISPENSARY & HOSPITAL**

NOTICE IS HEREBY GIVEN that the Special Election Committee is prepared to receive applications for the position of **HONORARY SURGEON**. Applications with copies of three testimonials should be addressed to the Chairman of the Election Committee on or before Monday July 11th 1938.

By Order of the Board

CHARLES I J MAURY

Secretary and Superintendent

**PEMBROKE COUNTY WAR MEMORIAL HOSPITAL**

Haverfordwest Pembrokeshire  
(64 Beds to be increased to 100 Beds)

**RESIDENT HOUSE SURGEON**

Applications are invited for the post of Resident House Surgeon male or female from duly qualified registered Medical Practitioners with previous resident experience to commence on July 1st 1938.

Salary £200 per annum with residence (private bungalow) board and laundry.

Applications stating age and accompanied by copies of not more than three testimonials to be sent to the undersigned at the above address.

B GLANVILLE DAVIES

Secretary

**NUNEATON GENERAL HOSPITAL**  
(100 Beds)**RESIDENT SURGICAL OFFICER**

Applications are invited from fully qualified medical women for the above post to take up duty on September 15th next. The appointment is for twelve months in the first instance. Salary £275 per annum with board residence and laundry.

Candidates should make application before June 30th to the undersigned and enclose copies of three testimonials which should give evidence of post graduate experience.

DOUGLAS S PRACY

Hon Secretary Medical Board  
June 17th 1938

**ROYAL SALOP INFIRMARY**  
Shrewsbury (150 Beds)**APPOINTMENT OF TWO HOUSE SURGEONS**

Applications are invited from fully qualified unmarried men for the posts of Resident House Surgeon vacant immediately. Salary £160 per annum with board residence etc.

The appointments are for six months subject to reappointment.

Applications stating age, qualifications, experience and nationality accompanied by copies of three recent testimonials to be sent to the undersigned not later than June 23rd 1938.

Board Room J W NOBLE  
June 13th 1938 Secretary Superintendent

**ROYAL DEVON AND EXETER HOSPITAL**  
Exeter (250 Beds)**RESIDENT SURGICAL OFFICER (Male)**

Applications are invited for the above resident appointment shortly becoming vacant at this hospital. Engagement for twelve months and duties eligible for re-election.

Salary at the rate of £250 per annum with board apartments and washing.

Applications stating age, qualifications and copies of three recent testimonials should be sent to the undersigned on or before Monday 20th inst.

S S COLE

Secretary and Manager

**ROYAL EAST SUSSEX HOSPITAL**  
Hastings

Applications are invited for the post of **SENIOR HOUSE SURGEON (female)** vacant July 1st 1938. The appointment is for a period of six months.

Salary at the rate of £200 per annum with board residence.

Candidates must be duly registered Medical Practitioners.

Applications with copies of recent testimonials to be addressed to the Secretary.

WILFRED G KEMSLEY

Secretary

**NORTH LONSDALE HOSPITAL**  
Barrow in Furness (164 Beds)

Vacancy July 1st 1938 **RESIDENT CASUALTY OFFICER (male)**.

Applications are invited for the above position from fully qualified Practitioners experienced in the administration of Anesthetics. Salary £150 per annum with board residence and laundry.

Applications stating age, qualifications, experience and nationality and accompanied by copies of three recent testimonials should be sent to the Secretary not later than Tuesday June 25th.

**ROTHERHAM HOSPITAL**

Wanted **CASUALTY HOUSE SURGEON (male)** qualified. Salary £150 per annum with board residence and laundry. To have charge of Out patients (130 beds).

Applications with copies of recent testimonials to be sent to the Secretary G W ROLLERS  
8 Moorgate Street Rotherham

**DUNSTON AND DISTRICT GENERAL INFIRMARY**  
(100 Beds)  
The Committee are invited to fill the post of HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry.

Applications are invited for the post of SENIOR HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of SENIOR HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the infirmary. The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the infirmary.

**FRED SMITH**  
Secretary

**DISTRICT INFIRMARY ASHTON UNDER LYNE**  
(General Hospital 100 Beds)

**CASUALTY HOUSE SURGEON (male)**  
The Committee are invited to fill the post of CASUALTY HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of CASUALTY HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the infirmary.

**FRANK OLIVER**  
General Superintendent and Secretary

**CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY WAKEFIELD**

Applications are invited for the post of FULL TIME RADIOLOGIST from October 1st 1935 to October 1st 1936. The duties of the post of FULL TIME RADIOLOGIST are to act as a radiologist and to be responsible for the medical and surgical treatment of the patients of the hospital.

**HEREFORDSHIRE GENERAL HOSPITAL, Hereford (115 Beds)**

Applications are invited for the post of HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**T W UPTON**  
Secretary

**DISTRICT INFIRMARY ASHTON UNDER LYNE**  
(100 Beds)

**RESIDENT SURGICAL OFFICER**  
The Committee are invited to fill the post of RESIDENT SURGICAL OFFICER at the rate of £100 per annum with board residence and laundry. The duties of the post of RESIDENT SURGICAL OFFICER are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the infirmary.

**FRANK OLIVER**  
General Superintendent and Secretary

**GENERAL HOSPITAL NOTTINGHAM**

**HOUSE SURGEON (male)**  
The Committee are invited to fill the post of HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**HENRY M STANLEY**  
House Governor and Secretary

**BRADFORD CHILDREN'S HOSPITAL**

**HOUSE SURGEON (male)**  
The Committee are invited to fill the post of HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**I W LONGLEY**  
Secretary Superintendent

**ROYAL WEST SUSSEX HOSPITAL**  
(114 Beds)

**HOUSE SURGEON (male)**  
The Committee are invited to fill the post of HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**J CONNOR**  
Secretary

**KENT AND CANTERBURY HOSPITAL**  
(113 Beds)

**CASUALTY HOUSE SURGEON (male)**  
The Committee are invited to fill the post of CASUALTY HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of CASUALTY HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**J F KENT**  
Secretary

**ROYAL SUSSEX COUNTY HOSPITAL**  
(114 Beds)

**CASUALTY HOUSE SURGEON (male)**  
The Committee are invited to fill the post of CASUALTY HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of CASUALTY HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**L L W LANCASTER-GAYE**  
Secretary

**THE WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL**

**RESIDENT SURGICAL OFFICER**  
The Committee are invited to fill the post of RESIDENT SURGICAL OFFICER at the rate of £100 per annum with board residence and laundry. The duties of the post of RESIDENT SURGICAL OFFICER are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**JOSEPH E SEARJEANT FCCS**  
House Governor and Secretary

**THE BOLTON ROYAL INFIRMARY**  
(115 Beds)

**Applications are invited for the post of HOUSE SURGEON**  
The duties of the post of HOUSE SURGEON are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the infirmary.

**H CORLESS**  
Secretary

**LEICESTER ROYAL INFIRMARY**  
(110 Beds)

**BIOCHEMIST**  
The Committee are invited to fill the post of BIOCHEMIST at the rate of £100 per annum with board residence and laundry. The duties of the post of BIOCHEMIST are to act as a biochemist and to be responsible for the medical and surgical treatment of the patients of the hospital.

**ROYAL VICTORIA HOSPITAL DOVER**  
(60 Beds)

**Wanted for July 1st HOUSE PHYSICIAN**  
The Committee are invited to fill the post of HOUSE PHYSICIAN at the rate of £100 per annum with board residence and laundry. The duties of the post of HOUSE PHYSICIAN are to act as a general physician and to be responsible for the medical and surgical treatment of the patients of the hospital.

**THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION**  
(132 Beds)

**Applications are invited for the post of HOUSE SURGEON (male)**  
The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**F J SYMONS**  
Secretary

**THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION**  
(132 Beds)

**Applications are invited for the post of HOUSE PHYSICIAN (male)**  
The duties of the post of HOUSE PHYSICIAN (male) are to act as a general physician and to be responsible for the medical and surgical treatment of the patients of the hospital.

**F J SYMONS**  
Secretary

**WALSALL GENERAL HOSPITAL**

**Applications are invited for the post of HOUSE SURGEON (male)**  
The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**WALTER FRANCOMBE**  
House Governor

**WEST KENT GENERAL HOSPITAL**  
(Incorporated) Maidstone (113 Beds)

**Applications are invited for the post of HOUSE SURGEON (male)**  
The duties of the post of HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**EDWARD J GREGG**  
House Governor and Secretary

**THE ROYAL INFIRMARY BRADFORD**

**ASSISTANT RADIUM OFFICER (Resident)**  
The Committee are invited to fill the post of ASSISTANT RADIUM OFFICER (Resident) at the rate of £100 per annum with board residence and laundry. The duties of the post of ASSISTANT RADIUM OFFICER (Resident) are to act as a radiologist and to be responsible for the medical and surgical treatment of the patients of the hospital.

**H TRUSSON**  
House Governor and Secretary

**THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL**

**JUNIOR HOUSE SURGEON (male)**  
The Committee are invited to fill the post of JUNIOR HOUSE SURGEON (male) at the rate of £100 per annum with board residence and laundry. The duties of the post of JUNIOR HOUSE SURGEON (male) are to act as a general surgeon and to be responsible for the medical and surgical treatment of the patients of the hospital.

**F W BARNETT**  
House Governor

**WESTMORLAND SANATORIUM**  
(160 Beds)

**JUNIOR ASSISTANT MEDICAL OFFICER**  
The Committee are invited to fill the post of JUNIOR ASSISTANT MEDICAL OFFICER at the rate of £100 per annum with board residence and laundry. The duties of the post of JUNIOR ASSISTANT MEDICAL OFFICER are to act as a general physician and to be responsible for the medical and surgical treatment of the patients of the hospital.

# BATTERSEA GENERAL HOSPITAL

(85 Beds)  
London SW 11

Applications are invited for the resident appointments of

- (1) HOUSE PHYSICIAN (female) Salary at the rate of £130 per annum
- (2) HOUSE SURGEON (female) Salary at the rate of £130 per annum Other terms to be arranged on appointment The successful candidates will be required to take over their duties on August 1st 1938

Applications stating age qualifications and experience with copies of two recent testimonials should be sent to the undersigned not later than 9 a.m. June 27th 1938

G L BENNETT Secretary

# DREADNOUGHT HOSPITAL

Greenwich SE 10  
(Seamen's Hospital Society)

Half time non resident MALE RECEIVING ROOM OFFICER required on July 1st for six months Morning or afternoon sessions with alternate Saturdays 9 a.m. to 12 noon Previous experience in resident posts essential The post is suitable for those studying for higher examinations Salary at the rate of £150 per annum with meals

Applications stating age nationality and experience of House appointments accompanied by copies of testimonials to be sent immediately to the undersigned F A LYON Secretary  
June 7th 1938

# HAMPSTEAD GENERAL HOSPITAL

Haverstock Hill NW 3  
(Out Patient Department Camden Town NW 1)

A vacancy is declared in the office of SURGEON TO OUT PATIENTS Candidates must be Fellows of the Royal College of Surgeons England and are required to call upon members of the Honorary Medical Staff of the Hospital

Applications stating age qualifications and experience with copies of three testimonials should reach the undersigned by July 15th from whom full particulars may be obtained  
KENNETH A F MILES Secretary

# HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

Brompton SW 3

The Committee of Management invite applications for the post of MEDICAL REGISTRAR (half time) Salary £150 per annum Candidates must be Graduates in Medicine of a recognized University Particulars as to duties etc may be obtained from the Secretary

Applications with copies of testimonials must reach the undersigned not later than Monday July 11th

F G ROUVRAY Secretary  
June 1938

# HOSPITAL FOR TROPICAL DISEASES

Gordon Street WC 1  
(Seamen's Hospital Society)

HOUSE PHYSICIAN (male) required for six months from July 1st 1938 Salary £120 per annum with board residence and laundry Applications with copies of three testimonials to be sent in on or before June 22nd 1938 to the undersigned

F A LYON Secretary  
Seamen's Hospital  
June 3rd 1938 Greenwich SE 10

# JEWISH MATERNITY HOSPITAL

Underwood Street E 1

RESIDENT MEDICAL OFFICER required Board residence and laundry provided with salary at the rate of £75 per annum The appointment is for four months with option of extension to six months Applicants may be male or female

Applications together with copies of three recent testimonials should be forwarded to the Secretary immediately

# HORNSEY CENTRAL HOSPITAL

Crouch End NS (61 Beds)

Applications are invited for post of HONORARY RADIOLOGIST to above Hospital Candidates must devote their whole time to radiology

Present remuneration on a percentage basis about £250 which is likely to increase

Further particulars and copies of testimonials to be sent to Hon Secretary, Medical Committee by first post June 27th 1938

# HAMPSTEAD GENERAL HOSPITAL

Haverstock Hill NW 3

Applications are invited from unmarried medical men for the resident appointment of HOUSE SURGEON for six months vacant July 1st next Salary £100 per annum Applications on the prescribed form with three testimonials to be returned to the Secretary by June 21st next

# PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shdwell London E 1  
(135 Beds)

Applications are invited for the post of ASSISTANT SURGEON to the above hospital Candidates should be doubly qualified duly registered in this country and Fellows of the Royal College of Surgeons of England engaged solely in the practice of surgery They should also have special experience in orthopaedic surgery but would be expected to share in the ordinary surgical work of the hospital

They should also have in view the fact that the early removal of the inpatient department of the hospital to Bantick Surrey is contemplated

A list of the honorary medical staff on whom candidates are expected to call and other necessary information can be obtained from the Secretary to whom all applications should be sent not later than July 5th 1938

# PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN

St Quintin Avenue North Kensington W 10  
(Ladbroke 0135)

The Board of Management invite applications for the post of HONORARY ASSISTANT PHYSICIAN with beds

Applicants must be graduates of a University and must hold the M.R.C.P. (London) and the successful candidate will be required to see Out Patients

Applications accompanied by copies of three testimonials should be sent to the undersigned at the Hospital from whom any further information can be obtained and should reach him not later than Tuesday July 5th 1938

H J ELEY Secretary

# HOUSLOW HOSPITAL

Staines Road Middlesex

## HOUSE PHYSICIAN and CASUALTY OFFICER

Applications are invited from male registered practitioners of British nationality for the above post The appointment is for 6 months with eligibility for appointment for a further period Salary £100 p.a. with board residence and laundry

Applications with copies of three testimonials should be sent to the undersigned as soon as possible

A MOWBRAY BARKER Secretary

# HOSPITAL OF ST JOHN & ST ELIZABETH

60 Grove End Road NW 8

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (male) The post is recognized for the degree of M.D. London University The appointment will be for six months from August 1st 1938 Salary at the rate of £100 per annum with full board

Applications together with copies of three testimonials should reach the undersigned by June 30th 1938 Applicants will be required to attend a meeting of the Medical Committee at 5.30 p.m. on July 5th at the Hospital

F DUDLEY HOBBS B.A. Secretary

# LONDON HOSPITAL E 1

Applications are invited for the post of ANAESTHETIST to the DENTAL DEPARTMENT Days of attendance Monday and (or) Thursday afternoons at 2 p.m. Honorarium £25 per annum per session

Applications with testimonials should be sent to the House Governor from whom further particulars may be obtained and should arrive not later than on June 21st

June 3rd 1938 ARTHUR G ELLIOTT House Governor

# ROYAL NORTHERN HOSPITAL

Holloway N 7

Applications are invited for the post of OPHTHALMIC REGISTRAR The appointment is for one year with eligibility for reappointment Times of attendance on application

Honorarium £50 per annum with certain fees Applications with copies of testimonials should be sent by July 1st to the undersigned from whom the necessary forms of application and rules can be obtained

GILBERT G PANTER Secretary

# KING GEORGE HOSPITAL

Ilford (near London) (207 Beds)

MEDICAL REGISTRAR (male) required as soon as possible for a period of twelve months Salary £150 p.a.

Forms of application may be obtained from the undersigned to whom they should be returned duly completed

G AUSTIN HEPWORTH Secretary and Superintendent

# PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN

St Quintin Avenue North Kensington W 10  
(Ladbroke 0133)

The Board of the combined pediatric and medical PHYSICIAN in CHARGE of the Child Guidance Clinic Applicants must be graduates of a University and must hold the M.R.C.P. (London) and the D.P.M. and must have had practical experience in a Child Guidance Clinic

Applications accompanied by copies of three testimonials should be sent to the undersigned at the Hospital from whom any further information can be obtained and should reach him not later than Tuesday July 5th 1938

H J ELEY Secretary

# QUEEN MARY'S HOSPITAL FOR THE EAST

END  
Stratford E 15

Applications are invited from fully qualified and registered medical men (only) for the post of CASUALTY AND OUTPATIENT OFFICER

The Hospital contains 219 beds including 50 for Maternity patients

The appointment will date from July 1st 1938 and will be for six months Salary at the rate of £150 per annum

Candidates who must be single and who should previously have held hospital appointments should send applications accompanied by testimonials to the undersigned at once

RAPHAEL JACKSON Major Secretary

# ROYAL CHEST HOSPITAL

City Road E 1  
(Royal Northern Group of Hospitals)

Applications are invited for the following post HOUSE PHYSICIAN additional (male) vacant August 1st for a period of six months Salary at the rate of £100 per annum with board residence and laundry

Applications with copies of testimonials should be sent by July 1st to the undersigned from whom the necessary forms of application and rules can be obtained

GILBERT G-PANTER Secretary  
Royal Northern Hospital  
Holloway London N 7

# ROYAL WESTMINSTER OPHTHALMIC HOSPITAL

High Holborn London WC 1

Applications are invited for the appointment of REFRACTION OFFICERS for a period of six months as from August 1st 1938 The present holders are eligible for reappointment but there may be one vacancy Salary £100 per annum payable monthly Candidates must be duly qualified Medical Practitioners and have had experience in Refraction work

Applications with copies of testimonials are to be sent to the Secretary (from whom further particulars can be obtained) on or before Thursday June 30th 1938

# ST MARY'S HOSPITAL W 2

CASUALTY HOUSE SURGEON

Applications are invited for the above post from duly qualified candidates

Candidates must have been House Surgeons for a full period of office to this Hospital or to some other General Hospital approved by the Board

The salary is £100 per annum with board and residence and the appointment is for six months

Applications with copies of testimonials not exceeding three in number should reach the undersigned (from whom particulars may be obtained) on or before Thursday June 23rd

W PARKES House Governor

# THE NATIONAL TEMPERANCE HOSPITAL

Hampstead Road NW 1

Applications are invited for the following post HOUSE PHYSICIAN (male) Salary £100 per annum board residence and laundry allowance being provided The appointment is for a period of six months as from June 25th Preference will be given to those who have held resident post

Candidates must submit applications stating qualification age etc with copies of not more than three testimonials by June 20th addressed to the Secretary

# ST JOHN'S HOSPITAL LEWISHAM SE 13

Applications are invited for the resident appointment of HOUSE SURGEON (male) tenable for six months from July 1st 1938 Salary £100 p.a. Applications as soon as possible to the undersigned

J C GILBERT Secretary Superintendent

## APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association B M A House, Tavistock Square, W C 1 (in the case of Scottish appointments with the Scottish Secretary 7, Drumhugh Gardens, Edinburgh)

### (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(Contd.)</b>	<b>PUBLIC HEALTH</b>
ABERTYSWING MEDICAL AID SOCIETY (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Medical Officer)	MOUNTAIN ASH URBAN DISTRICT COUNCIL AND EDUCATION COMMITTEE (Assistant Medical Officer of Health and Assistant Surgical Medical Officer)
ELAENAVON MEDICAL SOCIETY (Chief Medical Officer)	NEATH AND DISTRICT (Medical Officer)	COUNTY OF ROXBURGH (Assistant Medical Officer of Health)
GILFACH GOCH GLAMORGAN (Assistant Medical Officer)	OCMORE VALLEY, GLAMORGAN (Wrexham C. H. Officer Medical Officer) (Wrexham C. H. Officer Medical Officer)	<b>DISPENSARY APPOINTMENTS</b>
LILWYMPIA CLYDACH VALL PENYGRAIG GLAMORGAN (Children's Medical Officer)	ONKDAL MON (Medical Officer for Medical Officer)	LIMERICK CITY (Wrexham Dispensary Medical Officer)

### (b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association, B M A House, Tavistock Square, W C 1.

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (Medical Officer) (Medical Officer)	The Honorary Secretary New South Wales Branch, 115, Ma- quarie Street, Sydney N.S.W.	<b>VICTORIA</b> (All Institute of Medical Officers)	The Honorary Secretary Victorian Branch British Medical Associa- tion, Medical Society Hall, Albert St. East Melbourne, Victoria	<b>WESTERN AUSTRALIA</b> (Consultant and Lodger Practitioner)	The Honorary Secretary Western Branch British Medical Associa- tion, Shell House, 205 St. George's Ter- race, Perth, Western Australia
<b>QUEENSLAND</b> (British Association Medical Officer) (Medical Officer)	The Hon. Sec. Queens- land Branch British Medical Association B M A House, 225 Wickham Terrace, Brisbane, B. I.				

June 15 1938

By Order of the Council

G C ANDERSON Secretary

#### HUDDESFIELD ROYAL INFIRMARY (124 Beds)

MALE HOUSE SURGEON required to com-  
mence on July 1st 1938. Salary £10 per  
week board, rent, and laundry.  
The appointment is for a term of six months  
with the option of extension for a further  
six months. The successful candidate will be  
expected to perform the duties of a Resident  
Surgeon of the Hospital and to be available  
for duty at all times. The successful candidate  
will be expected to perform the duties of a  
Resident Surgeon of the Hospital and to be  
available for duty at all times. The successful  
candidate will be expected to perform the  
duties of a Resident Surgeon of the Hospital  
and to be available for duty at all times.

H. J. JOHNSON  
Gen. Surg. and S. relary

#### BIRMINGHAM AND MIDLAND EYE HOSPITAL (112 Beds)

Candidates are invited from duly qualified  
Medical Practitioners for the post of HOUSE  
SURGEON at the above Hospital. Salary £150  
per annum with 10 per cent. of six months  
and 10 per cent. of 12 months allowance.  
The post is that of a Resident Surgeon of the  
Hospital and the successful candidate will be  
expected to perform the duties of a Resident  
Surgeon of the Hospital and to be available  
for duty at all times. The successful candidate  
will be expected to perform the duties of a  
Resident Surgeon of the Hospital and to be  
available for duty at all times.

J. W. PEARCE  
Gen. Surg. and S. relary

#### ARADEN ROYAL MENTAL HOSPITAL

Candidates are invited for the position of  
ASSISTANT PHYSICIAN (male) in this Hospital.  
The successful candidate will be expected to  
perform the duties of an Assistant Physician  
of the Hospital and to be available for duty  
at all times. The successful candidate will be  
expected to perform the duties of an Assistant  
Physician of the Hospital and to be available  
for duty at all times.

#### DERBYSHIRE HOSPITAL FOR SICK CHILDREN (54 Beds)

WANTED JULY 1st 1938—A RESIDENT  
HOUSE SURGEON (L.D.S.) Salary £150 per  
annum with 10 per cent. of six months and  
10 per cent. of 12 months allowance. The  
appointment is for a term of six months  
with the option of extension for a further  
six months. The successful candidate will be  
expected to perform the duties of a Resident  
Surgeon of the Hospital and to be available  
for duty at all times. The successful candidate  
will be expected to perform the duties of a  
Resident Surgeon of the Hospital and to be  
available for duty at all times.

ARTHUR N. WHISTON  
Sec. relary

#### GENERAL HOSPITAL NOTTINGHAM (150 Beds)

A RESIDENT CASUALTY OFFICER (male)  
is required at the above Institution. The ap-  
pointment is for a term of six months with  
the option of extension for a further six  
months. The successful candidate will be  
expected to perform the duties of a Resident  
Casualty Officer of the Institution and to be  
available for duty at all times. The successful  
candidate will be expected to perform the  
duties of a Resident Casualty Officer of the  
Institution and to be available for duty at  
all times.

HENRY M. STANLEY  
Hon. Governor and Sec. relary

#### DONCASTER ROYAL INFIRMARY (150 Beds)

CASUALTY HOUSE SURGEON (male)  
required.  
Salary at the rate of £10 per annum with  
residence, board and laundry.  
The appointment is for six months.  
Applications accompanied by copies of a recent  
testimonial and a recent photograph to be sent to the  
Hon. Governor and Sec. relary.

R. LANCASTER  
Sec. relary and Super. relary

#### BUTE HOSPITAL LUTON

The Committee of Management invite applica-  
tion for the post of SURGEON in charge of the  
FRACTURE CLINIC in the new Luton and Dun-  
stable Hospital (150 beds).  
Candidates must be experienced in the work of  
a Fracture Clinic and must be Fellows of the  
Royal College of Surgeons of England or of  
Edinburgh. The successful candidate will be re-  
quired to reside in the Bute House of Luton and to  
enter into a bond restricting his private practice  
in the Hospital area to that of a Consultant Ortho-  
paedic Surgeon.

Duties will not commence before January 1st,  
1939, but the Committee desire to appoint as soon  
as possible so that the appointment may have the  
opportunity of commencing and doing on the  
lay-out and equipment of the department.

Salary £200 per year.  
Applications, stating age and experience, should  
be addressed to the Secretary, Medical Adm. Soc.,  
Committee at the Bute Hospital who will be  
pleased to supply any further information.  
Bute Hospital R. E. LINGARD  
Luton Secretary

#### BRISTOL ROYAL INFIRMARY and BRISTOL GENERAL HOSPITAL

#### JOINT FRACTURE AND ORTHOPAEDIC DEPARTMENT

post 1 HONOR  
ARY SURGEON in the Joint Frac-  
ture and Orthopaedic Department.  
Candidates who must be Fellows of the Royal College of  
Surgeons of England or of Edinburgh and must be  
able to perform the duties of a Consultant Ortho-  
paedic Surgeon. The successful candidate will be  
required to perform the duties of a Consultant  
Orthopaedic Surgeon in the Joint Fracture and  
Orthopaedic Department. The successful candidate  
will be required to perform the duties of a  
Consultant Orthopaedic Surgeon in the Joint  
Fracture and Orthopaedic Department.

ELLIS C. SMITH F.C.S.  
Sec. relary and Hon. Governor  
Bristol Royal Infirmary  
(Appointments continued on p. 61)

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NATIONAL ADOPTION SOCIETY 4 BAKER STREET W1. Telephone Welbeck 7.11. OFFERS ASSISTANCE in the legal adoption of illegitimate and orphan babies into suitable family life. Chairman THE LADY GWYNETH CAVENDISH

TYPEWRITING DUPLICATING TRANSLATIONS—Experts in Medical work. TESTIMONIALS THESE etc accurately copied in style that commands attention. WOUNDED BUREAU Drayton House, Gordon Street London WC1 (Cable BMA House) EUSTON 1775

REQUIRED COMFORTABLE HOME ON Kent Coast owned by a Doctor or Clergyman for boy aged 14 who lately has had operation for Tubercular Cervical Adenitis. Not fit to return to Public School for 12 months. Where some other boys are living an advantage. Needs some hours of daily tuition—Address No 6156 BMA House Tavistock Square WC1

WHEN YOU COME TO LONDON STAY AT THE HAMPTON RESIDENTIAL CLUB FOR GENTLEMEN Hampton Street N.W.1. Close Kings Cross and Euston 300 bedrooms 15/ to 2/6 p.w. include baths attend and boot cleaning. All meals à la carte in dining room. Mod tariff. Large club rms reading rm study for students. Illus pros. See Euston 2244/5

## ASSISTANCIES

WANTED IMMEDIATELY INDOOR ASSISTANT (male single) for mixed panel and private. Last London Dispenser kept. Little night work. Salary £300 all found £50 car allowance—Address No 6617 BMA House Tavistock Square WC1

WANTED IMMEDIATELY INDOOR AND OUTDOOR ASSISTANTS for Town and Country Practices with and without view to Partnership. Good salaries offered. State full particulars—BRITISH MEDICAL BUREAU 33 Cross Street Manchester 2

WANTED IMMEDIATELY MARRIED ASSISTANT (British) for South Wales colliery practice with early view 30 35 Salary £450 and car allowance or car provided with free unfurnished house—Apply with photograph Address No 6634 BMA House Tavistock Square WC1

WANTED IMMEDIATELY—MALE ASSISTANT with early view. Large good class practice. Pleasant Midland city. Excellent prospects. Salary £350 or according to experience and accommodation for married man. Car allowance—Address No 6666 BMA House Tavistock Square WC1

WANTED IMMEDIATELY INDOOR MALE ASSISTANT English Salary £300 and car allowance with view Kent London 12 miles—Address No 6690 BMA House Tavistock Square WC1

WANTED JULY 1st 1938 INDOOR MALE ASSISTANT married preferred with view near Manchester British Protestant. Salary £300 p.a. plus board and lodging. Car allowance £52 p.w.—Address No 6615 BMA House Tavistock Square WC1

WANTED FOR JULY 1st OUTDOOR ASSISTANT for mixed panel and private practice in Midlands. Own car preferred. State full particulars photo—Address No 6439 BMA House Tavistock Square WC1

WANTED NOW FOR GOOD CLASS PRACTICE Outdoor ASSISTANT graduate with surgical leanings or qualification. Scot preferred. Ultimate view. State the nationality religion testimonials when free. Allowance own car—Address No 6637 BMA House Tavistock Square WC1

WANTED AFTER JULY 10th INDOOR ASSISTANT (male British) near Manchester. Salary £350 p.w. all found. Car provided or car allowance (£50). Previous experience not essential. Good prospects for right man—Address No 6425 BMA House Tavistock Square WC1

WANTED ASSISTANT OR LOCUM FOR 3 months from August 1st for middle class practice in West Riding town. Able to drive car. Write full particulars—Address No 6627 BMA House Tavistock Square WC1

WANTED ASSISTANT WITH VIEW TO PARTNERSHIP in good class practice in residential district near South West Coast. All sports. Must be well qualified—Address No 6638 BMA House Tavistock Square WC1

WANTED ASSISTANT NEAR SWANSEA for 2 months from mid July. Live out 7 guineas weekly with board. State nationality and particulars. Usual bond—Address No 6694 BMA House Tavistock Square WC1

WANTED MALE ASSISTANT LARGE mixed country practice Mid Cornwall. Private and Panel Dispensing. Must be young and well qualified. Good prospects for energetic worker. Salary £300 all found. Car or car allowance. Interview essential. Usual bond—Address No 6445 BMA House Tavistock Square WC1

WANTED TWO ASSISTANTS ONE ophthalmic the second ENT. Give full particulars. HS DOMS or DLO an advantage—Address No 6607 BMA House Tavistock Square WC1

ASSISTANT WANTED. MALE. SOUTH Coast Town. end of June. Salary commencing £300 per annum plus £50 allowance for car. Work not heavy. residence at branch surgery—Address No 6430 BMA House Tavistock Square WC1

AN ASSISTANT IS REQUIRED IN A Radiological Practice in South Africa. Applicants between the ages of 30 and 35 will be given preference. Commencing salary £1200 to £2000 per annum depending on experience and qualifications. Partnership will be offered to suitable applicant—Address No 5639 BMA House Tavistock Square WC1

MALE ASSISTANT (WITH VIEW TO Partnership) wanted to start about July 1st. Busy panel and private practice in pleasant west country town. £400 plus car allowance while acting as assistant—Address No 6606 BMA House Tavistock Square WC1

PART TIME ASSISTANCY RESIDENT OR outdoor wanted in London by English post graduate with seven years experience. Any period up to one year—Address No 6721 BMA House Tavistock Square WC1

## LOCUMS

WANTED—LOCUM AUG 1st 14th EASY Practice South London 6 gns per week. Live out. Suit London resident. No night work. Few visits—Address No 6415 BMA House Tavistock Square WC1

WANTED LOCUM FOR SURGERIES ONLY London from June 24th—Address No 6601 BMA House Tavistock Square WC1

HOSPITALITY LOCUM WANTED JULY 16th 23rd inclusive. Blackpool work extremely light—Address No 6698 BMA House Tavistock Square WC1

HOSPITALITY LOCUM OFFERED DE lightful country in Wales 3 weeks from July 25th or August 1st—Address No 6636 BMA House Tavistock Square WC1

LOCUMS WANTED BY CONJ MAN motorist. Own car 9 years exp GP. Ex refs free now. Terms 7s gns per week plus car and travel expenses—Address No 6724 BMA House Tavistock Square WC1

## MEDICAL POSTS, DISPENSERS

WANTED IMMEDIATELY DISPENSER BOOK KEEPER country town. Apply with photograph and testimonials—Address No 6692 BMA House Tavistock Square WC1

WANTED LADY DOCTOR AS ASSISTANT IN SANATORIUM. Previous experience not necessary—Address No 6427 BMA House Tavistock Square WC1

A LADY DISPENSER BOOKKEEPER SUP plied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparations for Examinations—Write wire or phone (Bayswater 0969) Secretary 7 Westbourne Park Road W2

A COURSE OF TRAINING IN DISPENSING and Pharmacy is given at GORDON HALL SCHOOL OF PHARMACY and Secretary Dispensers can be supplied to Doctors Sessions January April and September—Apply Principals School of Pharmacy Drayton House Gordon Street WC1 Phone Euston 3930

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 A house is required for  
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 STANDING IN APPROX. 1 ACRE  
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**WINDFORD STREET, BEST PART—AN**  
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 2000—W. 1000. B. 1000. H. 1000  
 Inland, W. 1000.

### APPOINTMENTS—Contd.

**THE ROYAL INFIRMARY SHEFFIELD**  
 (100 Beds)  
 A house is required for the post of  
 CLINICAL ASSISTANT to the Ophthalmic  
 Department (male or female). The Ophthalmic  
 Department consists of 20 Beds and an Out-  
 Patient Department, which is open daily.  
 Salary £100 per annum.  
 The appointment will be for one year, subject  
 to a two months' notice and the offer extended to  
 the holder of the appointment. Letters giving  
 details and stating full qualifications, previous  
 employment, etc., to be forwarded to the  
 General Secretary, enclosed and Secretary immediately  
 by July 1st, 1938.

**THE ROYAL INFIRMARY, SUNDERLAND**  
 (150 Beds)  
 HOUSE SURGEON (male) required for six  
 months from 1st July 1938. Salary £10 per  
 annum with board residence, laundry, etc.  
 and a house with 2 or 3 bedrooms and a bathroom  
 and a garden. The Resident Medical Staff  
 consists of a R.S.O. and six others. The clinical  
 departments are recognized by the Royal College  
 of Surgeons of England for the six months' term  
 of the certificate for the R.C.S. (Surg.)  
 M. J. HUNTLEY  
 Hon. Governor and Secretary

**THE ST HELEN'S HOSPITAL, LANCASHIRE.**  
 A house is required for the position of  
 HOUSE SURGEON (male) to this  
 hospital. Salary £25 per annum with board  
 residence and laundry.  
 Applications accompanied by copies of three  
 recent testimonials to be sent to the undersigned  
 before June 25th, 1938.  
 GEO HARPER  
 Secretary

**KING GEORGE HOSPITAL**  
 1, near Lower (67 Beds)  
 HOUSE SURGEON (male) required for six  
 months from July 1st, 1938. Salary £10 per  
 annum.  
 Letters of recommendation may be obtained from the  
 undersigned to whom they should be returned  
 as soon as possible.  
 G. ALSTIN HEPPWORTH  
 Secretary and Superintendent

**THE NORTH KENSINGTON WOMEN'S**  
 WELFARE CENTRE  
 (Physiotherapy and Birth Control Clinic)  
 14, 16 & 18, Road, Ladbroke Grove, W.10  
 Applications are invited from women doctors  
 to the post of HONORARY CLINIC  
 in the Birth Control Centre. The work would  
 be from 6.0 to 8.0 p.m. on Tuesdays.  
 The applicant, accompanied by full particulars and  
 testimonials, should be forwarded to the Super-  
 intendent at the above address as soon as possible.

**WARWICK HOSPITAL, OXFORD**  
 Applications are invited for the post of  
 PHYSICIAN, SUPPLYING DENTIST, or  
 (a) House Surgeon, or (b) House Surgeon  
 (c) House Surgeon (d) House Surgeon  
 (e) House Surgeon (f) House Surgeon  
 (g) House Surgeon (h) House Surgeon  
 (i) House Surgeon (j) House Surgeon  
 (k) House Surgeon (l) House Surgeon  
 (m) House Surgeon (n) House Surgeon  
 (o) House Surgeon (p) House Surgeon  
 (q) House Surgeon (r) House Surgeon  
 (s) House Surgeon (t) House Surgeon  
 (u) House Surgeon (v) House Surgeon  
 (w) House Surgeon (x) House Surgeon  
 (y) House Surgeon (z) House Surgeon

**WORCESTER ROYAL INFIRMARY**  
 Applications are invited for the post of  
 HOUSE SURGEON. Salary £10 per annum  
 per annum.  
 HOUSE PHYSICIAN. Salary at the rate of  
 £10 per annum.  
 RESIDENT ANAESTHETIST. Salary at the  
 rate of £10 per annum.  
 All the above salaries include board and residence  
 and laundry.  
 Applications should be sent to the undersigned  
 by July 1st, 1938.  
 H. J. CLOUT  
 Secretary

**ROYAL FREE HOSPITAL AND LONDON**  
 (110) SCHOOL OF MEDICINE  
 FOR WOMEN  
 Applications are invited from registered medical  
 practitioners for the post of RESIDENT ASSIS-  
 TANT PATHOLOGIST in the Pathology Unit  
 (Salary £100 per annum).  
 The post is for six months from Sep-  
 tember 1st, 1938.  
 Applications should be sent to the undersigned  
 by July 1st, 1938.  
 RICHARD T. BARILEY, Secretary  
 R. 1 Free Hospital, W.C.1  
 NANCIE MILLER, Secretary and Sec-  
 retary, (R.F.H.) School of Med-  
 icine, 110, W. 1000. H. 1000. W.C.1  
 June 14th, 1938.

**THE ELIZABETH GARRETT ANDERSON**  
 HOSPITAL  
 Elston Road, N.W.1  
 The Managing Committee invite applications from  
 fully qualified medical workers for the posts of  
 HOUSE PHYSICIAN, 1st and 2nd HOUSE  
 SURGEONS and OBSTETRIC ASSISTANT.  
 The posts are for six months from September  
 1st, 1938. Remuneration at the rate of £10 per  
 annum with board residence and laundry. Further  
 particulars of the posts to be obtained from the  
 undersigned to whom applications should be sent  
 with copies of three testimonials not later than  
 Thursday, July 30th, 1938.  
 JEAN R. IURRAY  
 Secretary

**YORK COUNTY HOSPITAL**  
 (104 Beds)  
 Applications are invited for the post of  
 RESIDENT ANAESTHETIST and SECOND  
 HOUSE SURGEON. Salary £10 per annum with  
 board residence and laundry.  
 Applications should be sent to the undersigned  
 by July 1st, 1938.  
 J. R. MACKERRILL  
 Secretary

**WINGFIELD-MORRIS ORTHOPAEDIC**  
 HOSPITAL, OXFORD  
 RESIDENT HOUSE SURGEON (male) required  
 for six months. Salary at rate of £100 to £120 per  
 annum.  
 Applications with testimonials should be sent  
 to Prof. G. R. Girdlestone before July 1st.

**HOLSTON HOSPITAL**  
 H. 1000. W. 1000  
 APPOINTMENT OF RESIDENT MEDICAL  
 OFFICER  
 Applications are invited from registered medical  
 practitioners for the post of RESIDENT MEDICAL  
 OFFICER. Salary £10 per annum with board  
 residence and laundry. The post is for six months  
 from September 1st, 1938.  
 Applications should be sent to the undersigned  
 by July 1st, 1938.  
 A. MOWBRAY BARKER  
 Secretary

**THE MANOR HOUSE HOSPITAL**  
 (10 Beds)  
 Applications are invited for the post of JUNIOR  
 MEDICAL OFFICER. Salary at the rate of £10  
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 registered. The post is for six months from  
 September 1st, 1938. Applications should be  
 sent to the undersigned by July 1st, 1938.  
 J. W. LINDHORN, F.R.C.S.  
 Secretary

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 (100 Beds)  
 Applications are invited for the post of  
 MEDICAL PHYSICIAN. Salary £10 per annum  
 with board residence and laundry. The post is  
 for six months from September 1st, 1938.  
 Applications should be sent to the undersigned  
 by July 1st, 1938.  
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- 5 LONDON E—Large cash PRACTICE for sale Panel 4 400 £2 800 p a Premium £7 000 House rent
- 6 S COAST—PRACTICE in popular town Panel 1 600 £2 550 p a increasing 2 years purchase House rent Personally inspected
- 7 SOMERSET COAST—PARTNERSHIP in country town Panel 1 400 Over £3 000 p a Third share at 2 years purchase House rent
- 8 CORNISH COAST—PRACTICE in delightful part Good opportunity for young energetic man Very old established About £900 p incl Panel 342 recently started Premium £1 800 House available
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- 10 CORNWALL—PRACTICE in beautiful country district Panel 500 £850 p a 2 years purchase House rent

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FOR DISPOSAL

DEVON—UNOPP COUNTRY OVER £1 100 p a and increasing Panel worth £60 p a. Apts £60/70 Premium £1 500 Excellent free hold house 6 bed garden etc—1

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MIDDLESEX—SUBURB £1 030 P.A. Panel 600 increasing P.M.S. £100 Premium 2 years purchase Comfy house (4 bed) Sell or let—6

KENT WITHIN 15 MILES LONDON—Average £500 p a increasing Panel 220 Modern house nice garden £65 p a or sell Premium £500 for quick sale—7

MIDLANDS—AVERAGE £1 068 Panel nearly 1 000 Prem 1 1/2 years purchase Good detached house 6 bed nice garden etc £1 250 freehold—8

LOCK-UP LONDON S W—HELD BY WOMAN £485 p a Panel abt 500 Prem 1 1/2 years purchase—9

LONDON W 21—AVERAGE £1 900 p a Panel 1 300 Fees 5/ to 21/ Lease of imposing house for disposal—10

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KENT SUBURB—ABOUT £300 P.A. increasing Panel 140 Fees 3/6 to 7/6 Premium £300 Detached modern residence 4 bed and good garden—12

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LONDON N 17—£300 P.A. WITH scope Branch PRACTICE Panel 200 Nice house to rent—14

GLOS—1 SHARE OF £2 800 P.A. Panel 3 000 Apts £60 or more Premium 1 1/2 years purchase Choice of house—15

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KENT COAST TOWN—1 OR 1 SHARE receipts £3 650 p a Panel over 2 000 Good house on rental at £85 p a Premium 2 years purchase—17

CROYDON AREA—NEARLY £700 p a Panel 400 increasing Club etc Premium about £850 Semi detached house to rent—18

LONDON SUBURB W—£2 200 P.A. No panel Fees 5/ to 21/ Premium 2 years purchase Corner house on main road For sale leasehold £2 000—19

KENT—RESIDUAL & AGRICULTURAL AVERAGE £1 000 p a increasing Panel 930 Apts £3 Premium 2 years purchase Good family house and garden—20

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*For particulars see list*

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**SOUTH COAST—SEAPORT TOWN**—O d estab mixed-class PRACTICE, average last year £100 p.a. and 1 large transferable house £250 p.a. Panel over 100. Great scope. Local Hospital. Excellent reception. 4 bed rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1129

**MIDLANDS**—Very old established PRACTICE in pleasant country town. Cash receipts last year £250 p.a. Annual income of £1,000 p.a. Panel 150. Scope. Local reception. 3 reception, 7 bedrooms, 3 professional rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1130

**MANCHESTER**—Well established mixed Panel and Private PRACTICE in central suburban district adjacent to the Victoria Station. Cash receipts last year £100 p.a. Panel about 100. Excellent reception. 4 reception, 7 bedrooms, 3 professional rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1131

**MIDLAND HEALTH RESORT—PARTNERSHIP** in very old established house and better working-class PRACTICE. Cash receipts last year £2,500 p.a. Excellent reception. 4 reception, 7 bedrooms, 3 professional rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1132

**NEAR LEEDS**—O d established mixed-class PRACTICE in pleasant country town. Cash receipts last year £100 p.a. and 1 large transferable house £250 p.a. Panel over 100. Great scope. Local Hospital. Excellent reception. 4 bed rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1133

**MANCHESTER**—Mixed Panel and Private PRACTICE. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1134

**INLAND SPOT—Pleasant, mixed Panel and Private PRACTICE. Cash receipts last year £100 p.a. Good flat to rent £50 p.a. Freehold. Premium—£4,500—No 1135**

**LANCS TOWN**—Very old established mixed Panel and Private PRACTICE. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1136

**NORTH LANCS—YORKSHIRE BORDER**—Old established unopposed Country PRACTICE in present hands 20 years. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1137

**NEAR MANCHESTER**—PARTNERSHIP in very old established mixed-class PRACTICE, with SUCCESSION in one or two years. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1138

**NORTH STAFFS**—Very old established better working and middle-class PRACTICE. Cash receipts last year £2,431. Panel 1,225. Scope as district. Excellent reception. 4 reception, 7 bedrooms, 3 professional rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1139

**SOUTH YORKSHIRE**—Well established middle and better working-class PRACTICE in outskirts of town. Scope for increase as district develops. Cash receipts last year £2,471. Panel 1,040. Excellent house (built 12 years ago) 4 reception, 7 bedrooms, garage, garden, 3 professional rooms (separate entrance). Price £1,000. Premium—£4,500—No 1140

**LINCOLNSHIRE**—Very old established PRACTICE in pleasant country town. Cash receipts last year £2,471. Panel about 150. Cottage Ho panel 100. 5 bedrooms, small garden, garage etc. Premium—£4,500—No 1141

**NEAR MANCHESTER**—O d estab mixed-class PRACTICE in pleasant country town. Cash receipts last year £100 p.a. and 1 large transferable house £250 p.a. Panel over 100. Great scope. Local Hospital. Excellent reception. 4 bed rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1142

**MIDLANDS**—O d established mixed-class PRACTICE in large town. Cash receipts last year £1,011. Panel 1,011. Scope. Excellent reception. 4 reception, 7 bedrooms, 3 professional rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1143

**NORTH EAST COAST**—O d established mixed Panel and Private PRACTICE. Cash receipts last year £2,160. Panel 1,200. Apartments and Clues (transferable) upper flat £60 p.a. Good house. Reception, 7 bedrooms, 3 professional rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1144

**YORKSHIRE (W.R.)**—O d established mixed Panel and Private PRACTICE in pleasant country town. Cash receipts last year £100 p.a. and 1 large transferable house £250 p.a. Panel over 100. Great scope. Local Hospital. Excellent reception. 4 bed rooms, garage and 1/2 acre garden. Freehold. Premium—£4,500—No 1145

**NORTH MIDLANDS**—O d established mixed Panel and Private PRACTICE in Country District near large town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1146

**NEAR MANCHESTER**—Sound old established middle-class PRACTICE in pleasant suburban district. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1147

**NORTH WEST LANCS**—O d established mixed Panel and Private PRACTICE in large town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1148

**YORKSHIRE**—O d established PRACTICE in pleasant country town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1149

**DERBYSHIRE**—O d established PRACTICE in pleasant country town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1150

**NORTH EAST COAST**—Mixed-class (non Panel) PRACTICE. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1151

**NORTH WALES**—Sound old established middle-class PRACTICE in pleasant country town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1152

**YORKSHIRE (W.R.)**—Very old established mixed Panel and Private PRACTICE in large town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1153

**LIVERPOOL**—Steady increasing mixed-class PRACTICE in suburbs. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1154

**MANCHESTER**—Sound old established middle-class PRACTICE in industrial district. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1155

**WORCESTERSHIRE**—Very old established Country PRACTICE in beautiful country town. Cash receipts last year £100 p.a. Panel 125. Good house 3 bedrooms, living room, 2 professional rooms, small garden. Freehold. Premium—£4,500—No 1156

**MANCHESTER—MEDICAL WOMAN'S PRACTICE** in present hands. Cash receipts last year £100 p.a. Panel 125. Good detached house 2 reception, 7 bedrooms, garage and 1/2 acre garden. Price £1,000. Premium—£4,500—No 1157

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1 SUSSEX—PARTNERSHIP in good class Practice nearly £3,000 in favourite market town. Panel about 1,200. House (4 bedrooms) etc. Rent £80 p.a. Premium one half share £3,000.

2 S COAST—PARTNERSHIP in Practice over £3,000 p.a. in seaside resort. Panel about 2,000. Semi detached house (5 bedrooms) for sale or rent. Premium one half share £3,000. Excellent hospital and scope for surgery.

3 MIDLANDS—Country PRACTICE, over £1,300 p.a., in hunting district. Panel 546. Good house (5 bedrooms) garage and good garden. Main water and electricity. Price £1,400 freehold. Premium two years purchase.

4 NE ENGLAND—PARTNERSHIP in non-panel Practice doing about £6,000 in one of the chief towns. House available. One sixth share at two years purchase. Partner should be surgically inclined.

5 LONDON, SE 1—PRACTICE about £1,150 p.a. in populous district. Panel 1,800. Corner house. Rent £105 p.a. Scope. Premium two years purchase.

6 LONDON, SE 13—PRACTICE averaging over £650 p.a. Panel 800. Accommodation available. Premium £1,150 or near offer to include waiting room furniture etc.

7 LONDON, NW—Medical Woman's PRACTICE about £800 p.a. in growing district. Panel 740. Detached house (4 bedrooms) for sale or rent. Premium two years purchase. Appointments worth £250 p.a., additional possibly transferable.

8 S COAST HEALTH RESORT—PARTNERSHIP in Practice about £1,500 p.a. Panel over 1,100. House (3 bedrooms) garage and garden to rent. Premium two fifths share £1,250, to include drugs etc.

9 N OF ENGLAND INLAND SPA—PARTNERSHIP in Practice about £1,900 p.a. Panel 1,200. Excellent house (8 bedrooms etc) for sale. Scope. Premium one half share £1,800.

10 S COAST—PARTNERSHIP in non dispensing Practice over £5,600 p.a. in health resort. Panel about 600. Share worth about £900 at two years purchase. Further share in two years.

11 S OF ENGLAND—Easily worked PRACTICE, about £1,000 p.a. in Cathedral city (clubs worth about £160 and panel 1,065). House (6 bed and dressing rooms) for sale. Premium 1½ years purchase or very near offer.

12 LONDON, WC—PRACTICE averaging £1,460 (including branch surgery in N7 area). Panel 1,600. Rent private residence £210. Surgery also rented. Good scope. Premium two years purchase.

13 KENT—Medical Woman's PRACTICE, averaging £487 p.a. in rapidly growing, country district (appointments worth £17 10s. and panel 220). Small modern detached house for sale or rent. Scope. Premium £500 or near offer.

14 LONDON, SE 13—PRACTICE, about £1,600 p.a. in suburban district. Panel 1,400. Pleasantly situated house (4 bedrooms) garage and garden. Price £1,650. Scope. Premium £3350 or near offer.

15 WEST END OF LONDON—Good class non-dispensing PRACTICE about £1,150. No panel. Large house to rent. Premium lease and practice £3,000.

16 BUCKS—PRACTICE in growing town. Receipts last year £894. Panel about 790. House for sale. Well equipped hospital. Premium £1,500.

17 LONDON, W 6—Non dispensing PRACTICE about £1,150. Pleasant suburb. No panel. House (5 bedrooms) garage and garden for sale. Scope. Premium £1,000.

18 LONDON, SE—PRACTICE in outlying suburb. Earnings last year £1,368. Panel 560. House (5 bedrooms) garage and garden. Rent £150. Premium £2,800.

19 ESSEX—Country PRACTICE, about £700 p.a. Panel about 450. Very good house (5 bedrooms) garage and garden. Rent £65 p.a. Premium £1,050.

20 LONDON, SW—Medical Woman's PRACTICE, about £960 p.a., in outlying suburb. No panel. Suitable accommodation available. Premium £950.

21 SURREY—Medical Woman's PRACTICE, about £1,000, in developing district. No panel. Rent of house £100 p.a. Scope. Premium £500.

22 SMALL RADIOLOGICAL PRACTICE in provincial town. Good opportunity for young able man. Prospect of hospital appointment later. Premium £1,600 to include modern plant (value about £1,100).

23 PARTNERSHIP in increasing Ear, Nose and Throat Practice in provincial town. Partner must hold F.R.C.S.

24 MIDDLESEX—FOURTH PARTNER required in Practice over £7,600 p.a. in residential district on the Thames. Panel 3,600. House (5 bedrooms) to rent. Scope. Premium 6/30ths share £3,100.

25 LONDON, NW—PARTNERSHIP in Practice averaging about £5,200 p.a. Panel about 6,000. Maisonette (2 bedrooms etc) to rent. One fifth share at first at two years purchase.

26 NE COAST—Middle and better working class PRACTICE over £1,150 p.a. in seaport town. No panel. Private residence for sale. Premium £750 to include furnishings, etc. of consulting rooms.

27 LONDON, W 9—PRACTICE doing between £900/£950 p.a. in residential district. Panel about 60 but plenty of scope. Rent of maisonette (4 bedrooms) £200 p.a. Premium £1,000 or offer.

28 S WALES—Chiefly non dispensing PRACTICE £830 p.a., in seaside town. Panel 380. Centrally situated house. Price £1,250. Good scope. Premium £1,450.

29 LONDON, NW 4—Middle class PRACTICE about £800 p.a. in developing part. Panel 300. House (3 bedrooms) for sale or rent. Scope. Premium £1,250.

30 LONDON SW 16—Medical Woman's PRACTICE over £1,000 p.a. Panel 430. Semi detached house. Price £950 freehold. Scope. Premium £1,500.

31 MIDLANDS—PARTNERSHIP in country town. Practice. Receipts 1937 £4,510. Panel over 3,500. Premium one third share one and a half years purchase, or whole practice would be sold.

32 HOME COUNTY—FOURTH PARTNER required in Practice in growing town. Panel 3,000. Incoming partner must be energetic aged about 30 (married preferred) with a leaning towards medicine. Initial share about £1,250 p.a. Premium £3,000. Preliminary Assistantship.

# British Medical Bureau

(The SCHOLASTIC CLERICAL & MEDICAL ASSOCIATION LTD)  
(Incorporated in England)

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## Practices and Partnerships for Disposal (continued)

73 SW OF ENGLAND—Non dispensing PRACTICE averaging £1616 p.a. in favourite white, p.c. small par 1. Semi-detached house for sale. Good for p.a. Premium £2500.

74 CORNWALL—PRACTICE averaging £655 in market town on West coast. Panel 200. House (5 bedrooms) with garage and garden for sale. Scope. Premium one third quarter years purchase.

75 LONDON SE 22—PRACTICE in suburban district. Receipts past year £1250. Panel 700. Good house with garage and nice garden for sale or rent. Premium two years purchase.

76 NEAR MARBLE ARCH—Old established PRACTICE about £1970 p.a. Panel about 1600. Excellent scope in near future also midwifery. Well built detached double-fronted detached house with garage and garden. Reasonable premium accepted for practice and house to effect quick sale.

77 HOME COUNTY—PARTNERSHIP in Practice averaging £500 p.a. in beautifully situated country town. Panel about 150. Choice of house. Incoming partner must be experienced and aged about 35-40. Premium one half two years purchase. Hospital.

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79 LONDON SW—PARTNERSHIP in mixed class Practice about £4350 p.a. in residential suburb. Panel 2500. Very nice house with garage and quarter acre garden for sale. Two-fifths share at first at two years purchase.

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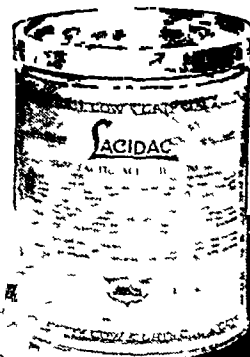
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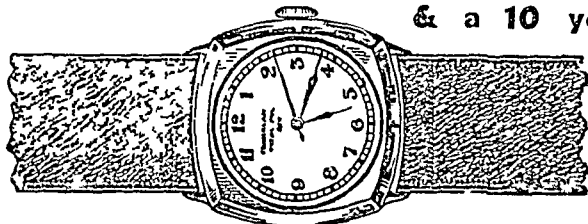
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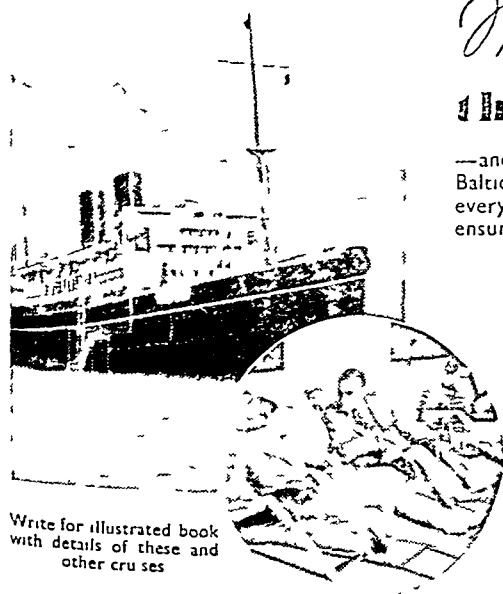
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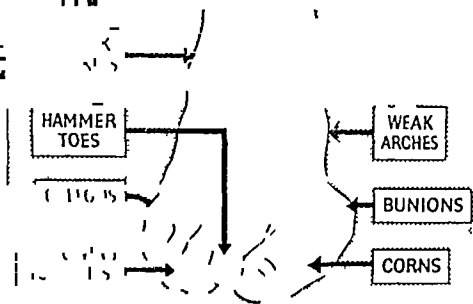
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The illustration below shows a retailer's cottage premises in the little village of Cockfield, Suffolk. Player's Navy Cut Cigarettes can be purchased here as in many similar picturesque and remote spots all over the country.



Numerous letters from smokers tell of pleasure in finding their favourite "Player's" on sale here, there and everywhere... in the most unexpected place... The vast demand which makes this possible also guarantees their unfailing freshness, and is promptly supplied by smokers themselves that there is no better Cigarette at 10 for 6d.

Remember also whatever your taste, you can please yourself by choosing "Medium" or "Mild" brands - Cork tipped or Plain.

*Player's Please*  
**MEDIUM or MILD**

For support of the lower  
abdomen -

*panties*  
designed by J Roussel



## The modern garment for health and beauty

Women will always seek beauty of figure. In the Panties designed by Roussel they have a garment that gives a fashionable line and one that their medical adviser can approve. Roussel Panties are woven to give support to the lower abdomen without dangerous pressure on the abdominal organs. Being woven to measure they do not restrict thighs or waist. The special elastic tricot from which they are woven exerts a gentle massaging action which stimulates circulation, assists in dispersing fat and encourages the natural eliminative functions. If you would like to know more about Roussel Panties and other figure control creations designed by Roussel, please phone or write for a copy of our beautifully illustrated Catalogue. Prices from 2 Guineas. A reduction of 2s. in the £ is made on purchases for personal use by members of the Medical Profession. Write to Dept ME

On Sale Only at

*J. Roussel*<sup>ltd</sup>  
(of Paris)

111 Regent Street, W 1 and 74, New Bond Street, W 1  
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## MILTON AS A DOUCHE

Patients often ask for advice on a suitable antiseptic. In the many cases where a douche is indicated, Milton is particularly suitable.

- 1 It is alkaline with a pH of about 10, due to sodium carbonate and not to caustic soda. On dilution it forms a mildly alkaline solution which corrects any acidity, but does not harm mucous membranes.
- 2 Even at considerable dilutions, it is still a hypertonic solution.
- 3 It is miscible with mucus and pus and dissolves semi-solid protein matter, thus acting as a cleansing agent.
- 4 As will be readily appreciated from its content of 1 per cent of hypochlorite, it has a powerful germicidal action on any micro-organisms likely to be found in the vagina or uterus. For *B. coli*, for example, it has a R.W. Coefficient of 2.12.
- 5 It is a deodorant with immediate action, destroying the organic gases by oxidation.

Owing to its reasonable price—Milton is sold by all chemists from 6d. per bottle upwards—it can be recommended even when expense is a main consideration.

A copy of the Pease Laboratories' Report on Milton, some notes on the value of Milton in Gynaecology, and a generous professional sample bottle of Milton will be sent to any medical practitioner.

MILTON PROPRIETARY LTD.,  
JOHN MILTON HOUSE, LONDON, N 7

# MEDICAL FACTS ABOUT TEA

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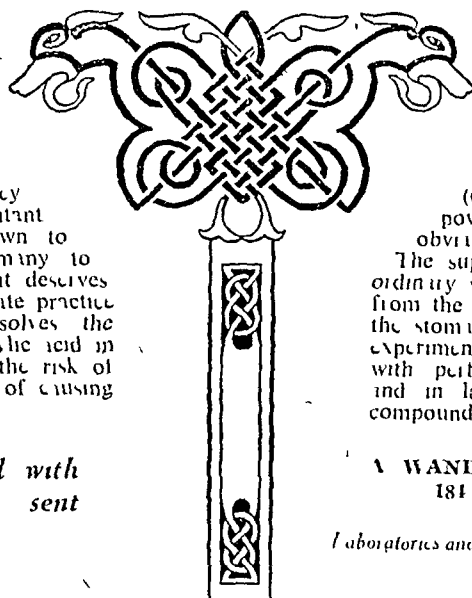
In order to remove certain popular misconceptions about the chemical properties of Tea thorough clinical and laboratory investigations have been conducted. The following is a brief summary of the main results of these investigations —

- (a) Tea as normally drunk is harmless and has no ill effects whatever on the human body. The amount of caffeine and tea tannin in tea is pharmacologically small.
- (b) Tea tannin is a different substance from the tannic acid of the Pharmacopœia, which is a Pyrogallie tannin, and the two should not be confused.
- (c) Clinical experiments have shown that the action of tea tannin is very much milder than that of tannic acid, and the different composition of the two tannins is proved by the fact that the tannic acid of the Pharmacopœia is about 25 times stronger as an acid than tea tannin.
- (d) Many common beverages besides tea contain similar tannins.
- (e) A thorough investigation reported in "The Analyst" (1936, LXI, 310) could find no tea on the market which was free from tannin. If there were any such teas, they would be almost entirely tasteless.

## FOR EFFECTIVE CONTROL OF PAIN

AMONG the many and diverse analgesics which have been evolved by modern chemical research acetyl salicylic acid retains its reputation as one of the safest and most effective. Its tendency to liberate salicylic acid—the irritant properties of which are well known to physicians—has however caused many to hesitate to employ it as widely as it deserves. Exhaustive trial in hospital and private practice proves that Alasil definitely solves the problem of administering acetyl salicylic acid in an effective form being free from the risk of irritating the stomach or bowels or of causing general reactions.

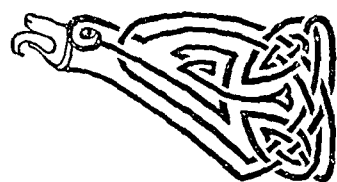
*A supply for clinical trial with full descriptive literature sent free on request*



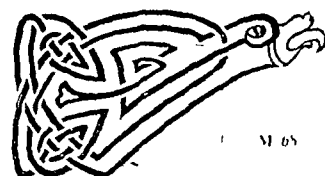
In 'Alasil' the desirable therapeutic effects of acetyl salicylic acid are well exhibited by its calcium acetyl salicylate moiety while the presence of Alacol (Colloidal Hydroxide of Aluminium) a powerful gastric sedative and antacid obviates any tendency to gastric irritation. The superior absorbability of Alasil over ordinary salicylate compounds and its freedom from the risk of liberating free salicylic acid in the stomach have been well proved by careful experimentation. 'Alasil' can be prescribed with perfect safety to patients of all ages and in larger doses than ordinary salicylate compounds.

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181 Queen's Gate, London, S W 7

Laboratories and Works KINGSLANGLEY HERTS



# ALASIL



# Safe Milk

*Whenever and for whatever purpose you need*

*milk you can rely on the purity and absolute safety of Nestlé's Milk.*

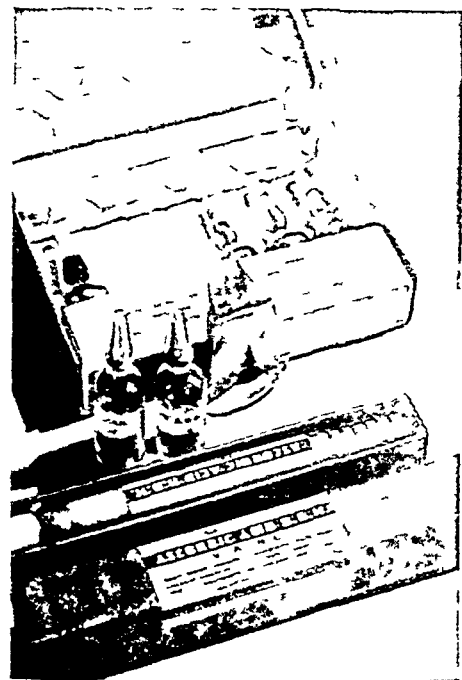
- |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1 Only the freshest full cream milk is accepted from the dairy farms</li> <li>2 Before, during, and after condensation the milk is subjected to rigid laboratory tests</li> <li>3 Churns and all apparatus are cleaned and sterilised every day</li> </ol> | <ol style="list-style-type: none"> <li>4 Every drop of milk is pasteurised and harmful bacteria are completely destroyed</li> <li>5 Every process, from first to last, is carried out under the strictest hygienic conditions</li> <li>6 During the whole process of manufacture the milk is never touched by hand</li> </ol> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*Nestlé's Milk is milk at its richest with all the cream. It comes to you straight from the country, sealed securely from all contamination. Signed with a name you can trust*

Nestlé's will gladly send, free on request, a full account of the preparation, composition and dietetic value of their products

# NESTLÉ'S MILK

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# ASCORBIC ACID B.D.H.

(VITAMIN C)

During all pyrexial conditions the body requirements of Vitamin C are raised considerably above the normal. Modern opinion favours the administration of large doses of Vitamin C to meet such increased demands. The B.D.H. range of preparations of Ascorbic Acid (Vitamin C) includes forms suitable for administration in all such cases, the requirements of which cannot be adequately met by an increased dietary intake.

*Sample on request*

THE BRITISH DRUG HOUSES LTD  
LONDON N 1

VitC15.55"

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## ANAESTHETIC ETHER

(DUNCAN)

SG 720



Duncan's Anaesthetic Ether is  
absolutely pure and contains no  
aldehydes or other oxidation  
products

Prices  
on  
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It is the result of many years  
experience in the manufacture  
of anaesthetics and can be  
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Anaesthetist

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EDINBURGH and LONDON

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*Specially designed for use in the treatment of*  
**Pneumonia, Bronchitis, Pleurisy and similar**  
*affections of the Chest and Lungs* **"Gamgee Tissue"**

Made from the superfine grade of "Gamgee" tissue, made exclusively by Robinsons of Chesterfield and reputed as the finest dressing for use in Thermal treatment. Invented by, and prepared exactly according to the direction of the late Sampson Gamgee, F.R.S.E., Consulting Surgeon to the Queen's Hospital, Birmingham. Made in six sizes 9½d to 3/. Obtainable from all Chemists.

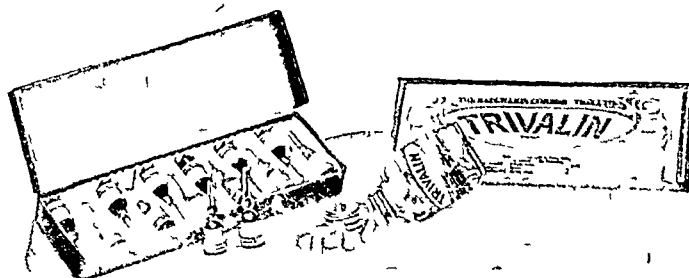
**PNEUMONIA  
JACKET**

SOLE PROPRIETORS & MANUFACTURERS ROBINSON & SONS LTD OF CHESTERFIELD & 168 OLD ST, LONDON, E.C.1

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THE FINEST ANODYNE

(Supplied solely to the Medical Profession)



*In Ampoules for injection, Capsules and Tablets*

*Extracts from Clinical Reports*

**Cancer.** I have used Trivalin with most satisfactory results in Carcinoma of the Mamma. No preparation I have tried including Morphia (which produced vomiting) gave so much relief.

I consider the addition of Hyoscine valuable in Morphia suppression, and have found the combination valuable in hysterical frenzies and other forms of mental excitement.

I shall continue to use it when Morphia is indicated, and particularly when Morphia-action is indicated but Morphia itself contra-indicated.

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Complete endocrine therapy in obstetrics and gynaecology is possible with B D H Sex Hormone Preparations

### *For Ovarian Stimulation Therapy*

#### SEROGAN

Serogan is obtained from the serum of pregnant mares, its action upon the ovary is mainly that of follicle stimulation

#### GONAN

Gonan is the gonadotropic substance from the urine of pregnancy, its effect upon the ovary is primarily luteinising

### *For Ovarian Substitution Therapy*

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The oestrogenic hormone in accurately-standardised form

#### PROGESTIN B D H

The standardised corpus luteum hormone

MORE and more clinical information is becoming available concerning methods of application of these hormone products in the various indications for their use, this information is summarised in a recently-published booklet entitled 'The Therapeutic Application of the B D H Sex Hormones in Gynaecology and Obstetrics', a copy of which will be sent willingly to any physician on request

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TRADE  
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# 'AMYTAL'

BRAND

*Iso-amyl Ethyl Barbituric Acid*

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● The tranquil sleep of children is always the envy of less fortunate adults to whom at times this boon is denied because of sickness or other conditions which upset the psychic or emotional equilibrium

'Amytal' supplies the relaxation and sleep which are essential to recuperation of vital forces. It may be prescribed wherever there is need to combat insomnia, restlessness, or apprehension. A noteworthy margin of safety is characteristic of 'Amytal,' and since destruction of the hypnotic within the body appears to be accomplished rapidly there is little tendency to unwelcome side-reactions or after-depression.

'Amytal' is supplied in  $\frac{1}{2}$  gram,  $\frac{3}{4}$  gram and 1 $\frac{1}{2}$  gram tablets in bottles of 40 and 500

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• ANAEMIA  
• CONVALESCENCE  
• ASTHENIA

# POLYHORMONAL BIOLOGICAL TONIC

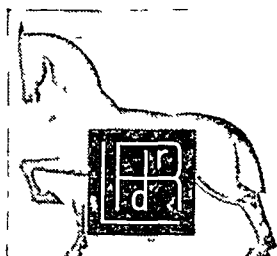
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PURE HORSE SERUM OF SECOND BLEEDING



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# SERENOL

*biological non-toxic*

## SEDATIVE

### Formula

Campho Sulphonate of sparteine	-	-	-	60	grams
Campho Sulphonate of ephedrine	-	-	-	25	"
Extract of boldo	-	-	-	100	"
Extract of crataegus	-	-	-	200	"
Extract of salvia	-	-	-	100	"
Tincture of marrubium	-	-	-	100	"
Glycerine extract of thyroid (it equals 1 of fresh gland)	-	-	-	0.10	"
Valerian	-	-	-	500	"
Hexamethylene tetramine	-	-	-	100	"
Excipient q s	-	-	-	ad 1000	cc

PRICE - 4/6 per 4 oz bottle  
Sample and Literature on request

*Serenol* is a sedative with action on the centres of the nervous vegetative system, sympathetic and parasympathetic, and on the cortical centres. Recent knowledge has shown the interaction of nervous vegetative system and endocrine system, and on this knowledge SERENOL is based. It is thus a biological, not a symptomatic, sedative, and, unlike many other sedatives, has not a direct depressant action on the cortical cerebral centres.

*Serenol* is indicated in conditions of anxiety and general irritability, insomnia, hyperthyroidism, hyperadrenalism (as in neurocirculatory asthenia, effort syndrome), the so called nervous palpitations of the heart, etc.

*Serenol* is given in the following dosage. For mild cases one to two dessertspoonsful on retiring. For more severe cases one dessertspoonful at 10 a.m., one dessertspoonful at 4 p.m. and two dessertspoonsful on retiring.

*Serenol*, being a biological sedative containing no barbiturate, is not habit forming.

CONTINENTAL LABORATORIES LTD.



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BRAND OF HEXYLRESORCINOL

DRUG HOUSES LIMITED  
SHARP & DOHME LIMITED  
LONDON

## In urinary tract infections

Caprokol administration effects rapid amelioration of distressing symptoms (particularly in cases in which there is renal impairment) and eventually it brings about complete disinfection of the urinary tract.

— J. C. D. 24. 2. 1

SOLD BY THE BRITISH DRUG HOUSES LTD and SHARP & DOHME LTD LONDON

Cap/112a

## MIST. DAMIANÆ CO.

(HEWLETT'S)

MIST DAMIANÆ CO (Hewlett's) will be found to possess all the properties of Damiana viz —its alterative effects on the alimentary canal and tonic action upon the brain and nervous system generally. It is a well known fact that exhaustion of the organs and tissues, neurasthenia, and premature decay are far more prevalent at the present day than ever before. The causes are numerous and complex but perhaps the principal reason is that multitudes have to toil harder with their brains than any previous race. The resulting cerebral anaemia is therefore one of the most general complaints in modern life. Not only is it found among the professional literary men but busy merchants and overworked scholars are equally the subjects of enfeebled nerve power and deficient vitality.

In all these various forms of loss of nerve power Mist. Damianæ Co (Hewlett's) is a powerful remedy relieving the exhaustion and conferring renewed capacity for mental and physical endurance.

As a nerve tonic and brain stimulant it is unequalled and its invigorating properties will be found invaluable in many diseases where there is great depression and exhaustion especially in the nervous depression following influenza.

*Dose—One or Two Drachms in Water*

Packed in 5 oz., 10-oz., 22 oz., 40 oz., and 90 oz. Bottles

Introduced and Prepared only by—

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LONDON, E.C. 2



# "vitamin B may be given as Marmite"

(*Brit Med Journ May 21st 1938 p 1085*)

## Case report

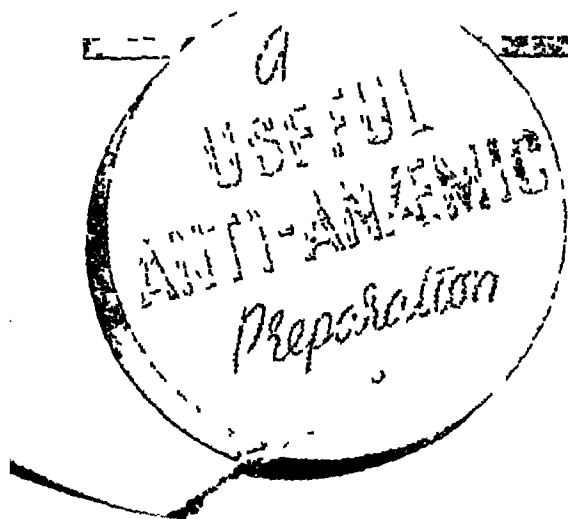
"... was advised to take Marmite, 2 drachms daily... made a gradual improvement and returned to work... still takes Marmite..."

(*Lancet May 7th 1938 p 1045*)

Sample and  
literature  
on request  
385/1a

**THE MARMITE FOOD EXTRACT CO LTD**  
Walsingham House, Seething Lane, London, E C 3

In jars 1 oz 6d 2 oz 10d 4 oz 1s 6d 8 oz 2s 6d 16 oz 4s 6d  
Special quotations for Marmite packed for use in hospitals and welfare centres



THE AQUEOUS EXTRACT  
SIMILAR TO WHOLE LIVER..

② Eight years of clinical use attest to the potency of Solution Liver Extract Valentine. This concentrated aqueous extract contains both the Whipple fraction for secondary anaemia and the Cohn-Millot principle for pernicious anaemia. It is rich in Vitamin B<sub>2</sub>.

One tablespoonful represents  $\frac{1}{2}$  lb of whole liver, and most patients like the taste.

**8-oz Bottles 11'6**

Sample and abstracts of published articles showing clinical response sent on request. Apply British Distributors

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## WHAT ARE THE ADVANTAGES OF BRAN AS A LAXATIVE?


**C**LINICAL TESTS show that, in the treatment of common constipation by increasing the intake of "bulk" in the diet, bran in the pleasant form of Kellogg's All-Bran gives the most favourable results.

The advantages of All-Bran as a laxative food may be summarized briefly as follows: (1) The "bulk" in All-Bran is absolutely non-irritant but does not break down as readily as does the bulk matter of fruits and vegetables, and is therefore more effective. (2) Its continued use does not reduce its laxative effect. (3) It is a good source of Vitamin B<sub>1</sub> and also contains iron. (4) Being a food rather than a medicine, the "psychological" effect of All-Bran is helpful: patients appreciate the fact that it is a pleasant, "natural" treatment which need not interfere with their normal mode of life.

Kellogg's All-Bran may with advantage be prescribed in all cases where an increase in the amount

of "bulk" in the diet is indicated. Within the body, it absorbs water and softens like a sponge. This water-softened mass gently but effectively aids elimination — gently exercises the digestive tract. Eaten regularly, All-Bran promotes thorough evacuation of the bowel contents without strain on the internal organs.

All-Bran may be served as a cereal with milk or cream, or cooked into appetising scones, bread, etc. It may also be taken in combination with other cereals or sprinkled over salads and other foods. To assure maximum effectiveness, plenty of fluids should be taken, preferably between meals. All-Bran is obtainable from all reliable grocers. A packet will be sent free on request to any qualified practitioner. Inquiries should be addressed to Kellogg Company of Great Britain Ltd., Strerford, Manchester.



The illustration is divided into three parts. The top left shows a large, fluffy pile of All-Bran cereal. The top right shows a tall glass of water with a small amount of All-Bran being added, creating a dark, textured mass. The bottom left shows a bowl of All-Bran cereal with milk, next to a packet of All-Bran cereal.

All Bran is not unlike a sponge in its absorbency and softness and to some extent also its effect on the intestines resembles the cleansing action of a water softened sponge. The amazing softness and absorbency of All Bran is strikingly shown when a small quantity is dropped into a tumbler and water added. It will at once be seen how readily All Bran takes up the water forming a large smooth mass.

# Allenburys Orange Juice

CONCENTRATED SWEETENED

Supplies a potent source of the anti-scorbutic vitamin C in a form convenient for infant feeding and other purposes

It is equivalent to about four times as much fresh orange juice and retains its full activity for a long period

Employed with advantage in all cases in which fresh orange juice is used

May be taken by children and adults in the form of a delightful drink by diluting with about ten times its volume of plain or aerated water or milk

In bottles, 2/3 each



*Allen & Hanburys Ltd*

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Further particulars and  
clinical sample request  
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## WHY WAIT FOR INTRAVENOUS SOLUTIONS?



Baxter's Intravenous Solutions of Dextrose, Saline and Acacia are ready for use in the "Vacoliter" container in less than three minutes from stockroom to patient. In "Vacoliters" Baxter's Solutions are always ready when you are ready to use them.

Baxter's Intravenous Solutions in "Vacoliters" make it possible for you to have Intravenous Solutions ready in any quantity and to keep them at the highest degree of purity, stability, sterility and of a constant pH value. They cannot become contaminated because they are packed in a high vacuum and tightly sealed with a metal closure.

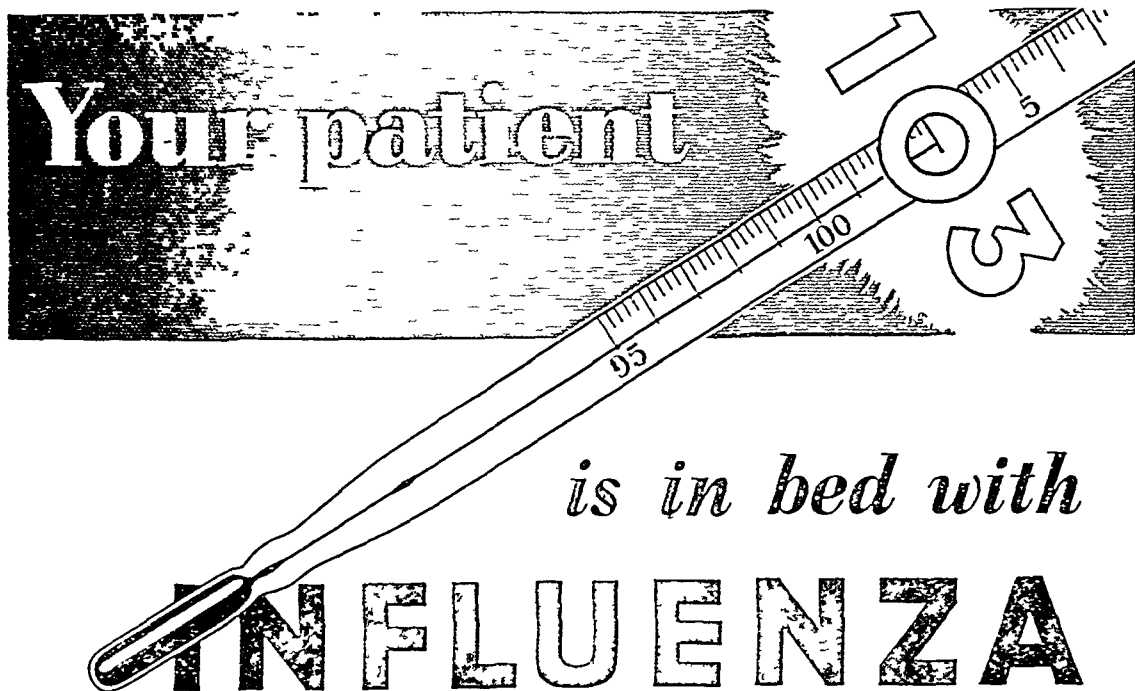
Baxter's service of Intravenous Solutions in "Vacoliters" is unmatched, and is not more costly than your own product.

**JOHN BELL & CROYDEN**

Wigmore Street, London, W.1.

DAY AND NIGHT SERVICE

Sole Distributors in Great Britain for Baxter  
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Her temperature is 103 Even when in normal health she is not very strong, and the weakening effect of the fever is becoming pronounced—especially as she refuses most of the light diet offered to her

In such cases the unique properties of Brand's Essence are of special benefit This pure meat stimulant does not cause thirst. Its flavour has been found to tempt the most enfeebled appetite and restore food tolerance at times when the mere suggestion of food was repugnant to the patient

Brand's contains no solids or irritants of any kind and is assimilated with rapid ease by the weakest digestion Its protein-sparing properties are pronounced

**BRAND'S** CHICKEN OR BEEF **ESSENCE**

*is never contra-indicated*

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Thorough  
— but  
pleasant!



In spite of very high germicidal efficiency 'Dettolin' has a distinctly pleasant taste — an advantage which tends to ensure that the patient will gargle thoroughly and often 'Dettolin' is specially made to deal with the micro-organisms concerned in affections of the mouth and throat — made so that it is soothing and gentle on delicate mucous membrane 'Dettolin' contains among other ingredients the active germicidal principle of 'Dettol' — the modern antiseptic

'Dettolin' is obtainable from Chemists and Medical Suppliers  
Price 9d and 1/3 Sample, and full information on request

**'DETTOLIN'** BRAND  
**GARGLE AND MOUTHWASH**

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## THE SWEDISH ALKALINE TABLE WATER

— a natural water of tonic properties, used extensively by athletes and invalids in Sweden

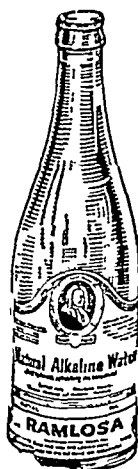


Supplied by Special Warrant to  
H.M. the King and H.M. the  
Crown Prince of Sweden and also  
to H.M. the King of Denmark

# RAMLÖSA

### 50 YEARS' REPUTATION FOR MEDICINAL AND TABLE USE

This famous natural mineral water is bottled at the source and slightly aerated with pure Carbonic Acid. The characteristics of "Ramlosa" are a relatively high Sodium Carbonate content in combination with an uncommonly low content of Calcium and Magnesium Salts (practically none) and a virtually complete absence of iron. "Ramlosa," in consequence, avoids the fault of certain natural mineral waters which upset the digestion by partially neutralising the hydrochloric acid in the gastric juice. "Ramlosa" considerably increases the amount of urine and is therefore indicated in the treatment of diabetes, gout, kidney troubles and other metabolic disorders, as well as in rheumatism and in conditions where a large supply of fluid is of importance as a mild form of irritant physical therapy.



#### ANALYSIS (per litre)

Sod Bicarb	53 gm	Pot Bicarb	0003 gm
Sod Chlor	041 gm	Potass. Sulph	0003 gm
Magn Carb	0016 gm	Silicon Ox	006 gm
Protoxide of Iron	000015 gm		

SAMPLE BOTTLE FREE ON  
REQUEST

Supplied by the Army & Navy  
Stores Harrods Selfridges Barker  
and the Trade generally

Retail prices (per dozen bottles)  
Large 13/- Small 9/- Splits, 7/-

Sole Whole  
INGRAM & Distributors

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Sole Agent in Gt Britain

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The Keep Fit Campaign at Bournville

# HOW GOOD MEALS AT LOW COST HELP CADBURY WORKERS TO KEEP FIT AND WELL



Healthy conditions of work are also the subject of great care. Cleanliness, ventilation and lighting are of the highest standard at Bournville—the factory in a garden.

Sport and exercise have their full share in the Keep Fit Campaign at Bournville. But the importance of good food is by no means overlooked. In the spacious dining rooms nourishing meals are provided at cost for all workers who require them.



There is a qualified medical staff available to attend to any emergency illness or accident within the factory and special facilities for free electrical and light treatments in co-operation with the worker's own doctor are provided.

So they're fit to make fine products at

## CADBURYS of Bournville

THE FACTORY IN A GARDEN

Study your patients' pockets as well as their health  
**Recommend**

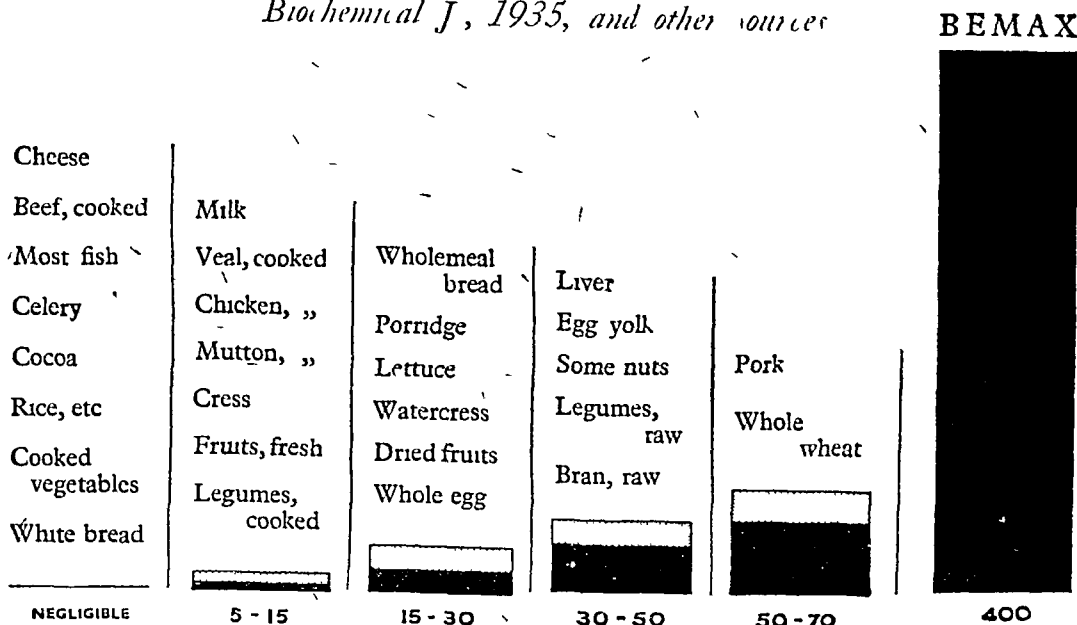
CADBURYS  
**BOURN-VITA**

THE IDEAL FOOD  
DRINK



# VITAMIN B<sub>1</sub> IN FOODS

*Biochemical J, 1935, and other sources*



*The figures represent International Units per ounce*

*Laboratory reports on Bemax; and a clinical sample for personal trial sent on request*  
 The Bemax Laboratories (Dept B 63), 23, Upper Mall, London, W 6

## "Vitamin B<sub>1</sub> deficiency an outstanding fault in the diet of many millions of people"

*(B M J, 16 Oct, 1937 p 753)*

The reduction in Vitamin B<sub>1</sub> intake, due to changes in dietary habits during the last hundred years, normally amounts to at least 50 per cent, and may be as much as 70 per cent. It has been demonstrated, both experimentally and clinically, that a shortage of Vitamin B acts as a limiting factor in the maintenance of health and nutrition, and often results in gastro-intestinal disorders, loss of appetite, indigestion, constipation and, if long continued, to neuritis and arthritis.

The logical way to rectify such shortage is to restore to the diet the Vitamin B-containing substance whose removal is responsible for the deficiency.

This substance is available in the form of Bemax.

For years it has been the policy of the proprietors of Bemax to ensure its Vitamin B<sub>1</sub> activity by biological assay of every day's output. So far as is known, Bemax is the only food product for which such a claim is or can be made.

The quantity of Vitamin B<sub>1</sub> supplied by the normal daily dose of Bemax—one tablespoonful—is 200 International Units, an amount sufficient to raise a deficient diet to an optimal level.

The normal daily dose of Bemax supplies, in addition to Vitamin B<sub>1</sub>, significant quantities of Vitamin B<sub>2</sub> and B<sub>6</sub>, Copper, Iron and Phosphorus as well as rich quantities of Vitamin E and other essential dietary elements.

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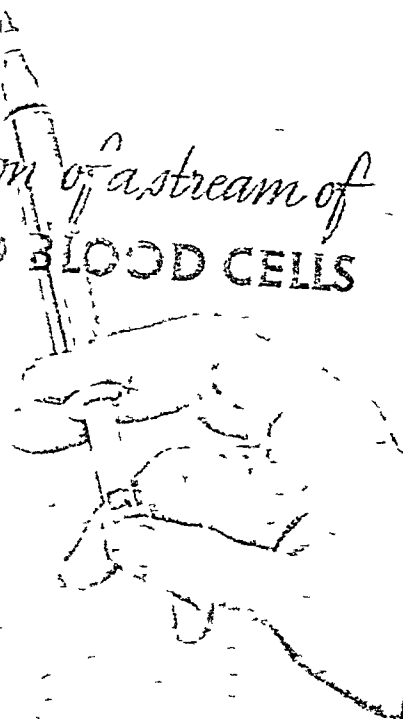
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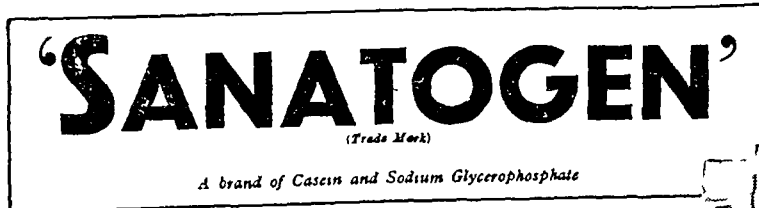
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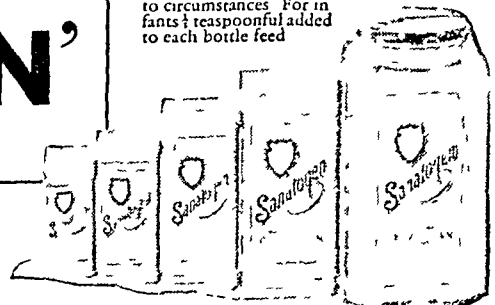
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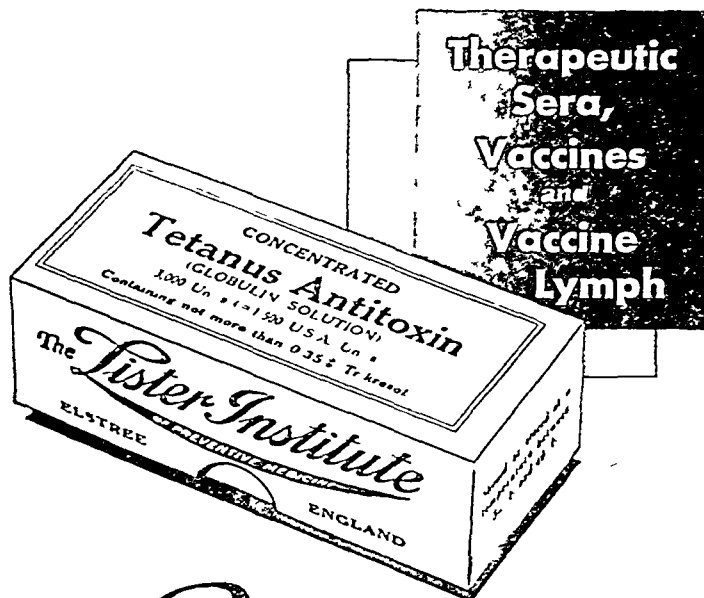
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# BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 25 1938

## THE CLINICAL ASPECTS OF THE TRANSMISSION OF THE EFFECTS OF NERVOUS IMPULSES BY ACETYLCHOLINE\*

BY

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### LECTURE III

#### Pharmacology and Therapeutics of Prostigmin

In the first lecture I described the action of physostigmine in increasing and prolonging the effects of stimulation of cholinergic nerves of the muscarine type and the effects of injected acetylcholine and explained that this action is due to the inhibition of the choline esterase present in the tissues and blood so that the hydrolysis and destruction of acetylcholine is delayed. In 1931 Aeschlimann and Reinert showed that a synthetic analogue of physostigmine, the dimethyl carbamic ester of 3-oxophenyl trimethyl ammonium methyl sulphate, has pharmacological actions similar to those of physostigmine. This substance known as prostigmin stimulates intestinal peristalsis as powerfully as physostigmine but has less effect on the heart and circulation. Ammon (1933) showed that prostigmin inhibits choline esterase as does physostigmine and McGeorge (1937) working in my department showed that it not only reduced the esterase activity of normal serum but that the activity was restored when the prostigmin was removed by dialysis acting in this respect in the same way as physostigmine (Matthes 1930). It is probable therefore that the actions of prostigmin are due to this inhibition of choline esterase and that the effects of its administration are due mainly to the potentiation of acetylcholine effects occurring normally in the body.

#### Investigation of its Therapeutic Action

Prostigmin was recommended by the manufacturers for the aporetic use as an intestinal stimulant in cases of post-operative intestinal atony and a number of favourable reports have been published (Weigand 1931, Leiner 1931, Tourneux, Petel and Gouzi 1931, Kottlors 1932, David 1935, Begg 1937 and Harger and Wilkey 1938). In 1933 at the request of the Therapeutic Trials Committee of the Medical Research Council an investigation of its therapeutic action was carried out in this country on the prostigmin supplied by Roche Products Limited. The action of the drug was studied on subjects with normal gastro-intestinal functions following barium meals and on patients with post-operative intestinal distension and other abnormalities (Carmichael, Fraser, McKelvey and Wilkie 1934). When given by subcutaneous or intramuscular

injection in doses of 0.5 to 1.5 mg increased activity in the movements of the colon was observed and in cases of gaseous distension abdominal pains and rumblings occurred in from ten to twenty minutes following the injection and continued for thirty minutes but to obtain a satisfactory passage of flatus it was necessary to give an enema in addition. With these doses slight reduction in pulse rate and blood pressure occurred: one patient showed sweating and twitching of the muscles of the trunk and limbs was observed in two patients.

#### EFFECT OF INTRAMUSCULAR INJECTION

Following the report in 1935 by Dr Mary Walker that prostigmin was more satisfactory than physostigmine in the treatment of myasthenia gravis and that it is necessary to employ it in considerably larger doses (2.5 to 5 mg) than had been advocated for intestinal distension I have

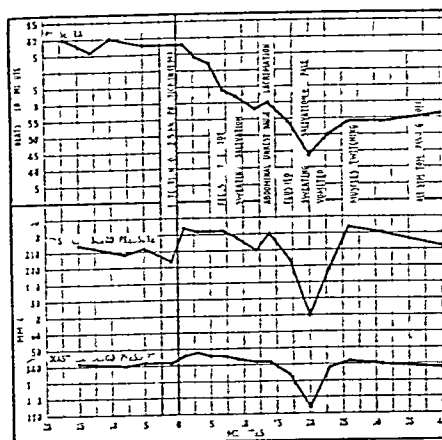


FIG 10

observed with the help of F W Gordon and C R Baxter the effect of doses up to 2.5 mg by intramuscular injection in twelve hospital patients. The effects vary considerably from subject to subject. A typical response is seen in Fig 10. The patient had essential hypertension but was free from symptoms on moderate exertion. Reactions similar to those seen following the injection of choline esters occur but the onset is more gradual, there is no rise of pulse rate, the fall of blood pressure is slight and in

accompanied by twitching of muscles rarely noted with doryl is a striking feature. This usually begins in the orbicularis palpebrarum, the patient complaining of a stiffness around the eyes and it may spread to the pectoral muscles, the muscles of the abdominal wall, the legs, the neck, and the shoulder girdle. These twitchings are brief contractions involving part of a muscle at a time, and often powerful enough to cause movements of tendons and the patient may be conscious of them. The whole of a muscle is rarely involved in one twitch but the contraction commonly involves more muscle fibres than is usual in the fibrillary tremors of progressive muscular atrophy. With the appearance of the twitching of the muscles there is an increase in the tendon reflexes. The effects begin to pass off in about thirty minutes after the injection, and have usually

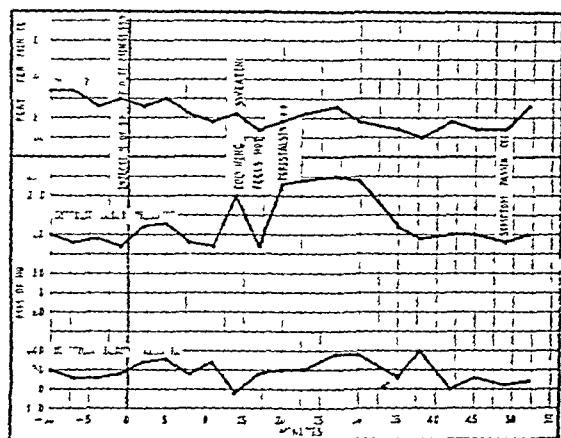


FIG 11

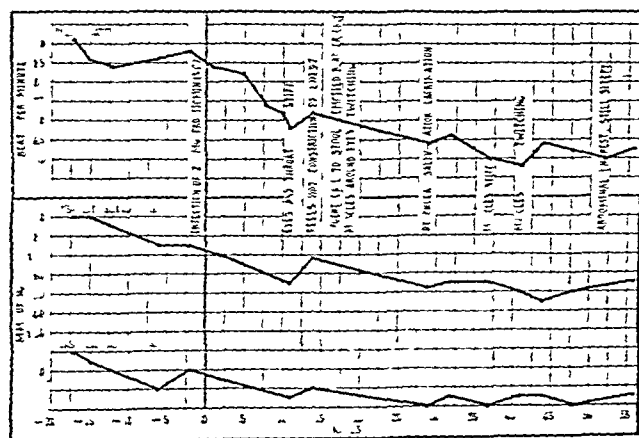


FIG 12

disappeared in forty minutes or an hour and not infrequently the subject feels drowsy and may go to sleep at this time. Atropine abolishes the parasympathetic effects but not the twitching of the voluntary muscles. Following 1 mg. in the same subject no symptoms were noted apart from a feeling of warmth and slight sweating fifteen to twenty minutes after the injection. A dose of 1 mg., however, produced a striking increase of visible peristalsis in a patient with megacolon (Fig. 11) but no relaxation of the sphincter and no improvement in the size of the colon or in its functions were observed at the end of four weeks during which he received three injections daily of 1 mg. A desire to defecate is usually experienced twenty minutes or an hour after a dose of 1 or 2.5 mg. more than the larger dose of 5 or 10 mg. commonly no defecation occurs, the stool flatus is passed and the bladder emptied (Fig. 12).

It would appear, therefore, that by means of prostigmin the normal cholinergic nervous effects in man are increased—both the muscarine-like parasympathetic effects and the nicotine-like effects on voluntary muscle. Doubtless physostigmine would have the same action but in doses sufficient to produce the effects on voluntary muscle it causes in man such severe cardiovascular inhibition with vomiting, headache, and general malaise that it is unsatisfactory for therapeutic purposes or for making clinical observations.

#### ITS VALUE IN INTESTINAL DISTENSION AND ATONY

Apart from the use of prostigmin in myasthenia gravis, which will be considered later, its therapeutic value has been established so far only in the treatment of intestinal distension and atony. For this it is probably less reliable than doryl and mechohol, but with doses usually effective (0.5 to 1 mg. by subcutaneous or intramuscular injection) undesirable effects on the cardiovascular system and, so, eating are much less. Since it acts by exaggerating normal mechanisms it may well be found to have therapeutic value in increasing reflex responses, such as carotid sinus and oculo-cardiac reflexes, but at present there is not enough evidence to justify any conclusions.

Laurent and Waller (1936) showed that all the actions of prostigmin can be obtained by oral administration, but that to produce comparable results much larger doses are required than by injection. They found that in cases of myasthenia gravis 25 to 30 mg. by the mouth gave a result similar to that following 0.5 mg. by injection and that 50 mg. by the mouth was comparable in its effects to 1 mg. by injection. Other authors have confirmed this in cases of myasthenia gravis, and Mitchell (1937) has noted the production of the usual parasympathetic effects following the oral administration of 90 mg. daily in from three to six divided doses.

Goodman and Bruckner (1937) record that two and three-quarter hours after an oral dose of 45 mg. a healthy subject while walking home experienced a train of symptoms that were severe and alarming, including those of parasympathetic stimulation and twitching of voluntary muscles. The authors suggest that the exertion of walking produced acetylcholine, which was protected from hydrolysis by the prostigmin, was carried throughout the body and produced the symptoms peripherally. Atropine abolished the alarming symptoms, and no similar occurrence has been recorded following oral administration.

#### Myasthenia Gravis

Because of the resemblance of the condition of the voluntary muscles in myasthenia gravis to curare poisoning and the known antagonism between physostigmine and curare, Dr. Mary Walker tried physostigmine in the treatment of myasthenia gravis. A striking and dramatic effect was seen, the muscle weakness and fatigue being temporarily abolished (Walker, 1934). She later reported that prostigmin was as efficacious and that full therapeutic results could be obtained without the undesirable toxic effects that occurred with effective doses of physostigmine (Walker, 1935). Since then a number of reports have been published confirming this use of prostigmin whether given by injection or by the mouth (Pritchard 1935, Laurent, 1925, Lindsley, 1935, Minaki and Sioris 1926, Wade 1926, Marinisco, Sager and Krenn 1926, Cooke and Pastore, 1936, Winkelman and Moore 1937, Mitchell 1937, Riven and Wilson 1937, Harvey and Whitchell 1937, Vies, Mitchell and Sen 1937, Kennedy and Wolf, 1937, 1938, Vies and

Shivab (1935) and Harvey and Whitchell (1937b) regard the response to prostigmin as so specific as to have diagnostic value.

The explanation of this striking and specific effect of prostigmin in myasthenia gravis may be expected to throw light on the pathology of the disease. Two possible explanations have been suggested in terms of acetylcholine transmission. (1) There may be a disturbance of the normal balance between acetylcholine production and its destruction by choline esterase—either a defective production of acetylcholine or an abnormally rapid destruction of acetylcholine by esterase so that a deficiency of the transmitter or the effect of the nervous impulse results—and prostigmin by inhibiting the esterase restores the balance. (2) there may be a curare like substance present in myasthenia gravis that interferes with the transmission by acetylcholine to the muscle and is antagonized by prostigmin which potentiates the transmitter.

There is good evidence that the esterase content of the serum is not increased. McGeorge (1937) estimated the esterase activity of the serum of 132 hospital patients including three with myasthenia gravis. He found a wide range but was unable to correlate the activity with any disease process or other abnormality. The esterase contents of the serums from the three cases of myasthenia gravis were well within the range found by him in the other cases. Siedman and Russell (1937) estimated the esterase in whole blood serum and corpuscles from twelve cases of myasthenia gravis ten other patients and five normal subjects. They concluded that the serum esterase was lower in myasthenia gravis than the average of normal persons but that the esterase in the corpuscles was normal. Pichler (1937) also found the average activity in the blood from seven cases of myasthenia gravis lower than from fourteen normal subjects. As McGeorge pointed out it is possible that the esterase activity at the neuromuscular junction may be increased in the presence of a normal serum esterase activity but no method of testing this possibility is available. There is certainly no evidence of an increased esterase activity to account for a disturbed balance between acetylcholine and esterase in myasthenia gravis.

#### THE HYPOTHESIS OF DEFECT IN ACETYLCHOLINE PRODUCTION

To test the hypothesis of a defect in acetylcholine production Fraser, McGeorge and Murphy (1937) tried the effect of injecting choline esters in two cases of myasthenia gravis. We found that improvement in muscle power resulted following the subcutaneous injection of 500 and 600 mg of acetylcholine 0.5 and 1 mg of carbaminoylcholine (doryl) and 25 and 50 mg of acetyl- $\beta$ -methylcholine (mecholin). Following doryl the improvement was nearly as impressive as with prostigmin, less after mecholin and but slight after acetylcholine. The effects however differed from those of prostigmin in that they appeared later, attained a maximum after some hours and did not pass off for more than twelve hours. The result following the administration of mecholin which has feeble nicotine-like properties, is especially significant and the time interval between the injection of acetylcholine and the full development of its effects is surprising in view of its rapid hydrolysis in the body. We concluded that our results suggested some defect in the production of acetylcholine in myasthenia gravis.

#### THE HYPOTHESIS OF CURARE LIKE POISONING

There is however more evidence in favour of the second hypothesis. Pritchard (1935) found that the form

of the myogram in myasthenia gravis is abnormal showing quick fatigue with high rates of stimulation and that prostigmin restores the myogram to the normal form at the same time as it produces clinical improvement. Briscoe (1936) reported that the cat's quadriceps muscle poisoned by curarine presents a myogram at fast rates of stimulation similar to that found by Pritchard in patients with myasthenia gravis and that following an injection of prostigmin the myogram is restored to the normal. At a recent meeting of the Physiological Society Walker demonstrated that if a patient with myasthenia gravis exercises a limb with the circulation obstructed by a sphygmomanometer cuff to the point of exhaustion and the pressure in the cuff is then released an increase in the weakness of the myasthenic muscles in the rest of the body occurs immediately and can be relieved by prostigmin. This suggests that some product of muscle activity either normal or abnormal has a curare like action on the myasthenic muscles. Many cases of myasthenia gravis are associated with tumours of the thymus and Adler (1937) has produced in dogs muscular weakness resembling myasthenia by transplantation of thymus tissue and by injections of thymus extracts and reports that these symptoms were completely relieved by prostigmin.

In a recent publication Minor, Dodd and Riven (1935) have reported that guanidine produced marked but temporary improvement in muscle strength in two cases of myasthenia gravis and considered the effect comparable to that of prostigmin. It was equally efficacious if given by intravenous injection or by mouth. Following intravenous injection in doses of 6 to 10 mg per kilogramme the improvement was apparent in ten to thirty minutes and was maintained for about eight hours. They quote the conclusion of Frank, Nothmann and Guttman (1923) that guanidine increases the sensitivity of striped muscle to the action of acetylcholine and consider that their observations favour the hypothesis of a decreased sensitivity of the myasthenic muscle to the action of acetylcholine.

A number of other substances besides prostigmin are known to act beneficially in myasthenia gravis notably glycine (Boothby 1934), ephedrine (Edgeworth 1930) and potassium chloride (Laurent and Walther 1935). It is probable that they are not comparable with prostigmin in therapeutic effect but a satisfactory explanation of the pathology of the disease must account for these beneficial actions and also for the well known effect of emotion in aggravating the weakness of the muscles and the fatigue.

So far we have no satisfactory explanation for all the facts. There is more in favour of a curare like poisoning of the muscles than a defect in acetylcholine production being the cause of the muscular weakness and fatigue but no suggestion that has so far been made accounts for the delayed and prolonged beneficial action of the choline esters. It is possible that the explanation of their delayed and prolonged action is quite independent of the cause of the myasthenia and that their beneficial effect is due like that of prostigmin to their ability or the ability of some resultant product, to overcome the curare like action on the muscle of some abnormal chemical substance present in myasthenia gravis.

#### IMPROVEMENT IN TREATMENT OF PATIENTS

If the principle of chemical transmission by acetylcholine has not yet solved the problem of the pathology of myasthenia gravis it has led to a great improvement in the treatment of the patients. The dose required to produce maximum beneficial effects varies with each



patient, and must be decided by trial. In an average case 2.5 mg of prostigmin by subcutaneous or intramuscular injection three times in the day at intervals of six hours will produce a striking effect and restore the ability of the patient to lead an independent and useful existence. The actual dose and the hours of administration must be adjusted to suit the individual, and oral administration in doses of about 45 mg three times in twenty-four hours can then be substituted in stages. If it is found that in the morning following the long interval of sleep without prostigmin the weakness is too great to permit the patient to get up and dress, ephedrine in doses of 1/4 to 1/2 grain by the mouth before going to sleep may be efficacious in prolonging the beneficial effect to the following morning. In many patients prostigmin in sufficient quantity to restore muscle power produces abdominal unrest and colicky pains and doses of atropine or of belladonna must be administered at suitable intervals during the day to correct the muscarine-like actions.

Harvey and Whitehill (1937a) think that the oral administration of 100 to 200 mg of prostigmin daily is the best method of treatment. Mitchell (1937) considers about 90 mg by the mouth in from three to six divided doses the most satisfactory method. Viets, Mitchell, and Schwab (1937) gave 15 mg from three to twelve times a day to twenty-three patients, and noted that belladonna or atropine is sometimes required to relieve abdominal discomfort, and that in some cases ephedrine in doses of about 3/8 grain avoids the necessity for so much prostigmin. Kennedy and Wolf (1938) treated nine patients either with subcutaneous injections of 0.5 mg repeated up to twenty-four times a day or by oral administration of 15 to 30 mg three times a day. Some patients became refractory to the influence of prostigmin.

#### QUININE IN DIAGNOSIS

Harvey and Whitehill (1937b) draw attention to the use of quinine as an adjunct to prostigmin in the diagnosis of myasthenia gravis. They point out that the objective signs of the disease may be so slight that the improvement following prostigmin may be inconclusive as a diagnostic test, and that the administration of quinine increases the symptoms to such a degree (Kennedy and Wolf, 1937) that the improvement following the injection of prostigmin can be easily recognized.

#### Effect of Prostigmin in Other Diseases of Nervous System and Muscles

Kennedy and Wolf (1937) found that prostigmin exaggerates the symptoms in myotonia, pointed out its antagonism to quinine in this disease, and drew attention to the similar exaggeration of symptoms recorded by Russell and Stedman (1936) by potassium salts. These effects are of interest in connexion with the findings of Lanari (1937), who reported that the intra-arterial injection of acetylcholine gave rise to painful muscular contractions in six cases of myotonia.

Hamill and Walker (1935) reported that prostigmin increased the motor power in cases of amyotrophic lateral sclerosis. Winkelman and Moore (1937) observed increased muscle strength in early cases of muscular dystrophy following intramuscular injections of prostigmin, and noted fibrillary tremors in one case of amyotrophic lateral sclerosis, but drew no conclusions as to its value in these conditions. Kennedy and Wolf (1938) used it in three cases of chorea, one of hemiathetosis, twelve of hemiplegia with spasticity, twelve of chronic encephalitis,

one of facial and cervical tic, two of spasmodic torticollis, one of amyotonia congenita, two of progressive muscular dystrophy, one of Westphal's pseudo-sclerosis, and one of botulism, without producing any benefit. In one patient with facio scapulo-humeral myopathy subjective and objective improvement was noted following the subcutaneous injection three times a day of 0.5 mg, but an increase of dosage produced extreme weakness.

Dr M. Kremer is at present investigating in my wards the action of prostigmin when injected by the different routes in cases with spastic condition of the muscles. He finds that after subcutaneous, intramuscular, and intravenous injections there is, as a rule, an increase in the tendon reflexes of the normal as well as of the affected muscles, and an exaggeration of the spasticity when this is due to an upper motor neurone lesion. Following intrathecal injections a different effect is obtained, as will be described later.

In a man aged 61 with generalized arteriosclerosis and left-sided hemiplegia with spasticity a dose of 2.5 mg of prostigmin by intramuscular injection, together with 1 mg of atropine sulphate to avoid parasympathetic effects, produced muscular twitching throughout most of the body so vigorous as to be painful, and in addition to the exaggeration of the tendon reflexes commonly present following this dose there

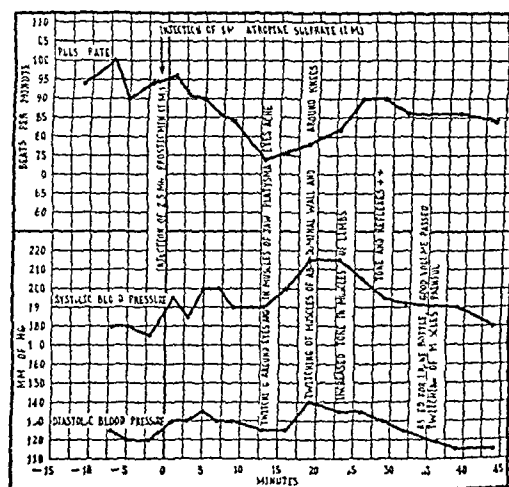


FIG 13

was an increase in the spasticity on the hemiplegic side but no increase in muscle power. He complained also of a stiffness in the neck and of difficulty in swallowing (Fig 13).

We have observed the effect of the intramuscular injection of 2.5 mg in a man of 55 who had had muscular dystrophy for seventeen years, affecting mainly the lower limbs and gluteal muscles, and who at the age of 13 had had an attack of poliomyelitis which resulted in atrophy of many of the muscles of the right arm and shoulder girdle. Twitching was especially marked in the dystrophic muscles of the legs but in addition cramp-like contractions occurred in the muscles of the left calf, in which weakness and atrophy were less than in the other muscle groups of the lower limbs. No twitching occurred in the atrophied muscles of the right arm. In this patient the twitching of the muscles was unusually severe and continued for several hours. No increase in muscle power was detected.

There is general agreement that any improvement in muscle power produced by prostigmin in conditions other than myasthenia gravis is slight and not comparable to that seen in myasthenia gravis. There is good evidence also that prostigmin by subcutaneous or intramuscular injection increases the symptoms in myotonia and increases

the spasticity in upper motor neurone lesions but has no therapeutic value in these conditions.

#### Action of Prostigmin and Choline Esters on the Central Nervous System

Plattner and Hintner (1930) showed that cholinesterase is present in the brains of rabbits, cats, and dogs. Sedman and Sedman (1937) isolated acetylcholine from cat brains. Mann, Fennelbaum, and Quistel (1935) found an inactive precursor of acetylcholine in the brains of rats, and Miller (1937) reported that physostigmine applied to the cortex of cats caused motor activity in the contralateral limbs, but there is no evidence it present that acetylcholine acts as a transmitter within the central nervous system. Observations have however been made on the effects of the choline esters and of anti-cholinesterase substances on the central nervous system in experimental animals and in man.

Schweitzer and Wright (1937a) showed that physostigmine administered to cats by intravenous injection increases the knee jerk and general reflex excitability through an action on the central nervous system, but that prostigmin and acetylcholine depress the jerk by a direct inhibitory action on the spinal cord. The same authors (Schweitzer and Wright 1937b) found that acetylcholine, doryl, prostigmin, and other anticholinesterase substances but not mechohol depress the knee jerk following intravascular injection in anaesthetized cats partly by a central and partly by a peripheral action and that while prostigmin in small doses increases the jerk by a peripheral potentiating action, larger doses have a peripheral paralyzing action.

Kremer, Pearson, and Wright (1937) observed the action of prostigmin injected intrathecally in doses of 1 to 15 mg in eight patients with spastic conditions of the muscles (one cerebral diplegic, one paraplegic due to spinal tumour, and six hemiplegics). They found that the tendon reflexes and muscle tone in the legs were decreased or abolished, and sometimes in the arms also. Such improvement in voluntary movement as was observed they considered to be due to the abolition of the spasticity. Dr Kremer is continuing these observations in my wards and comparing the effects of prostigmin when given by intrathecal injections with those following intramuscular injection. In man the effects of intravenous injection are similar to those of intramuscular injection, the tendon reflexes being exaggerated and spasticity increased, in contrast to the results of Schweitzer and Wright (1937a) in anaesthetized cats, as following the intravenous injection of relatively much larger doses they obtained depression of the reflexes from a central action. It is necessary in these observations of the effects of intrathecal injections in patients to give a preliminary injection of atropine to avoid the disturbing effects on the circulation and gastro-intestinal tract. It is not unusual for the patient to become drowsy about an hour after the injection and to remain in this state for several hours. In some instances in from two to two and a half hours after the injection symptoms of parasympathetic stimulation appear possibly consequent on the effect of the atropine wearing off, but a further injection of atropine has little or no effect on the symptoms. These symptoms may come on abruptly with vomiting, bradycardia and collapse and are presumably due to the action of the prostigmin on the vagus centre in the medulla. The train of symptoms and the abrupt onset resemble the attack reported by Goodman and Bruckner (1937) which occurred two and three quarter hours after the oral

administration of 45 mg by the mouth. Twitching of the voluntary muscles was prominent in their subject in addition to the symptoms of parasympathetic stimulation which were relieved by atropine so that a peripheral action was probably concerned and not a central one.

It is not possible at present to see the significance of these actions of prostigmin on the central nervous system and the observations on patients have not so far resulted in any therapeutic use of the drug by intrathecal injection.

#### Acetylcholine Transmission in Urticaria

Grant, Pearson, and Comeau (1936) have recorded a series of observations on six cases of urticaria in which the attacks were induced regularly by emotional disturbances, exercise or warmth. They found that the attacks could be provoked also by injections of pilocarpine and of doryl. The application by ionization of acetylcholine and more constantly of acetylcholine and physostigmine and of doryl produced local urticarial reactions in these subjects but not in normal persons. These authors considered that the effects of emotional disturbances, exercise and heating of the body were transmitted to the skin by cholinergic nerves and that the urticaria was due to an abnormal response of the skin to acetylcholine produced normally at the nerve endings. The reason for the abnormal response is obscure. If these observations are confirmed this type of urticaria must be classed along with myasthenia gravis since in both the evidence available is in favour of normal acetylcholine production and an abnormal response. For in myasthenia gravis there is an absence or diminution of the response and in these cases of urticaria an exaggerated response occurs.

#### Conclusions

The acceptance of acetylcholine as the transmitter of the effects of nervous impulses throughout a large part of the peripheral nervous system has been followed by important advances in knowledge of the physiology of the autonomic nervous system and of voluntary muscle and neuromuscular stimulation. Already, in the few years since the principle gained general acceptance a number of aspects of clinical value have emerged.

1 Many of the long established therapeutic uses of atropine and physostigmine are explained.

2 Two new substances of therapeutic value have been introduced to clinical medicine—doryl and mechohol—and their value in the treatment of intestinal distension and atony, of post-operative and post-partum retention of urine and of supraventricular paroxysmal tachycardia has been established.

3 A third new substance, prostigmin, has an established therapeutic value in the treatment of intestinal distension and atony, and has so dramatic an effect on the muscle weakness and fatigue in myasthenia gravis that it has altered the outlook for patients suffering from this disease and this therapeutic effect is of diagnostic value.

4 This action of prostigmin has led to an analysis of the cause of the muscular disability that seems likely to solve the problem of the cause of the disease.

Of greater importance I believe will be the discoveries that acetylcholine transmission will bring about in the future for all processes, tissues and organs of the body are affected by it. Further advances in pharmacology may be expected for acetylcholine lends itself readily to modifications by the synthetic chemist. Emotional disturbances have been linked with skin lesions through acetylcholine and observations have been recorded that

must lead to a better knowledge of the functions of the central nervous system. And if acetylcholine transmission should be proved to occur there as well as in the periphery, still further advances in knowledge of clinical importance may be expected.

## REFERENCES

- Adler H (1937) *Arch klin Chn* 189, 529  
 Aeschlimann, J A, and Reinert M (1931) *J Pharmacol* 43 413  
 Ammon A (1933) *Arch ges Physiol* 233 486  
 Begg, R C (1937) *British Medical Journal* 2 581  
 Boothby, W M (1934) *J Amer med Ass* 102 259  
 Briscoe G (1935) *Lancet* 1 469  
 Cirmichael E A, Friser F R, McKelvey, D and Wilkie D P D (1934) *Ibid* 1, 942  
 Cooke A M and Passmore R (1936) *Quart J Med* NS, 5 21  
 David, W E (1935) *Lancet* 1 1160  
 Edgeworth H (1930) *J Amer med Ass* 94, 1136  
 Frank E, Nothmann M, and Guttmann E (1923) *Pflügers Arch* 201 569  
 Friser F R, McGeorge, M and Murphy, G E (1937) *Clin Sci* 3, 77  
 Goodman L S and Bruckner, W J (1937) *J Amer med Ass*, 108 965  
 Grant R T, Pearson, R S B, and Comeru W J (1936) *Clin Sci* 2 253  
 Himml P and Walker, M B (1935) *J Physiol* 84 Proc 36  
 Hurger J R, and Wilkey J L (1938) *J Amer med Ass* 110 1165  
 Harvey, A M, and Whitchill M R (1937a) *Ibid* 108 1329  
 — (1937b) *Johns Hopk Hosp Bull* 61, 216  
 Kennedy F, and Wolf A (1937) *Arch Neurol Psychiat* 37 68  
 — (1938) *J Amer med Ass* 110, 198  
 Kottlois E (1932) *Med Klinik* 28 366  
 Kremer M, Pearson, H E S and Wight S (1937) *J Physiol*, 89 Proc 21  
 Larois A (1937) *C R Soc Biol Paris* 125 546  
 Laurent L P E (1935) *British Medical Journal* 1 463  
 — and Walker, M B (1936) *Lancet* 1 1457  
 — and Walther, W W (1935) *Ibid*, 1 1434  
 Leimer W (1931) *Dtsch med Wschr* 57, 2017  
 Lindsley D B (1935) *Brain* 58, 470  
 McGeorge M (1937) *Lancet* 1, 69  
 Minn P J G, Tennenbaum M, and Quastel J H (1938) *Biochem J* 32, 243  
 Morinisco, G, Siger O, and Kleindler, A (1936) *Rev Neurol*, 65 416  
 Matthes K (1930) *J Physiol* 70 338  
 Miller, F R (1937) *Ibid*, 91, 212  
 Minot A S, Dodd, K and Riven S S (1938) *Science* 87, 348  
 Minski L and Stokes, A B (1936) *British Medical Journal* 1 1095  
 Mitchell R S (1937) *New Engl J Med* 216 96  
 Pichler E (1937) *Arch Psychiat Nervenki* 107, 669  
 Plattner F and Hinner A (1930) *Pflügers Arch* 225 19  
 Pritchard E A B (1935) *Lancet* 1 432  
 Riven S S and Mason, M F (1937) *Southern med J* 30, 181  
 Russell, W R, and Stedman E (1936) *Lancet* 2 742  
 Schwitzer, A and Wright S (1937a) *J Physiol* 89, 384  
 — (1937b) *Ibid* 90 310  
 Stedman E and Russell W R (1937) *Biochem J* 31 1987  
 — and Stedman E (1937) *J Physiol* 89 Proc 37  
 Tourneux, J P, Patel and Gouzi (1931) *Presse med* 39 1838  
 Viets H R and Schwab R S (1935) *New Engl J Med* 213 1280  
 — Mitchell R S and Schwab R S (1937) *J Amer med Ass* 109 1956  
 Wade H J (1936) *British Medical Journal* 1 1099  
 Walker M B (1934) *Lancet* 1, 1200  
 — (1935) *Ibid* 2 47  
 Weigand W (1931) *Munch med Wschr* 78 1348  
 Winkelman N W and Moore M T (1937) *Arch Neurol Psychiat* 37 237

## THE UNCONSCIOUS MIND AND MEDICAL PRACTICE\*

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I shall divide what I have to say here into two groups considerations bearing on the relation between the patient and the doctor, and those concerning the relation between the patient and himself, especially his disease.

Before coming to these topics themselves, however, I must first say something about the meaning of the unconscious mind in general. So immediate is the feeling of our own personality, and so intimate is our first hand acquaintance with our thoughts and emotions, that it is exceedingly hard to bring home to oneself the idea that all this self-knowledge is only very partial, that the most important part of our conscious mind is merely a selection of what has been allowed to filter through from the unconscious mind, the primary fount of all our mental processes. Now what is this unconscious mind to which so much significance is nowadays attached since Freud's epoch making discovery of it? To begin with, it represents our inborn instincts as they first manifest themselves in the dawning mind of the infant. But these never develop smoothly, as they seem to do with other animals. It is plain that in the past 50,000 years there have been brought about many extensive changes and modifications, it not in our inborn instincts themselves certainly in the adult expression of them. The difficulties we perceive in the early mental development of the individual must be related to the fact that most of these extensive changes that the race took 50,000 years to accept have to be hurriedly recapitulated in the individual in the short space of five years.

In the contact between these instincts and the outer world, and perhaps for more intrinsic reasons, difficulties and conflicts arise from the start. The apprehending of outer reality is for long preceded by a period in which the mind is ruled by fantasy, and fantasy of such a grotesque and exaggerated nature as to seem quite incredible to our conscious mind. This is one feature of the unconscious that makes it so hard to believe in the reality of its manifestations and still harder to take them seriously enough to appreciate their grim significance.

## Defensive Mechanisms

This phase of development is dominated by the problem of what in psychopathology is termed 'anxiety,' doubtless an expression of the remarkable activity on the part of the fear instinct. The majority of the mental changes that go on at this time consist of the building up of a large variety of defences against anxiety, and these defences, or 'mental mechanisms,' play an extremely important part throughout later life. Let me illustrate these at this point by a simple example—the reciprocal process of introjection and projection. When the infant's mind is terrified at feeling something bad painful and dangerous inside itself or its body, it often responds by seeking to take in something it conceives to be good and helpful from another person so as to assuage or neutralize the bad thing. I purposely say this since the primitive mind never works in abstract terms, such as 'evil impulse' etc. but always in concrete physical ones. Thus when a kind mother reassures a frightened child he does

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J T Ingram (*Brit J Derm Syph* February 1938) differentiates simple eczematous scosis from seborrhoeic scosis. The former is a staphylococcal dermatosis of external origin responding readily to caudal X-ray and U.V. therapy; the latter is an intractable skin manifestation of a complicated medical condition. Seborrhoeic scosis affects the beard and upper lip and is associated with the seborrhoeic diathesis, dyspepsia and septic foci particularly in nose and mouth. The treatment is that of the septic foci and of malnutrition if present with restriction of fluids and carbohydrates; the application of malachite green paint night and morning andomentations to remove the scabs. X-ray therapy may be necessary for the worst cases.

net feel that she has given him love with which to allay his terrors but an actual part of her body, milk or flesh which he feels to be good, helpful and strong. This attitude of taking in or absorbing something from another person so that it is then felt to be a part of oneself is what we mean by the word introjection. Projection is the reverse process. Here the mind deals with the bad thing by denying the possession of it and ascribing it to another person. I recently came across a pathetic example of this and am sure you have all met with somewhat similar ones. A man was dying of a very painful cancer and was being given some relief by means of large doses of morphine. In a state of drug delirium he imagined it was his nurse who had the dread disease and he uttered the most heartfelt expressions of sympathy and pity for her sufferings. Here in a critical hour the mechanism of projection succeeded perfectly in extruding from his personality all sensation of pain and distress on the condition however that his unavoidable perception of them was deflected towards the outer world.

When these defensive mechanisms function imperfectly or break down then the underlying anxiety breaks through. Else there is mental pain—that is suffering. I put at the outset these matters of anxiety and suffering with the defences against them in the foreground because I think this is the most instructive point of view from which to regard the various problems of psychopathology in general and I will add even those of the psychology of the so-called normal as well.

Some of the defensive mechanisms are when extensively employed characteristic of the psychoneuroses others of the psychoses. Neuroses and psychoses may become manifest giving rise to specific symptoms or they may show themselves more indirectly by producing what we call neurotic or psychotic character traits. In my opinion evidence of one or other of these conditions is to be found in every human being and commonly enough all of them it is simply a matter of degree. Now we know that in childhood the occurrence of manifest neurosis is universal: there is no child who escapes suffering from one or other of the familiar symptoms of night terrors, food phobias, and so on. What has only recently been appreciated is the extent to which still younger children—in the first two or three years of life—are affected by mental mechanisms especially characteristic of the psychoses. It would be inaccurate—or at all events loose language—to describe this as some authors have done as a psychotic stage of development. But one can at least say that in these phases the infant is more or less dominated by fantasies and convictions of a kind that were we to encounter them in the adult would have to be called insane delusions. Many years ago a Dutch psychoanalyst Starcke startled us by asserting that the mentality of the normal is built on a psychotic basis. Nowadays unfortunately, the sight of the world is such as to make this assertion less obviously absurd even to others than psychologists. There seems to be little doubt that there are temporal fluctuations in the extent to which these underlying mental attitudes shimmer through in social and political forms and that we are at present in a favourable position for observing them.

The grandiose achievements that men of genius have in all ages encompassed in the spheres of art of thought and of science cannot but bring inspiring and elevating reflections to any contemplative mind. The sense of wonder is vastly heightened when one admits what formidable difficulties human beings encounter in the course of their development, and what an unstable basis most of

them have to build on. It is extremely instructive to examine from this point of view the various institutions of civilization such as that of marriage of religion of class and caste and—last but not least—the numerous political theories and devices of government. Such a study reveals both how complex are the methods by which man seeks to fortify himself against his inner weakness and also how ingenious are the ways in which he has socialized those defences.

We must now withdraw from these spacious perspectives and concentrate on the more purely clinical topics before us. I alluded to them only to indicate that we are concerned here with fundamental problems of human biology of which neurotic troubles constitute only one aspect I should have said. Only a minor aspect were it not for the important fact that we owe to the neuroses through their greater perspicuity and accessibility the most fruitful approach to the deeper problems of human nature. Much of the interest of psychopathology proceeds from this consideration.

### Medical Neglect of Psychology

When psychological factors play such a large part in medical practice it is astonishing how little attention is devoted to them in medical circles and in the medical curriculum. It is of course very hard to estimate in precise figures the proportion of ill health that may be ascribed to psychological disorder. A distinguished physician recently gave as his opinion that it is as high as 80 per cent. but such an estimate certainly needs closer definition. I do not know what proportion of the populace is considered to be in completely perfect physical health. I should suppose it to be a rather small minority, but I am sure that those in perfect mental health constitute a much smaller minority. Most patients therefore who seek medical advice present a varying combination of both mental and physical troubles. Let us look at the matter in a different way for a moment. We know that the actual distress of which a patient complains often bears no close correlation to the illness which the physician thinks necessary to treat especially since his bias must for many reasons be heavily in favour of treating the physical condition rather than the mental. There is no doubt that a much higher percentage of the patient's complaints are psychological in nature than the diagnoses made by physicians would indicate. Not that this would necessarily signify their greater importance. The relative importance is something that has to be judged in each case. If a patient with a cancer presents also some neurotic manifestations we go straight for the cancer. On the other hand the fact that a severe and crippling neurosis may be accompanied by some slight bodily disturbance such as indigestion does not mean that the latter should necessarily claim precedence in therapeutic attention. The rarely attained ideal would be that judgment should be passed by someone equipped to estimate the significance of both mental and physical factors. At present the mental causes of ill-health are pitifully neglected the attention paid to them being infinitesimal in comparison with that devoted to the physical causes.

A great many reasons are given for this state of affairs most of which contain some truth—the difficulty of acquiring an adequate knowledge of medical psychology and of applying psychotherapeutic methods the apparent contradictions and obscurities in medico psychological writings, the time needed for dealing with neurotic patients and so on. It is little wonder that medicine has always hoped to evade these tasks by discovering a remediable physical

'basis for neurotic suffering, and that it clutches at every hint endocrine or other, in this direction. This seems to me to be an attitude that combines an undue optimism with an undue pessimism. It is partly based on an over-medical view of psychoneurosis being a 'disease' in the ordinary sense, the social and biological aspects not being taken into account. It is easy to see the point if one considers examples from other fields, examples that are more than analogies. Among the many problems that civilization has to deal with one may instance social conflicts, criminality, education, and the risks of distress and destruction due to the unsatisfactory uses that many ruling politicians make of their reasoning powers. Now it is no doubt arguable from a medical point of view that the difficulties I allude to are ultimately due to lesions in the brain or malfunctioning of the ductless glands. But to sit down and wait until these somatic causes are discovered, and—what is by no means the same thing—efficacious remedies found for them, would seem to be both a policy of despair and a dream of hopefulness. A teacher who adopted any such attitude about those of his pupils who were slow at learning French or coping with arithmetic would soon be dismissed from his school on the ground that he was lazily seeking excuses to evade his duty of finding psychological solutions for the difficulties in question. It may well be that in the future we shall regard the present-day attitude of the medical profession towards psychoneurotic difficulties as similarly misplaced.

No, the real reason for the medical neglect of psychology is, in my opinion, a very simple one. It is that, just as their patients physicians too are human beings. And by that I mean that, without in the least being aware of it, they shrink from the unconscious mind and have built up their life on the basis of more or less successful protections against it. The dark fantasies and fierce impulses and dread fears of the unconscious, carefully repressed from consciousness, are completely unknown, at the most some distant issue of them, such as irritability, insomnia, intolerance, etc., may be perceived. Anything that tends to draw one, however slightly nearer to the unconscious is automatically avoided, and the position of security is fortified by so called practical matter-of-fact attitudes or by any other means that may present themselves. There is no reason for supposing that members of the medical profession differ from the rest of the community in all this.

### The "Nightmare" Phenomenon

The only remark one might add is that one particular mode of defence offers itself to them with greater readiness than to other people. I mean the chance of displacing or projecting mental phenomena on to the somatic sphere. I will quote a classic example of this, which I have studied in great detail (Jones, 1931)—namely, the phenomenon called 'nightmare'. Actually this is an expression of a violent conflict between a certain unconscious sexual desire and intense fear, the admixture of these two components is infinitely varied, so that all transitions are found between the simple erotic dream, the anxious dream with seminal emission and the pure fear dream. Until a couple of centuries ago the world saw in these manifestations the action of lecherous demons who indeed often appear in the dream in various guises. It represented an important advance in thought when a scientific age sought for a more naturalistic explanation and contested the popular belief in devils, demons and witches. But if ever there was a case of emptying the baby out with the bath water it was here. Medical thought discarded not only the

fancied demons but also the sexual conflict that was the essential cause and they did this by taking full advantage of their readiest projection mechanism—somatic attribution. From now on nocturnal emissions were attributed to physical tension in the seminal vesicles, prostatic or urinary pressure, and the like, while nightmares were put down to gastric pressure on the heart, intestinal toxæmia, and a large variety of other processes implicating every system of the body. In this we safely get far away from the frightful struggle between incestuous desire and castration fear that provides the actual dynamics of the phenomena. The mediaeval writers, with their insistence on the personal sexual wishes as the causative agent, were perhaps after all nearer to the truth than modern physicians. Both used projections, on to demons or somatic processes respectively, but at least the earlier writers retained a hold on the psychological and sexual nature of the phenomenon which was lost in the later medical projection.

This historical excursus will also serve to illustrate a momentous consideration to which I wish to draw special attention. It is that in medical practice we are concerned not alone with the patient's unconscious mind, with its incalculable influence on the clinical situation, but also with that of the physician. Most of all, perhaps, we are concerned with the subtle and extensive interaction of the two. On the physician's side this produces its effect not merely in the practical handling and treatment of individual patients, but in what is possibly an even more important sphere—that of diagnosis and pathology, particularly aetiology. It will, however, be easier to expound this theme after we have considered the various attitudes the patient's unconscious displays towards disease and therefore to the person treating that disease. I will next take these two topics in order: the influence of the patient's unconscious on his relation to himself (including any disease present) and on his relation to the physician.

### Influence of the Patient's Unconscious

The first of these two topics naturally divides itself into the problem of neurosis itself and the attitude of the patient's unconscious to physical disease. To understand the latter one must have some knowledge of the former. There are fortunately many descriptions of the psychopathology of neurosis now available (Deutsch, 1932; Freud, 1929; Jones, 1938; Mitchell 1921; Stephen, 1933), and I shall confine myself here to emphasizing certain fundamental features of the condition. First of all, neurotic manifestations do not themselves constitute a disorder except in a purely clinical and descriptive sense, actually they are only the visible symptoms or signs of an underlying disorder, just as jaundice is a sign of hepatic disturbance. They result from an excessive inner tension which has been provoked by some intolerable thwarting or privation. The tension itself proceeds from an unresolved conflict which has often been stirred to fresh activity by some current situation. They express in a variously disguised way both sides of this conflict and thus are always what may be termed *compromise formations*. In the conflict the important elements are sexuality, aggression, fear, and love but these are involved in such an extraordinarily complicated fashion that one cannot describe the two sides of the conflict in any simple terms.

These four or five sentences state in an exceedingly condensed form the most essential basis of our knowledge about the meaning of psychoneuroses but it is a basis that has been reached only as the result of extremely detailed studies of the characteristic unconscious

mechanisms that determine the structure of such formations, and the state of affairs is actually much more complex than I have just indicated. Let us look at it in another way. Thwarted and repressed impulses provide the active dynamic urge that starts everything going. These meet with opposition from other instinctive attitudes and the conflict generates first fear then mental pain and misery. This is the disorder itself, but then there comes into play a whole series of defences, one or two of which I mentioned earlier, and the manifest neurosis is the result. It is really the resultant combination of all the factors containing elements from each one of them. It expresses therefore something of the primary repressed impulse, something of the resulting anxiety and distress, and something of the defensive attitudes. The proportion of these varies considerably in different cases. In one the gratification of the repressed wishes is prominent so that the neurosis brings unmistakably positive advantages to the patient who is correspondingly loath to renounce it. In another the anxiety breaks through and dominates the clinical situation either directly or in the form of protective phobias. In yet another case the defensive mechanisms play the largest part and then the clinical type is apt to assume the form of what we call a character neurosis.

#### Factors in Neurosis Formation

It is important to distinguish between the current and the essential factors in neurosis formation just as it is to distinguish between the exciting and essential causes of tuberculosis or heart disease. In the aetiology of neurosis we commonly though by no means always find current factors such as overwork, over excitement, privation, grief, misfortune. Yet none of these can by itself produce a neurosis. It evokes one only if certain specific conditions are present in the unconscious—namely a serious unresolved conflict dating from childhood, one with which the current factors can become associated. The process set up is what we call regression. The emotional responses reanimate the older ones and revert to an older type. This is the reason why a real cure of any neurosis necessitates the exposure of the essential childhood basis and the resolving of conflicts then left in an unsatisfactory state.

The central content of the repressed impulses may be summed up in two words: incest and murder. When we reflect that these refer to loved parents, that bitter hostility has to fight against the strongest feelings of dependence and affection it is not astonishing that no easy solution can be found. On the physical side also there are many bewildering ideas with which the young child has to grapple: the problems of cleanliness, clashing with the extraordinary significance that excretory processes have for the infant, the instinctive knowledge of coitus with the unknown dangers accompanying the idea of penetration, the sex differences with their implication of castration. Small wonder that no child escapes an infantile neurosis, tantrums, fears, eating difficulties, destructive and other manifestations which every adult does his best to discount.

If a neurosis proceeds successfully to its logical extreme it ends in a state of inhibition more or less extensive according to the severity of the conflict. It seems plain that the function of a neurosis is on the one hand to retain in an unaltered infantile form certain repressed impulses, and on the other to keep at bay the anxiety and distress that these impulses are prone to bring in their train. It is often very remarkable what extensive inhibitions people will bear before they consider them as

symptoms and seek for therapeutic help. Permanent sexual frigidity or a sexual perversion that confines gratification to the narrowest possibilities, the crippling effects of a phobia that may forbid all social life or even going out of doors (as with an agoraphobia), these and many similar restrictions are cheerfully borne if only the impulses and dread they cover are thereby successfully kept out of sight and never enter consciousness.

#### The Patient's Attitude towards Treatment

These considerations about the nature of neuroses enable us to understand a prominent and peculiar feature in the patient's attitude towards therapeutic help. It is of course common enough with physical disorders for there to be a conflict between patient and doctor over the question of what is to be treated. The patient naturally wishes to be relieved of whatever symptoms are giving him distress, while the doctor is more concerned with abolishing the cause of the symptoms than with merely alleviating them. No doubt the actual treatment will vary with the strictness of the doctor's professional code of ethics, since it is undoubtedly easier to fall in with the patient's wishes and alleviate the symptoms than to insist on giving him the trouble of having the underlying causes investigated and dealt with. Still there is no doubt about what the medical attitude ought to be in such a situation, even if in practice doctors sometimes depart from it. Now with the neuroses the conflict between doctor and patient is much sharper. It must be very rare in organic disease for no wish for cure to exist in the patient's mind, but with neuroses this state of affairs is the rule. One may say that they constitute the only condition where the patient comes for help to sustain the disease and resists every effort to cure it.

To give up a neurosis would signify to the neurotic mind which has not been able to encompass any alternative to surrender certain cherished wishes and also since this is inherently unthinkable to dispense with the only protection it knows against the accompanying anxiety and mental misery. When a person is disturbed by neurotic symptoms his distress is only in part due to the painful effect of the symptoms themselves. What disturbs him far more is the inner feeling that his defensive systems are beginning to break down, which is indeed what the presence of manifest symptoms means. What brings him for help is his need to strengthen and reinforce these defences—that is the neurosis itself.

This curious situation is further complicated by an even more peculiar feature—one which leads to a unique problem in therapeutics. With organic disease one can reckon not only on the patient for some will towards cure, but still more so on the part of the doctor, unless he panders to the patient's preference for the alleviation of symptoms, his whole attitude is in favour of curing the condition. Now with the neuroses it is different. Here also there is agreement between doctor and patient, but unfortunately this time in the opposite direction—namely, of avoiding a cure. In a certain very important sense doctor and patient are psychologically in a similar position. Both have had to fight against their unconscious tears and to build up various complicated defences against them in the course of their early development. Both therefore show the strongest disinclination to open up these defences and expose the repressed material behind them. It is far easier to turn the other way to discount or deny the significance of any signs of underlying emotions, to get away as far as possible from them to strengthen and encourage what is called the will power. This is of course what the patient in particular wants, since it is

the only way he knows of to combat the neurotic affliction. And, with one single exception, this also has been the aim, avowed or otherwise, of all the various methods of psychotherapy from the beginning of medical history.

### Psycho-analysis

The exception is, of course, psycho-analysis. And by psycho-analysis I mean *real* psycho-analysis, not the strange things that nowadays often pass by that name. The aim of psycho-analysis is in exactly the opposite direction to that of other forms of psychotherapy. It is to uncover and resolve the conflicts that underlie the whole neurosis. In this way it strengthens the ego, including the "will-power," not by the method of direct encouragement which has such palpable limitations but by diminishing the unconscious anxieties that are the real cause of its weakness.

This procedure, however, cannot be carried out except by someone who is prepared to face calmly the contents of his own unconscious mind, and who has had the personal experience of resolving the conflicts and anxieties in it. Without this his endeavours to help his patients would constantly be thwarted, unknown to him, by the powerful inner forces making for the opposite solution to the analytic one. At first sight no doubt it seems strange to ask that a doctor should have to undergo the same treatment as that which he proposes to employ with his patients. In no other branch of medicine is such a thing thought of. When it happens, as for instance with pulmonary tuberculosis, then certain advantages are perceived—the doctor is perhaps better able to appreciate the difficulties of the regime—but no one would dream of suggesting that the staff of a sanatorium must necessarily be tuberculous. With psycho-analysis, however, the whole situation is radically different. The very tool the analyst employs in the treatment is his own unconscious mind, and if this is not clear, perspicuous, and able to function quite smoothly he would be in the position of a histologist using a rusty and muddy microscope—everything would be distorted by artefacts.

### Relation between the Unconscious Mind and Organic Disease

I should like now to say something about the relation between the unconscious mind and organic disease. Bodily processes are of the greatest interest to the mind, and especially so to its primitive infantile, and unconscious layers. They are therefore one of the commonest ways by which unconscious mental attitudes find expression. We are very familiar with some forms of this—for instance, in conversion hysteria, where an unbearable loathing may express itself as chronic vomiting, or a wish to expel imaginary poison may lead to chronic colitis. But it is certain that the effects of unconscious attitudes go far beyond this, and it is at present impossible to set limits to our knowledge concerning the extent to which they may influence bodily processes. It is, for instance, probable that the greater part of ordinary dyspepsia takes its origin in this way. Much work in this direction has recently been done on very varied conditions ranging from asthma and thyroid syndromes to duodenal ulcer.

Where on the other hand the organic disorder is essentially of physical origin we still have the question of how the mind reacts towards it since this may not only influence the patient's attitude to treatment but may also exacerbate the physical condition itself or complicate it by the addition of neurotic symptoms. The unconscious invariably interprets every physical illness as a personal

attack, which it colours with a projection of its own aggressivity. In other words, someone has either malevolently or sadistically assaulted the person. This, it is felt, is equivalent to introducing a bad poisonous material that will corrode all that is good within, will exhaust and drain vital material, and prevent the acquiring of beneficial sustenance. The unconscious then conceives of help in coping with the invasion in one of two ways: the doctor is either to offer something good that will neutralize the malevolent foreign body or to display a violence greater than this. We are familiar with these two broad types of treatment, psychologically regarded, and perhaps also with corresponding types of doctor. The one is illustrated by a soothing cough medicine or a gentle manipulative massage, the other by most medicines or by surgical operations. I say "most medicines," for it is a familiar experience that a medicine with a pleasant taste is apt to be suspected of impotency.

There are three features in organic disease that are prone to activate a latent neurosis. In the first place every form of injury or illness signifies privation or deprivation in one form or another, whether it be interference with sleep, with freedom of movement, of eating, of working, or of other activities. Now, as I remarked earlier, privation is the characteristic starting-point for all neuroses. It sets in action the typical mechanisms of regression back to infantile fantasies and wish-fulfilments with all the symbolism and disguises that clothe neurotic processes. With the details of these we are not here concerned.

In the second place the unconscious invariably responds to any kind of physical illness or injury by generating anxiety. Some of this is of course conscious, but much more is unconscious. We know that one of the two main functions of every neurosis is to provide a barrier or support against unconscious anxiety, so that is a second way in which organic disorders stimulate any latent neurosis.

Finally, most physical illness causes either pain or some other kind of suffering, and thus provides material for the various tendencies in the unconscious that seek for suffering. This search for suffering is perhaps the most remarkable trait in human nature, being so paradoxically anti-biological, but it is hardly possible to exaggerate its importance psychologically, and even the most experienced of us are constantly being surprised by its power and range. It has several sources. There is the curious component of the sexual instinct called masochism, which is far more subtle and widespread than is commonly thought. Then there is the tendency to self-punishment which plays a large part not only in neuroses but in everyday psychology. It comes from the fact that an important part of the conscience is itself unconscious, and that part is far more primitive and ruthless than the conscious part with which we are familiar, though of course even the latter can at times inflict considerable suffering and pain by remorse. Most subtle and dangerous of all, however, is the tendency of the mind, from fear and other motives, to turn its repressed aggressive impulses against itself instead of against the outer world. Suicide is of course its extreme form, but it has a thousand other manifestations. It is a motive that has always to be watched for, since in both neurosis and organic disorder it may succeed in baffling the most skilled therapeutic efforts.

### The Unconscious Mind of the Doctor

I have not time to develop the interesting theme of the ways in which irregular functioning of the unconscious mind of the doctor may interfere with his clinical



judgment in making diagnoses and deciding on treatment but I am persuaded that the potential skill of most doctors is considerably reduced by such aberrant activity. The commonest example is probably the way in which doctors share popular superstitions about the danger of cold air but the grimmest example of all is of course when the patient's death results from such mistakes but short of this I think one could trace more errors in medical practice to unconscious interference with knowledge than to lack of knowledge itself.

### Conclusion

In summing up I would repeat the two main contentions of my paper: that there are few cases in which the unconscious mind of the patient does not play a part in the clinical situation and further that the fact of the doctor possessing an unconscious mind is one the importance of which is commonly overlooked.

### REFERENCES

- Brunh Heere (1932) *Psycho-Analysis of the Nurses* London  
 Freud Sigm. (1929) *Introductory Lectures on Psycho-Analysis* London  
 Jones Ernest (1931) *On the Nature of Health* Pic. London  
 — (1935) *Papers on Psycho-Analysis* 2nd ed. London  
 Mitchell T. W. (1921) *Psycho-Analysis of Medicine* London  
 Sigmund Freud (1933) *Psycho-Analysis and Medicine* Cambridge

## UTERINE RUPTURE FOLLOWING CAESAREAN SECTION

BY

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According to Eardley Holland (1920) 4 per cent of Caesarean scars give way during a subsequent pregnancy or labour. Often this type of rupture is not accompanied by any abnormal signs or symptoms and the surgeon on opening the abdomen to perform a second section is amazed to find a bulging sac of liquor amnii protruding through the old scar. At other times the clinical picture is one of shock or haemorrhage. None of these cases however resemble the ordinary type of uterine rupture which so often occurs as a terminal event in cases of obstructed labour and is described in the obstetrical textbooks.

Many cases of rupture of the uterus following a previous Caesarean section have been reported and the condition may give rise to a perplexing and bewildering variety of signs and symptoms. An attempt is here made to classify this type of uterine rupture into five groups, with the object of facilitating its diagnosis.

### Group I

In this group the rupture occurs through an old upper segment incision and the placenta is situated away from the uterine scar. This is a common type.

Mrs. A., a woman who came under my care at St. Mary's Hospital, Manchester, belonged to this group. This patient was admitted to hospital during the last month of her first pregnancy. Her diagonal conjugate was estimated to be 9 inches and her interspinous and intercrural measurements were 9 and 9½ inches respectively. As the head showed no signs of entering the pelvis a medicinal induction was attempted. She did not tolerate the quinine however so drugs were discontinued and the patient was allowed to start labour spontaneously. Trial of labour was unsuccessful and I delivered her by Caesarean section twenty-three hours

after the onset of the pains. The classical operation was performed and the uterus sutured with two layers of interrupted catgut, an additional continuous suture being used for the peritoneum. She had a febrile puerperium the temperature reaching 101° on several occasions between the second and the fourteenth day after operation. She was discharged from hospital on the twenty-second day in a satisfactory condition.

In 1936 she became pregnant again. During this second pregnancy the head never showed any sign of entering the pelvis; it was extremely mobile and rode high above the inlet. It was often palpable in one or other iliac fossa. Towards the end of the pregnancy "overlap" could be demonstrated if the head were pushed over the pelvic inlet and pressure applied to the fundus of the uterus. As the patient had had a very fair trial of labour with her previous child and as this second infant showed no signs of engaging in the pelvic cavity it was decided to perform another Caesarean section.

We arranged to admit her into hospital on July 20 but on the morning of this same day she came in as an emergency. On being questioned she told us that she had been in labour fourteen hours before reporting at the hospital. The pains she said had been very bad most of the time but their severity had diminished and they had been less regular during the last one and a half hours. Her general condition was very good. The pulse was 80 and the blood pressure 120/80. She was having pains but they were rather irregular and niggling in character. Immediate Caesarean section was considered advisable.

On opening the abdomen I was very much surprised to find that the scar of my previous operation had given way along two inches of its length. An intact bag of membranes was bulging through the aperture. The rest of the scar which was a fibrous one was thinned out and appeared to be on the point of bursting. The placenta was situated on the posterior wall of the uterus and was nowhere near the scar.

This case impressed me very much by its lack of signs and symptoms. Many similar cases are to be found in the literature. Occasionally the bulging sac of liquor has been palpated through the abdominal wall (Casagrande 1933). Sometimes foetal limbs have been recognized protruding through into the sac. These splits are often only discovered at operation. Prognosis is good when proper treatment can be administered.

### CHARACTERISTICS OF GROUP I

- 1 Rupture tends to take place during labour.
- 2 Little or no haemorrhage occurs and therefore the pulse remains good.
- 3 The pains may become niggling in type after the scar has started to give way.
- 4 The bulging bag of membranes may sometimes be palpated through the abdominal wall.
- 5 Prognosis is good provided that suitable treatment is available.

### Group II

Group II consists of cases in which the rupture occurs through an upper segment incision and the placenta is situated underneath the old scar. This type of case is more serious and presents a different clinical picture. When the placenta is situated underneath the old scar a gradual erosion of fibrous tissue by the placental villi occurs (Hornung 1929). This erosion is an insidious one and may cause marked attenuation of the scar during the latter part of pregnancy. In this type of case therefore rupture is said to be more liable to occur before the onset of labour. The eating away of the scar may be associated with vague pains in the lower abdomen (Potter 1930). As the process is gradual haemorrhage is seldom severe.



until the onset of labour, when the uterine wall is pulled away from the placenta and the sinuses are left gaping

A good example of this type is mentioned by Holland (1920). In his case the first Caesarean section was performed in 1914 for contracted pelvis. In August 1915 the patient was readmitted to hospital. She was pale, and the pulse was 120 and of poor volume. A diagnosis of concealed accidental haemorrhage was made. On opening the abdomen it was found that the old scar had ruptured along one and a half inches of its length. Placental tissue protruded through the rupture and there were about two pints of blood in the abdominal cavity.

Another typical case has been reported by Casagrande (1933). In this instance the patient had her first Caesarean section at the age of 37. The puerperium was febrile. The second pregnancy terminated in a breech delivery with no complications. With the third pregnancy five days before the expected date of delivery she presented a picture of considerable shock with marked pallor, pale lips and a weak and rapid pulse. On opening the abdomen the placenta was found bulging through the centre of the scar. There was a considerable amount of blood in the abdominal cavity.

#### CHARACTERISTICS OF GROUP II

1 Gradual rupture tends to occur towards the end of pregnancy. This may be accompanied by vague pain in the lower abdomen. Such pain should therefore never be ignored.

2 After the onset of labour haemorrhage occurs, and may be of considerable severity.

3 Prognosis will not be so favourable as in Group I, and will depend very largely on the amount of intra abdominal haemorrhage.

#### Group III

In Group III the rupture occurs after a previous lower segment section. Several cases belonging to this group have been reported during recent years. The incidence of subsequent rupture is said to be reduced by using the lower segment technique. I myself feel doubtful about this, as I have seen very attenuated scars in the lower segment.

Mayer (1934) has reported a case of this sort in which operation revealed a very considerable haemorrhage suggestive of a laceration involving one of the uterine arteries. Perez and Tallaferró (1937) also reported a case, but in this instance part of the placenta was attached to the outer wall of the uterus adjacent to the scar, showing that the scar must have given way early in pregnancy. Trillat (1934) considers that these ruptures usually take place during labour and there is an absence of pain. Jager (1931) has recorded a case in which rupture extended into the bladder, causing marked haematuria.

#### CHARACTERISTICS OF GROUP III

1 Rupture is said to take place during labour. There is no very convincing evidence on this point.

2 Haemorrhage may occur, due to the extension of the laceration laterally into the uterine arteries.

3 Rarely the bladder may be involved, giving rise to haematuria.

#### Group IV

Group IV comprises cases in which the rupture is complete through an upper segment incision, and the child, within its bag of membranes, is expelled into the abdominal cavity, the placenta remaining *in situ*. In this type of case the uterine scar gives way along its entire length, the contractions persist and the child is extruded into the abdominal cavity. The foetal heart sounds almost invariably

disappear and foetal movements cease. The physical signs are characteristic. The uterus is felt to be pushed over to one side, and the child, floating in the abdominal cavity, is very easily palpable.

An interesting example of this variety has been described by Tottenham (1931).

This patient developed pneumonia after her first Caesarean section. Labour with the second pregnancy started at midnight. At 8.45 a.m. she was admitted to hospital. She came by tram and walked a distance of a quarter of a mile up a steep incline. On admission the pulse was 80, she was in a very good condition, and the real state of affairs was discovered only on abdominal palpation. Section revealed a foetus lying enclosed in its bag of membranes in the peritoneal cavity. The placenta, in the vicinity of the scar but apparently not underlying it, was in the uterus. There was hardly any bleeding.

#### CHARACTERISTICS OF GROUP IV

- 1 Foetal heart sounds cease as a rule.
- 2 Foetal movements usually stop.
- 3 The uterus is pushed over to one side.
- 4 The foetus, lying free in the abdominal cavity, is easily palpable.

#### Group V

In this group the rupture is complete, through an upper segment incision, and the child, with its placenta, is extruded *in toto* into the abdominal cavity. A case described by Holland (1920) belongs to this group.

This patient had had a Caesarean section performed in March 1914 after she had been in labour over eighteen hours. Convalescence was febrile. In March 1916, when she was readmitted to hospital, spontaneous rupture of the uterus occurred. There was collapse, anaemia, with cessation of pains, and the foetus was very easily palpable. The dead child, the placenta, and much blood were in the peritoneal cavity. The patient made a good recovery.

Potter (1930) stresses that the most dangerous cases from the prognostic point of view belong to this group, and says that this type is usually associated with severe haemorrhage and collapse, and often results in the death of both mother and child. Such cases fortunately are rare.

#### CHARACTERISTICS OF GROUP V

- 1 Often associated with severe intra-abdominal haemorrhage.
- 2 Foetal heart sounds are absent.
- 3 Foetal movements are absent.
- 4 The uterus is pushed over to one side.
- 5 The foetus, lying free in the abdominal cavity, is easily palpable.

#### Conclusion

All patients who have been subjected to Caesarean section should have subsequent confinements under skilled supervision and within access of a fully equipped operating theatre. If the indication for a second Caesarean is absolute, then the operation should be performed either during the last week of pregnancy or at the onset of labour. Unnecessary delay in these cases can do no good, and may be the cause of rupture of the scar with its attendant dangers. Should the first Caesarean have been performed for any condition other than gross pelvic contraction, such as placenta praevia, minor degrees of contraction, etc., and should it be considered advisable to allow a trial of labour with a subsequent child, then the patient must be under the closest supervision not only

during labour but also during the latter part of pregnancy. Any abnormal symptom, particularly that of lower abdominal pain, must be regarded with suspicion.

### Summary

Rupture of the uterus during a subsequent pregnancy or labour is not uncommon in those who have undergone Caesarean section. This type of rupture has been divided into five groups and the characteristics of each group briefly indicated.

My thanks are due to Dr F. Lacey for permission to quote the case of Mrs. A. under Group I.

### REFERENCES

- Casagrande J (1933) *Amer J Obstet Gynec* 20 273  
 Holland E (1920) *Proc Roy Soc Med Sect Obstet and Gynaec* 14 22  
 Horowitz R (1931) *J Czechoslov Gynec* 95 50  
 J. J. K. (1931) *Lancet* 55 94  
 Mayr M (1934) *Bull Soc Obstet Gynec Paris* 23 43  
 Pezz M L and Tallaferrro F (1937) *Gynec et Obstet* 35 257  
 Platt I W (1930) *Amer J Obstet Gynec* 19 253  
 Totham R E (1931) *J Obstet Gynec Brit Emp* 38 551  
 Tinsley M (1934) *Bull Soc Obstet Gynec Paris* 23 276

## THE NERVOUS COMPLICATIONS OF MEASLES

BY

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Nervous complications are recognized to follow most of the exanthemata and the incidence is probably highest after measles. Boenheim (1925) gives the incidence in Berlin as 0.4 per cent, and this may not be considered an over-estimate if we remember that as well as the severe cases which impress so much as to be included in the literature, we must also include the minor cases of mere drowsiness or slight meningeal irritation.

### Pathology

This has been studied by Wohlwill (1928), Ferraro and Schaffer (1931) and Greenfield (1929). The last named has summarized the abnormalities to be found in the central nervous system under three headings: (1) congestion and haemorrhage; (2) perivascular infiltration; (3) perivascular demyelination. The pathological findings appear to be identical with those occurring in post-vaccinal encephalitis and in the forms of encephalitis following certain other acute fevers (as for example mumps and chicken pox); it has therefore been suggested, especially by Greenfield, that the post-vaccinal and other forms of encephalitis which follow eruptive fevers are not directly due to the virus of the preceding fever but to another independent virus which is either stimulated to activity or is directed against the nervous system by the exanthem. The phenomenon of demyelination also occurs in disseminated sclerosis and Schilder's disease, and it is possible that there is some connection between them. The changes in the cerebrospinal fluid are variable. There is usually a moderate increase in the cells, mainly lymphocytes, up to about 200 per cmm. The protein may also be increased.

### Clinical Manifestations

These have been summarized by Ford (1928) who collected most of the authentic cases in the literature and added twelve of his own. He distinguishes six groups—

1. Mild and Transient Diffuse Cerebral Symptoms—These include stupor, headache, vomiting and possibly

even convulsions. There may be a suggestion of meningism but the symptoms point to involvement of the brain rather than the meninges and to a general toxic effect rather than local inflammatory damage. These cases may recover completely or may pass into one of the further groups.

2. Multiple Focal or Diffuse Lesions of the Nervous System—The accompanying physical signs include spastic weakness of the extremities, tremor, choreic or athetoid movements, aphasia or ataxia, or the condition may simulate either tuberculous meningitis or epidemic encephalitis.

3. A group of single focal cerebral lesions, aphasia or hemiplegia being the commonest symptoms.

4. Cerebellar Syndromes of Varying Degrees of Severity—There may be localized or generalized ataxia, intention tremor, loss of muscle tone, slow or scanning speech and nystagmus.

5. Paraplegia and Spinal Cord Syndromes—An acute ascending paralysis may occur.

6. Other nervous complications—for example toxic psychoses and papilloedema.

The whole series of Ford's cases yield a mortality of about 10 per cent, which compares favourably with the mortality of 55 per cent in post-vaccinal encephalitis in the English epidemic of 1922-3. About 60 per cent of the survivors showed residual symptoms, such as weakness, ataxia, mental defect or personality change. The time of occurrence of the nervous symptoms was extremely variable; they might appear as early as the height of the fever or even in the prodromal period or as late as a month afterwards. The commonest times were on the third, fourth or fifth day of the exanthem and between the tenth and twentieth days of convalescence. As might be expected, the incidence was mainly in childhood, following the much higher incidence of measles at this period.

### Case Report

The following case is an example of the post-febrile variety of measles encephalitis.

The patient was a married woman aged 31 with two children aged 6 and 3. The elder child was taken ill on August 26, 1936, and when seen by his doctor on the 29th presented a typical mild attack of measles from which he made a good recovery. The younger child became ill on September 3. His rash did not appear till the 14th, six days later. He also made a good recovery.

On September 21 the mother complained of headache, malaise and aching pains in the limbs; there was some coryza. The doctor saw her on the 23rd; her temperature was then 101° F. there was no rash and no Koplik's spots were seen. In spite of this measles was still suspected as she had not previously had an attack. Her main complaint was of cough, but no physical signs were found in the chest. She had definite photophobia, preferring the blinds down. On September 27 two or three Koplik's spots were found and the diagnosis seemed certain. No rash, however, developed; a temperature of between 100° and 103° F. persisted together with the cough, which was associated with no physical signs until October 3, when there were moist sounds at the left base.

On October 5 she was admitted to Addenbrooke's Hospital, Cambridge, under the care of Dr C. H. Whittle. She was then mentally depressed and looked ill, with slight cyanosis and an increased respiration rate. The only physical signs were in the lungs posteriorly, low down between the scapulae, where there was impairment of note with bronchial breathing and fine rales. Her condition improved and by October 8 there were no physical signs; her temperature was normal and a radiograph of her lungs showed no lesion.

At about this time she became euphoric and her depression departed, it was also noticed that her speech was becoming slurred. On October 11 slurring was more pronounced, and she volunteered the statement that she saw double on looking to the left. On examination her pupils reacted to light and accommodation but the left pupil reaction was not sustained. There was no ptosis and no abnormalities of the cranial nerves were detected except for weakness of both sixth nerves, especially the left. There was no weakness or altered sensation of the limbs but all tendon reflexes were exaggerated, the plantar responses were equivocal. The fundi showed some blurring of the disk margins—about the same on both sides.

**October 14**—Lumbar puncture was performed. The fluid was not under increased pressure; it was contaminated by blood and so useless for further tests.

**October 16**—The patient started vomiting, and did so several times daily for the next three days, the vomiting being unaccompanied by nausea.

**October 19**—Speech was still slurred and there was marked euphoria. Slight facial weakness was observed on the left side only. The disks were still slightly blurred. There was intention tremor of both hands more on the right, and dysidiadokokinesis of the right hand, with past-pointing to the right. The tendon reflexes were exaggerated, abdominal reflexes were absent on the left and weak on the right.

**October 26**—The weakness of face and alteration of reflexes were much less marked. There was nystagmus coarse and horizontal on looking to the left, finer and vertical on looking to the right. There had been very marked mental weakness with delusions and hallucinations, during the preceding days, but this had slightly improved.

**October 30**—Her speech had now become more articulate and lower in pitch and her appearance was more that of a normal woman. Practically all physical signs had disappeared, except intention tremor on the right and some nystagmus on looking to that side.

**November 17**—She was at this date discharged quite well, having been able to walk and to look after herself for over a week.

#### AFTER HISTORY

**November 26 1937**—A little more than a year after her discharge the patient attended the follow-up department. She had been very well and fit in every way, both mentally and physically, and neither she nor her family had noticed any sequelae. On examination reflexes, tone, power, and sensation were all normal; is were the fundi. There was slight intention tremor more marked on the right hand. Dysidiadokokinesis was present on the right and there was slight horizontal nystagmus on looking to that side. The position sense was normal.

#### Discussion

There would seem to be no doubt at all that this was a case of encephalitis beginning with multiple focal and diffuse lesions, and later concentrating on the cerebellar functions. Fortunately, the sequelae were minimal, affecting cerebellar function only and unaccompanied by mental defect or personality change.

The possible differential diagnosis of acute disseminated sclerosis would seem to be excluded on two counts: first, by the mental symptoms in the acute attack, and, secondly, by the absence of any further development in over a year.

Whether the illness followed an atypical attack of measles without the rash can be less certainly claimed. The existence of these *formes frustes* of measles is well recognized. Box (1937) states: "Some of the mildest attacks are aberrant, the rash failing to appear, and only Koplik's spots giving a clue to the disease." Blackfan (1933) says: "the fever and catarrhal symptoms may follow the usual course with an eruption which is

scanty or atypical. Koplik's spots are found even in the atypical cases." The same period of thirteen days existed between the illness of the first and the second child as between the second child and the mother, while the second child took longer than usual to develop the rash. In both their cases the measles was mild in type. The clinical development of the illness was such that there can be little doubt that it was measles. Koplik's spots were seen, and the chest symptoms and early photophobia were characteristic. Only the rash was lacking.

My thanks are due to Dr C. H. Whittle for permission to publish the case.

#### REFERENCES

- Blackfan, K. D. (1933) *Cecil's Text Book of Medicine* 3rd ed., p. 295.  
Boenheim, F. (1925) *Ergebnisse der Medizinischen Kinderheilkunde* 28, 598.  
Box, C. R. (1937) *Principles of Text Book of Medicine* 5th ed., p. 256, London.  
Ferraro, A., and Schaffer, I. H. (1931) *Arch. Neurol. Psychiat.*, Chicago, 25, 748.  
Ford, F. R. (1928) *Johns Hopk. Hosp. Bull.*, 43, 140.  
Greenfield, J. G. (1929) *Brain*, 52, 171.  
Wohlwill, F. (1928) *Z. ges. Neurol. Psychiat.* 112, 20.

## SULPHANILAMIDE THERAPY IN MENINGOCOCCAL MENINGITIS

### REPORT ON THREE CASES

BY

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The following cases are considered worth reporting in view of the widespread interest in the treatment of meningococcal meningitis by drugs of the sulphanilamide group. Two of these cases were due to a Type I meningococcus, the second is included because, although bacteriological evidence was lacking, the case both clinically and epidemiologically was almost certainly of a similar type. The site of the disease in meningitis is accessible by spinal puncture, and the inflammatory exudate can be seen, estimated, and readily examined by cytological and bacteriological methods in a way that is rarely available in other acute infections.

#### Treatment

1. Prontosil soluble was given intravenously (20 ccm of a 2.5 per cent solution), and this dose was repeated at eight-hour intervals for from two to three days. In addition 1½ grammes of prontosil album were given in the twenty-four hours by mouth. The first two or three intravenous injections were followed almost immediately by vomiting which was not repeated with subsequent injections, apart from this no ill effects were noticed.

2. All prontosil was stopped forty-eight hours after the cerebrospinal fluid became sterile and the cell count had dropped to a fairly low level. Contrary to L. J. Willien's experience this was not followed by a relapse, he continues the drug by the mouth for ten days after the symptoms and laboratory findings have returned to normal.

3. In addition anti-meningococcal serum was given intrathecally twice a day for three days. This is

probably not necessary as I. J. Willien has treated a series of six cases with sulphanilamide alone with excellent results. We feel however that until further experience has been gained in the treatment of this disease with sulphanilamide compounds it is not justifiable to withhold serum. Animal experiments also tend to show, according to Brown that in mice infected with meningococci the administration of both agents simultaneously produced a greater degree of protection than either of the agents by itself.

## Case I

A recruit aged 17 of excellent physique (weight 132 lb) was admitted at night on February 13 1938 in a comatose condition. It was afterwards ascertained that he had felt sick and had vomited the day before. He had remained on duty until lunch time on the 16th when he lay down on his bed and later on was found unconscious. On admission marked neck rigidity and Kernig's sign were present. The diagnosis was confirmed by lumbar puncture, meningococci were seen in the direct smear and a profuse growth of Type I meningococcus was

## PROGRESS IN CASE I

Date	Total White Cell Count	C.S.F. Count	Temp.	Culture	Prontosil Soluble	Prontosil Album Orally	Serum Intrathecally	Serum Intramuscularly
15/2/38	23,000 polymorphs 80 eosinophils 5, 0	20,000 Meningococci 17, 15, 22	101.0	Positive Type I	20 c.cm.		15 c.cm.	10 c.cm.
16/2/38 A.M. P.M.		17,600 8,000	98.6	Sterile	20 c.cm. 20 c.cm.	3 grammes	8 c.cm. 10 c.cm.	
17/2/38 A.M. P.M.	16,000 polymorphs 7 1/2 eosinophils 0	2,100  [60] C.S.F. pressure 1.0 mm.	98.4°	Sterile	10 c.cm.	1 1/2 grammes	10 c.cm.	
18.2.38	12,100 polymorphs 70 eosinophils 0		98.2			1 1/2 grammes	Nil	
19/2.38	5,600		98.4°			Nil	Nil	
20.2.38	10,000 polymorphs 65 eosinophils 14, 3 1/2		98.4			Nil	Nil	

## PROGRESS IN CASE II

Date	Total White Cell Count	C.S.F. Count	Temp.	Culture	Prontosil Soluble	Prontosil Album Orally	Serum Intrathecally	Serum Intramuscularly
22.3.38 P.M.	34,000 polymorphs 57/	10,200 No orgs. seen	100	Sterile	20 c.cm.		10 c.cm.	20 c.cm.
23.3.38 A.M. P.M.		6,000 16,600	102.4	Sterile	20 c.cm. 10 c.cm.	1 1/2 grammes	15 c.cm. 15 c.cm.	
24.3.38 A.M. P.M.		19,600 6,000	100	Sterile	10 c.cm. 20 c.cm. 20 c.cm.	1 1/2 grammes	15 c.cm.	
25.3.38	16,800 polymorphs 71/ eosinophils 1/	6,200	100	Sterile	20 c.cm. 10 c.cm.	1 1/2 grammes	30 c.cm.	
26.3.38	10,000		97.6		Nil		Nil	
27.3.38	9,600 polymorphs 63/		98.4		Nil		Nil	
28.3.38	7,600				Nil		Nil	

## PROGRESS IN CASE III

Date	Total White Cell Count	C.S.F. Count	Temp.	Culture	Prontosil Soluble Intravenously	Prontosil Album	Serum Intrathecally	Serum
23/3/38 A.M. P.M.	24,000	28,000 Meningococci scanty 14,600	103.4	Positive Group I	20 c.cm.  20 c.cm.		15 c.cm.  15 c.cm.	20 c.cm. L.V.  5 c.cm. L.M.
24/3/38 A.M. P.M.		15,000 26,000	101°	Sterile	20 c.cm. 20 c.cm. 20 c.cm.	1 1/2 grammes	10 c.cm. 15 c.cm.	
25/3/38	11,000 polymorphs 77/	8,000	101	Sterile	20 c.cm. 20 c.cm.	1 1/2 grammes	5 c.cm.	
26/3/38	7,400 polymorphs 67/ eosinophils 2/		99°		Nil	Nil	Nil	
27/3/38	7,000		98°			Nil		

obtained on culture. His temperature fell to normal in twenty-four hours and he made an uninterrupted recovery, apart from the usual serum rash.

### Case II

A well built youth, aged 15, weight 119 lb, was admitted on the night of March 22 1938. His temperature was 100.6° on admission. He was completely deaf, but was able to answer written questions and appeared very anxious. There was marked neck rigidity and a positive Kernig sign was present. Auriscopic examination was completely negative, both tympani being intact and normal. An examination of his central nervous system, apart from the involvement of both eighth nerves and a definite papilloedema of the optic disks, was negative. Interrogation later revealed that he had reported sick with a headache on the day of admission and had been treated for nasopharyngitis, and towards evening he suddenly became stone deaf in both ears. He states that there was no tinnitus or vertigo, but as he was in bed the latter might not have been noticed. A turbid cerebrospinal fluid was obtained on lumbar puncture containing 10,200 cells per cmm (95 per cent polymorphonuclears). No organisms were seen in direct smears and all cultures were sterile. The diagnosis of cerebrospinal meningitis with eighth nerve involvement was made on clinical grounds, and treatment was started. He made a complete recovery from his meningitis, but the deafness, which is of a nerve type, persists, although it has improved slightly. On March 30 examination showed a complete nerve deafness of the left side, on the right side a shouted voice could be heard at three feet.

### Case III

A youth aged 16, of average build (weight 124 lb), was admitted at noon on March 23, 1938. His temperature was 103.4°. He complained of intense frontal headache, photophobia, and neck rigidity, an erythematous rash was present on the trunk and upper limbs, with a few scattered petechiae. The diagnosis was confirmed by lumbar puncture, scanty Gram negative diplococci were present in the direct smear, and after forty-eight hours incubation a Type I meningococcus was grown. Apart from a herpes labialis and a serum rash which appeared on the 28th he has made an uninterrupted recovery.

### Comment

Three cases of meningococcal meningitis have been treated with prontosil and anti-meningococcal serum. We were greatly impressed with the rapidity in resolution of the pathological findings in the cerebrospinal fluid, together with the dramatic clinical improvement in the patients' condition, and on comparing these cases with others treated in the past with anti-meningococcal serum alone we feel that the results obtained were largely due to prontosil.

The object of pushing prontosil soluble during the first seventy-two hours is to sterilize the cerebrospinal fluid before morbid changes with their lasting sequelae have time to occur.

In the second case the eighth nerves were already involved when treatment commenced, and an unfavourable prognosis as regards hearing was inevitable.

In view of the American experience it is probably wise to give sodium bicarbonate grain for grain with sulphaniilamide to combat acidosis.

In our opinion the giving of sulphaniilamide intrathecally is unnecessary.

The use of prontosil album orally to combat the carrier problem opens a large field for experiment.

Our thanks are due to Group Captain E. W. Craig, M.C. Officer Commanding Princess Mary's R.A.F. Hospital for his kindness, help and co-operation.

RECEIVED

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## Clinical Memoranda

### Chronic Schizophrenia with Remission following a Spontaneous Epileptiform Seizure

Contrary to the experience of most workers, this case affords yet another example of a cardiazol remission occurring in an advanced case of schizophrenia of some eight years' standing.

The patient, Mrs. X, aged 34, was admitted to Warlingham Park Hospital on April 9, 1931, suffering from schizophrenia of the depressed type of some six months' duration. Prior to admission she had swallowed methylated spirits and said she hoped she would die. When admitted she was notably self-absorbed and evinced little interest in her surroundings, being also indifferent about her dress and personal appearance. Shortly after admission she was described as dull and resistive, having auditory hallucinations and requiring to be fed by tube. Her subsequent history was one of apparent progressive dementia, with faulty habits, complete self-neglect, and impulsive suicidal tendencies extending over years. She became mute, and from time to time exhibited catatonic stuporous tendencies, alternating with periodic excitement. Her physical condition, never robust, deteriorated, as will be seen from the following note dated March 11, 1938.

'She remains physically in poor condition, being emaciated and still losing weight, despite full extra diet. Her weight is now 5 st 2 lb, indicating a loss of 10 lb in the last two months and this without evidence of organic disease, mentally she is restless, excitable, and impulsive continually discarding her clothing, and is both wet and dirty. She will crouch naked in a trivistic attitude, silent, morose, and withdrawn, portraying little evidence of mind.'

On April 12 1938, at 2 p.m., she had a spontaneous epileptiform seizure, a phenomenon unprecedented in her case. The seizure lasted some three minutes and, beyond transient confusion, produced no other mental change that day. During the next two days, however, she showed great mental improvement, becoming relatively accessible, talking rationally though hesitantly, and sitting up in bed knitting. This sudden change in an apparently 'lost' and demented patient was striking enough to call for considerable comment. The improvement was not maintained and within the next few days the patient gradually lapsed into her former state.

On May 3 cardiazol treatment was begun despite her poor physical condition, in the hope of regaining remission by therapeutic convulsions. A dose of 4 ccm of a 10 per cent solution of pentamethylenetetrazol was given intravenously, and produced a typical major epileptic fit. The procedure was repeated on May 9 and the patient showed almost immediate mental improvement, the same evening becoming partially accessible and conversing rationally though with considerable retardation. Since then the treatment has been repeated every third day, the dose at no time having exceeded 5 ccm of the 10 per cent solution. The patient has continued to show marked mental and physical improvement, being indeed scarcely recognizable as the same person. She spontaneously asks to be allowed to assist in the ward, converses brightly and rationally, and writes sensible letters to her relations. She shows every promise of making a good recovery, and her physical improvement is almost equally marked. All faultiness of habit has disappeared, and she now takes pride in her personal appearance. So far she has had nine therapeutic seizures and treatment is still being continued.

An interesting side aspect of this case lies in the fact that her husband, regarding her as hopeless, contemplated divorce proceedings under the new Matrimonial Causes Act. Within the short period of one month the complexion of this case has totally altered, and it affords an instance of the need for extreme caution before finally

adjudging an apparently hopeless case is incurable. The case, moreover, exemplifies Muller's observation (1930) that where epilepsy intervenes in the course of schizophrenia the schizophrenic symptoms tend to remit. This observation following similar observations pointing to a constitutional antagonism between idiopathic epilepsy and schizophrenia made previously by Nyiro and Jablonszky (1929) on the treatment of epilepsy is the rationale of the convulsion therapy which is producing similar brilliant results in certain other forms of mental disorder.

I have to thank Dr. T. P. Rees, medical superintendent for permission to publish this case.

WM H. SHIELLY, M.B. D.P.M.  
Senior Assistant Medical Officer, Warrington  
Park Hospital, Surrey

## REFERENCES

- Muller, G. (1930). Anfaller bei Schizophrenie. *Lichtdruck*.  
Nyiro and Jablonszky (1929). *Orient. H. 11/2*

## Influenzal Meningitis Treated with Soluseptasine and Lumbar Puncture Recovery

In view of the recent literature on this apparently rare condition (*British Medical Journal* 1937 2 797 and *Lancet* 1937 2 1410) another case of influenzal meningitis in an adult with recovery may be described.

## CASE REPORT

The patient, a man 60 years of age and 19½ st. in weight was first seen on October 19 1937 after a few days illness the outstanding features of which were pains in the back and legs, headache, dizziness and intense drowsiness. For a fortnight before taking to bed he was aware of a great desire to sleep on every possible occasion. Apart from this symptom he felt in his usual health.

When examined he was drowsy and so giddy that he could not sit up in bed. He complained of pain in the back and legs and of headache. His temperature was 102° and his systolic blood pressure 210 mm Hg. There was no sugar or albumin in the urine and no other abnormal physical sign. Next day his condition was definitely worse. He was so drowsy that he could scarcely be roused and by evening he was comatose. There was now slight nuchal rigidity, the pupils were fixed in mid-dilatation and Kernig's sign was present. The knee and ankle jerks were normal in reaction. Abdominal and cremasteric reflexes were absent. There was no apparent further involvement of cranial nerves. Lumbar puncture revealed a slightly turbid fluid under pressure. The fluid was examined by Dr. Kyle of the Western Infirmary of Glasgow with the following result: "Cell count 138 per cmm, chiefly polymorphonuclear leucocytes. On examination of films from the centrifugalized deposit polymorphonuclear leucocytes were numerous. Small Gram-negative bacilli resembling *B. influenzae* were the only organisms seen. On culture no growth was obtained on appropriate media."

Lumbar puncture was repeated daily for the next four days with immediate improvement in the patient's mental condition following each puncture. The fourth and last lumbar puncture showed that the cerebrospinal fluid was still very slightly translucent but not under pressure.

Soluseptasine (May and Baker's preparation of the sulphonamide series) 3 grammes as a dose was given eight hourly for seven days and after four days the temperature became normal. The patient's only complaint was slight occipital headache and general weakness. His systolic blood pressure was now 146 mm Hg. A rapid and continuous improvement set in leaving no signs of any involvement of the central nervous system and the patient was able to leave his bed for a short time on the twenty-third day of his illness. His final convalescence was quite uneventful.

BRYCE TEGGART, M.B. Ch.B.

Milngavie, Dumbartonshire

## Aspirin Poisoning

A fatal case of aspirin poisoning is sufficiently rare to warrant its recording although there was in this instance no very unusual feature.

## CLINICAL HISTORY

A woman aged 30 was admitted as a voluntary patient into St. Andrew's Hospital in September last with a diagnosis of dementia praecox. Periods of depression were noted but no suicidal tendencies had been exhibited. Frequent medicinal doses of aspirin had been indulged in before her admission.

By some means unknown the patient obtained a bottle of 100 five-grain tablets of aspirin and after defacing the label had swallowed some if not all of them between four and five o'clock on Saturday. At 7 p.m. she became restless and two hours later when this had increased vomited undigested food. At 11 p.m. she said she had taken some aspirin and thought that it was that that was causing the sickness. This and other statements to the same effect were not believed because the possibility of her having obtained the aspirin was not entertained and she often suffered from delusions. Restlessness, insomnia and mild delirium continued throughout the night. Sweating and hyperpnoea became obvious later and at 7 a.m. she had the first of three epileptiform convulsions. Coma then supervened and she died on Sunday at 9.30 a.m. about seventeen hours after taking the poison.

## FINDINGS AT NECROPSY

A post mortem examination was carried out the next day and the following is a summary of the findings.

The body was that of a very thin dehydrated female. Cyanosis was not marked. The blood was dark in colour and fluid. The brain was congested. The lungs were congested and contained little air. In the dilated and discoloured stomach were 12 oz. of brown fluid containing numerous gritty particles. The stomach wall was inflamed and necrotic. The distended bladder contained 16 oz. of clear yellow urine. Sections of the kidney, liver and stomach were made. The kidney showed marked congestion with red cells in the tubules and shrunken glomerular tufts. The efferent veins and sinuses of the liver were engorged. Necrosis and submucous oedema were found in the stomach wall. Very strong reactions with ferric chloride were obtained from the stomach contents and urine and rough estimations suggested a dose of at least 400 grains.

## COMMENTARY

Dyke in 1935 reported fully a case of poisoning by about 430 grains which recovered after energetic treatment. Neale in 1936 reviewed five cases of poisoning four of which were fatal. The general opinion appears to be that recovery after 400 grains may be expected.

This case presented most of the classical signs, the latent period, the restlessness, sweating, dehydration, hyperpnoea and the terminal convulsions.

As treatment is by no means ineffective, early diagnosis becomes important. The ferric chloride reaction is a delicate test for salicylic acid and should a strong reaction be obtained in the urine with a weak or absent Rothera's test and a positive reaction with the chloride of iron in the cerebrospinal fluid the diagnosis of aspirin poisoning is more than a probability.

I am indebted to Mr. Bernard Prett, H.M. Coroner and Dr. Brooks Keith for permission to publish this case.

Ipswich

E. BIDDLE, M.B.

## REFERENCES

- Dyke, S. C. (1935). *Lancet* 2 613.  
Neale, A. V. (1936). *British Medical Journal* 1 109.

## Reviews

### THE THYROID SURGICAL PATHOLOGY

*Surgical Pathology of the Thyroid Gland* By Arthur E. Hertzler M.D. (Pp 298 238 figures 21s net) Philadelphia and London J B Lippincott Company 1937

Professor Hertzler's book on thyroid disease had had three editions, the last being reviewed in these columns about two years ago. In this review comments were made of the unorthodoxy of many of the author's statements. Professor Hertzler has now brought out a larger volume dealing with the surgical pathology of the thyroid gland, in which he elaborates his own views, which often run counter to accepted opinion. The book is therefore stimulating to read, refreshing in its racy way of expressing matters, but dangerous unless read critically. In his preface the author suggests that he is only following accepted opinion to its ultimate conclusion when he urges that, if removing a part of a diseased gland is beneficial to the patient, nothing could be more logical than to assume that removing the whole will be better.

In brief synopsis the thyroid case is shown to present a serial story, in early life the thyroid gland attempts to adjust itself to function harmoniously with the other endocrine glands, or, partaking too much or too little of something, it becomes the colloid goitre of adolescence. There being no anatomical change, spontaneous recovery is possible. If the enlargement does not regress with the passage of time the goitre changes its shape, developing non-toxic bosselations. During this period neither patient nor doctor can quite decide whether the goitre is toxic or not, and in their combined optimism they regard it as non-toxic. Then follows the period when everybody learns that the goitre is toxic and the heart already a thyrotoxic one. Professor Hertzler describes these stages as the non-toxic diffuse goitre, the non-toxic nodular goitre, and the toxic nodular goitre, of which there may be atypical varieties. There is also the toxic diffuse goitre, with exophthalmos and increased metabolic rate (Graves's disease).

This clinical classification does not give a true differentiation, however, in all cases there is a mixture of hyperplasia and recession, and, as Professor Hertzler admits the absence of thyrotoxic manifestations does not attest that the heart is not being injured by the goitre. He believes that the cardiotoxic element arises from degenerative changes in the goitre, some changes of the colloid are postulated the nature of which is not known. This is because no definite cellular pathology is found in the cardiotoxic goitre. The essential thing is to detect impending toxicity before there is heart damage, to study the genesis of toxicity rather than the bosselations or nodules. The basal metabolic rate is a measure of the cellular hyperplasia and gives no measure of the toxicity or degeneration and no warning of the progress towards a damaged heart. Non-toxic nodular goitres do not represent a stage of innocence but the threshold of more important changes which will surely come in advancing years. Logically the surgeons should not be frightened to aid the cardiologists with total removal of the whole gland. The author has never seen post-operative myxoedema, and doubts if it exists. The surgeons then, should push matters to a complete try-out though he admits that the clinical judgment of surgeons is not infallible.

Pathologists and physiologists are content for the most part to worship at the shrines of the past. Now, accord-

ing to Professor Hertzler, myxoedema may be due to a deleterious product of a diseased gland, and in myxoedema the surgeon may be culpable in not removing enough gland. These hypotheses will need more substantiation than mere statement. The illustrations are numerous, typical, and beautifully reproduced.

### VITAMINS DURING PREGNANCY AND LACTATION

*Der Vitaminhaushalt in der Schwangerschaft mit besonderer Berücksichtigung der Vitamine A und C* By Dr. Med. Gerhard Gaethgens. Volume 24 of *Medizinische Praxis* (Pp 161 21 figures RM 12, bound RM 13 20) Dresden and Leipzig Theodor Steinkopff 1937

This book gives a short summary of the metabolic processes concerned with proteins, fats, and carbohydrates. The chemistry and chemical method of estimation of vitamin C (*l*-ascorbic acid) are described, together with the application of this method to the "saturation" test for human beings. The function of vitamin C in the animal body is discussed (a part in the oxidation-reduction processes). Carotene and vitamin A are treated similarly, but unfortunately the only measure of vitamin A used by this author is the "Lovibond unit" (Incidentally, Coward is erroneously credited with having used the occurrence of xerophthalmia as a criterion of vitamin A deficiency).

The main part of the book deals with the findings of the author and of other writers on the vitamin C, carotene, and vitamin A content of the blood and urine during pregnancy and lactation, an estimate of the pregnant woman's daily need for vitamin C, the storing of these factors in the placenta and foetal tissues, and their presence in very variable amounts in the amniotic fluid. There is a long account of the importance of vitamins C and A in lactation as evidenced by the daily determinations of the volume and vitamin C content of the milk and urine of many women. The need of the lactating mother for vitamin C is shown to be greater than for the woman at ordinary times. The finding for vitamin A was similar. The antagonism of the thyroid gland and vitamins A and C is discussed at some length, with the "greed" of certain organs for storing certain vitamins. The last section is devoted to the practical aspect of feeding the pregnant and lactating mother. There is a list of vitamin concentrates available in the market and a short table of the vitamin contents of the commoner foodstuffs. References are given for most of the results of other workers quoted in the text.

The book is well printed and the illustrations well drawn and reproduced.

### ALCOHOLISM

*Alcohol One Man's Mead* By Edward A. Strecker M.D. Sc.D. and Francis T. Chambers, Jr. (Pp 230 10s 6d net) New York The Macmillan Company 1938

The reader in search of general information on the subject of alcohol will be disappointed. From the sub-title one is not surprised to encounter an early reference to 'allergy' but the term is employed in this connexion in a rather peculiar application. There is, states the author, nothing more humiliating or disgraceful about having a psychic allergy to alcohol than there is about having a physical allergy or sensitivity to fish or strawberries.

A rather startling confession printed in the introduction is made the basis of a special claim to authority. The author expresses his indebtedness to his collaborator whom he proclaims to be one of the few men who have

intelligently studied the problem of alcoholism who has established his key position for the understanding of the problem since he himself was in alcoholic whose investigation and cure of his own case has insured the capacity to comprehend all the factors involved in the production of alcoholism. Yet it cannot be said that despite this promise the result is very illuminating. The greater part of the book is occupied with wearisome reiteration with psychological details in description of lurid cases with explanations of the urge towards alcoholic indulgence which are on the whole elementary and yet are put forward as if profound discoveries. The last chapter of thirteen pages on psychological and nutritional factors is fairly comprehensive but much too abbreviated and concentrated for the uninformed reader though it might serve as a convenient list of references for the more experienced. It devotes itself for the greater part to an insistence on the relation of hypoglycaemia to alcoholism and wastes space in describing at length the investigation in the laboratory of four cases when one would have sufficed.

The final sentence. We feel that the most satisfactory treatment of alcoholism consists of an intensive psychological—re-educational approach reinforced by a sensible correction of physical damage and particular attention to a carefully considered nutritional program epitomizes the problem succinctly. The attempt thus to deal with it has not been avoided but the method employed cannot be appraised.

## MATERIA MEDICA, PHARMACOLOGY, AND THERAPEUTICS

*Materia Medica Pharmacology, Therapeutics and Prescription Writing for Students and Practitioners.* By Walter Arthur Bastedo PhM MD ScD FACP. Fourth edition reset. (Pp 778 81 figures 30s net.) Philadelphia and London W B Saunders Company 1938.

*Textbook of Materia Medica Pharmacology and Therapeutics.* By A S Blumgarten MD FACP. Seventh edition completely revised. (Pp 845 illustrated 12s 6d net.) New York The Macmillan Company 1937.

The textbook by Dr W A Bastedo of Columbia University is well known and well established. The first edition appeared in 1913 and now a fourth reaches us for review. It is interesting to note that though it is only five years since the last edition yet the author mentions eighteen important drugs which now make their first appearance and states that numerous important articles have been rewritten. He writes from the standpoint of a practising physician but fully recognizes the need for laboratory research in providing a sound basis for rational therapeutics. He remarks: "I believe that as the outcome of critical laboratory research and the adoption of laboratory methods in clinical research we are at the dawn of a new era of simple and practical therapeutics an era in which knowledge will supplant credulity on the one hand and scepticism on the other and in which fewer drugs will be used but better treatment given." In general the volume gives a very clear account of pharmacology and therapeutics and great care has been taken to deal adequately with recent developments. The author states that he has included many drugs only to condemn them and it is questionable whether such substances do not occupy too large an amount of valuable space. The best attitude to take to such remedies is however a difficult problem and Dr Bastedo has found space for full and clear discussion of the action of all drugs of known value.

The textbook by Dr A S Blumgarten of New York is intended primarily to assist nurses in their class work and practice. It was first published in 1914 and now

has reached its seventh edition hence it evidently fulfils its purpose in a satisfactory manner. The author has had the difficult task of explaining the pharmacological actions of drugs to students with a limited knowledge of physiology. He has made a free use of diagrams and the colour diagrams deserve special notice on account of the effective manner in which they illustrate certain fundamental facts about drug action. The book covers a very wide field and naturally treats the subject in as simple a manner as possible but great care obviously has been spent on its revision and adequate accounts are given of recent advances in such subjects as the action of benzadrine the use of insulin in treatment of schizophrenia protamine zinc insulin sex hormones and vitamins. In general the volume gives a very clear account of the essential facts of pharmacology.

## BOYD'S PATHOLOGY

*A Textbook of Pathology. An Introduction to Medicine.* By William Boyd MD LL D FRCP FRSC. Third edition thoroughly revised. (Pp 1064 459 figures 16 coloured plates 4s net.) London Henry Kimpton 1938.

Professor William Boyd's *Textbook of Pathology* a third edition of which has now appeared has attained remarkable popularity. The author's flair for vivid expression makes it more readable than most works of the kind and his constant endeavour to relate morbid changes to the clinical features of disease has rendered an important service to the better study of pathology. The motto of this work might be a sentence in its original preface.

A world of disordered function lies revealed in any lesion it we only have the eye to see it. This edition has been modified by including a large number of brief references to subjects or aspects of subjects previously untouched space for which has been made by placing certain sections in small type and by introducing many new illustrations some in colour. In so comprehensive a work and especially in one which discusses aetiology with such freedom it is easy to find statements which are disputable and sometimes perhaps even misleading but the general effect on the student's mind of the author's enlightened method of treating his subject can only be admirable.

## BLOOD GROUP HEREDITY

*A Critical Investigation of the Blood Groups and their Medico Legal Application.* By Dawood Matta MB ChB PhD. Faculty of Medicine Publication No 11. (Pp 231 80 tables No price given.) Cairo Egyptian University 1937.

The established theories of blood group determination and heredity are benefited by an occasional overhaul. Dr Matta's thesis contains the results of a considerable body of research into the existing theories of blood group inheritance. In his preface he acknowledges help from Professor John Glaister of Glasgow University with whom he has been associated in this work for some years. He covers much well trodden ground but reaches some interesting conclusions. Besides confirming the serological bases of the four main groups he finds that proof has been obtained of the existence of subgroups A and A<sub>1</sub>, B and B<sub>1</sub> and their combinations with each other. The difference between these subgroups is he says quantitative. He confirms Schiff's observation on the existence of an agglutinin O not only positive in character but equal in value with the characters A and B in the foundation of the system of the four groups. This observation is interesting in that before Schiff's work the character O was always regarded merely as an indication of the



absence of both A and B, and as a recessive and not a dominant character. Dr. Matta uses its quantitative variation in the cells of the various subgroups to formulate a new classification containing thirteen subgroups. He also claims to have shown it in the cells of certain AB persons. He cannot explain these results by applying any of the hitherto accepted theories of heredity, and has therefore formulated the hypothesis that the three agglutinogens O, A, and B are all Mendelian dominants and that the genotype of each individual is composed of four genes representing one, two, or three agglutinogens, two of which are transmitted by each parent to the child. He confirms the work which has shown the existence of the three types M, N, and MN, and regards the existence of a weak N as probable. He says that the application of blood grouping to cases of disputed paternity should be restricted to exclusions based on the simple Mendelian law that a child cannot possess an A or B character unless at least one parent possesses it. He does not consider that the subgroups can be applied to this purpose until their inheritance has been corroborated by work on a larger number of families than the ninety-nine which he has investigated. He also considers that the inheritance of the characters M and N should not be used judiciously until certain points of relationship between them, and also certain questions concerning the inheritance of N<sub>2</sub>, have been cleared up. This opinion, if confirmed, would postpone the application to affiliation proceedings of much work that has already been widely accepted, and which has, in fact, been applied every day for some years in the courts of various European countries.

### Notes on Books

*Physiological Chemistry of the Bile* by HARRY SOBOTKA (Baillière, Tindall and Cox, 13s. 6d.), will be welcomed by all those who stand in need of a comprehensive digest of the vast literature relating to biliary function. For a thorough and well-documented survey nothing better could be desired, and, when taken in conjunction with the same author's companion volume on the chemistry of the steroids, it constitutes, but for the omission of the bile pigments, a complete exposition of the chemistry and physiology of the bile and its constituents. While the author gives good reason for leaving out the pigments, many are likely to hold the view that such essential components might with advantage have been included, even though their treatment had to be disposed of in brief summary and in the absence of a detailed chemistry of the pyrrol derivatives.

Professor CAMILLE LIAN presents the French Medical Annual for the seventeenth time, and this review of principally French work on medicine during the past year ranges from 'abscess of the lung' to Wassermann reaction-ified. The practical aspects of the subjects discussed are well stressed. The publisher of *L'Année Médicale Pratique* is René Lepoint, Paris, and the price 35 fr.

*Die Pathogenese des Ertrinkens in Zusammenhang mit der Behandlung* by Dr. C. J. MÜHLIEFF is published in Berlin by Carl Heymann, price R.M. 8. In it the author describes a series of experiments made on animals. Drowning and resuscitation were performed and sections were subsequently taken of the lungs. Dr. Mühlief concludes that the first step in resuscitation should be to empty the air passages of water and that it is important not to start artificial respiration until this has been done. He finds that when the bronchi are plugged with water

artificial respiration can cause extensive injury to the alveoli of the lungs. He emphasizes the fact that undue violence in artificial respiration can very easily produce such injury.

Bentley and Driver's *Tables of Qualitative Chemical Analysis* (H. Milford, 1s.) provides the directions for a beginner in the practical study of the subject in a handy and useful form. The directions are suitably condensed and abbreviated so that the student may memorize the facts easily as he works and thus lay a good foundation for the further development of his study. What is lost by this condensation is better left for subsequent study after the student has gained experience in the practice of the scheme of treatment here given. The scheme is that which is quite usually followed in schools.

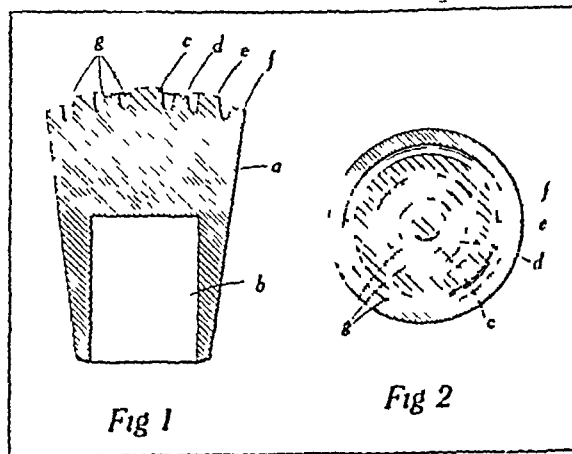
## Preparations and Appliances

### NON-SLIP RUBBER CRUTCH PADS

Dr. Sydney H. Keys (Ruislip) writes:

I have recently had brought to my notice, by Mr. E. W. Coleman of South Ruislip, samples of non-slip shock-absorbing crutch pads. Ordinary pads of plain rubber will slip on highly polished floors and water being a lubricant to rubber, will cause rubber to slip on wet surfaces. With Mr. Coleman's latest patents these defects are overcome in the non-slip crutch pad and also in the non-slip ferrule for invalid sticks.

The diagrams show a rubber crutch pad formed with a socket (b) for fitting on to the crutch. The surface of the pad is composed of a number of concentric projections separated by air spaces, the projections including a central soft rubber stud (c), an inner hard rubber ring (d), an intermediate soft rubber ring (e) and an outer hard rubber ring (f), the air spaces between the projections are also indicated (g).



The soft rubber projections (c and e) are more prominent than the hard rubber projections (d and f). When the pad is pressed upon the ground the soft rubber projections (c and e) make the first contact and are compressed so that they spread into the air spaces. The width of the spaces (g) is such as to permit the spreading to take place without any overlapping of the hard rubber projections by the soft rubber. The effect is that when the pad is pressed hard upon the ground the surfaces of the soft rubber projections (c and e) are pressed back to the same level as the top of the hard rubber projections (d and f), the latter being resistant and taking the wear whilst the soft rubber projections exercise an elastic grip on the ground and prevent slipping.

# Nova et Vetera

## THE BMA AND MEDICAL REFORM

In Mr E. Muirhead Little's centenary *History of the British Medical Association* there is a chapter on the Association and Medical Reform a matter which was kept in the forefront of policy from 1837 onwards. So closely has this subject been interwoven with the life of the Association that it is difficult to treat of it apart from other medical affairs. The first important step was taken in 1839 when the Association presented to Parliament a memorial on the urgent need for reform of medical education and of the status of the practitioner and praying for the necessary legislation. Contact was made at the House of Commons with the MPs Warburton Hawse and Thomas Wakley Editor of the *Lancet* who were bringing forward Bills for the regulation of medical education and the restriction of unqualified practice. The Bill introduced by Mr Hawse MP for Lambeth came up for second reading in March 1841 but was counted out. In 1845 the Secretary of the Association received instructions to send a copy of the report of its Medical Reform Committee at once to Sir James Graham in reference to a Bill he was introducing but nothing came of this renewed effort. Five years passed and then Sir George Grey brought forward another abortive Medical Bill.

### A Letter from the Founder

In 1852 Mr George Hastings MP son of the Founder and Secretary of the Medical Reform Committee drifted on behalf of the Association a Medical Bill which however shared the fate of all its forerunners. We have received from Dr D. A. H. Moses M.C. a copy of a letter now in his possession written by Sir Charles Hastings evidently referring to that Bill. The letter is as follows:

Worcester  
March 5 1853

My dear Mr Nunneley

From the letter you will have received from my son you will perceive that the Committee were determined to take their stand on the Bill and to go boldly to Lord Palmerston who willingly receives us.

Nothing must keep you away and you must secure as many Members of Parliament as you can to accompany the Deputation to Lord Palmerston.

If you have any means of securing Sir James Graham do so by all means and get him to support the Bill.

We shall meet at my son's Chambers 4 Paper Buildings Temple at ten o'clock in the morning of the 17th to arrange the preliminaries.

Believe me

My dear Mr Nunneley

Yours very truly

CHARLES HASTINGS

Thomas Nunneley Esq.

Two years later at the Annual Meeting of the Association held in York the Medical Reform Committee recommended the reintroduction of this Bill and steps were taken to organize support of the measure in Parliament. It had a first reading in the House of Commons but went no further. At the Annual Meeting of 1857 in Nottingham Sir Charles Hastings announced that the Right Hon. W. F. Cowper MP, was proposing to introduce a Medical Reform Bill in the next session of Parliament. This was the measure which became law on August 2 of the following year as the Medical Act 1858. Under it the General Medical Council was constituted and Sir Charles Hastings became one of the four Crown nominees upon that Council retaining his seat from November 13 1858, to November 13 1863.

Thomas Nunneley F.R.C.S. to whom our Founder's letter is addressed was mainly known to the profession as a provincial ophthalmologist and to the public as a medical witness in the trials for murder of William Palmer and William Dove but he was also for six years surgeon to the General Infirmary at Leeds and had a name for judgment and skill in operating. From its formation in 1832 Nunneley was a most active member of the British Medical Association and in 1869 the year before his death he read the Annual Address in Surgery at the Leeds meeting.

## NIELS STENSEN, 1638-86

As a medical student of 23 Niels Stensen dissecting in the house of Gerardus Blasius (Blas) at Amsterdam, discovered and graphically described the duct of the parotid gland in the head of a sheep, and despite jealous efforts on the part of his teacher to take the credit for himself has survived in the anatomical eponym Stensen's duct ever since. Had he accomplished no more fame would not have passed him by. Studying the structure of muscle with the aid of the microscope he anticipated much of our modern knowledge. His motor fibre has become our fasciculus his most minute fibril is our elementary fibre and his proper membrane we now call connective tissue framework. His conception of the nature of muscular contraction was far in advance of his time. He found the duct of the sublingual gland and elucidated the mechanism of the secretion of tears by the lacrimal glands. A neat and clever dissector he was mathematically inclined sober and practical. In his discourse on the *Anatomy of the Brain* in 1669 he sternly rebukes both Willis and Descartes for their fanciful theories.

Extremely versatile even for a versatile age Stensen is sometimes described as the father of geology. He was a pioneer too in the scientific study of crystals investigating their growth by accretion and the phenomena of light refraction. In 1666 he was invited by Ferdinand II to become his court physician at Florence. But in the following year occurred a tide in his affairs which completely changed his outlook and revolutionized his career. Converted from the Lutheran to the Catholic faith and later receiving the titular honour of Bishop of Titiopolis in Greece he lived a life of severe self-denial gradually undermining his health. Though for a time he taught anatomy in his native town of Copenhagen the power of conviction and the eagerness for knowledge had deserted him. He died in 1686 at the age of 48 and was buried in Florence. The tercentenary of this restless noble sincere and entirely unselfish character who possessed a true genius for friendship was commemorated by the Section of Historical and Cultural Medicine at the New York Academy of Medicine on March 9 1938, with a comprehensive and authoritative paper by Dr Anne Tjomsland. Stensen is often known by his Latin name Nicolaus Stenonis inaccurately Steno.

W. R. B.

John Freke the 250th anniversary of whose birth occurs this year was the first curator of the museum and the first ophthalmic surgeon at St Bartholomew's Hospital and in 1736 described myositis ossificans progressiva. A friend of Henry Fielding he is mentioned twice in *Tom Jones*. He died in 1776. A chandelier carved by him in oak and heavily gilded hangs in the Steward's office at St Bartholomew's.

Under the title of *Some Forgotten Medical Memorials* an anonymous writer in the April issue of the *Journal of the Royal Naval Medical Service* gives short historical notes concerning Sir John Richardson Sir Alexander Armstrong, Robert McCormick Frank Toms W. T. Donville M. C. Bain David Walker George Bass and Elliott whose names have been given to various sites.

## BRITISH MEDICAL JOURNAL

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## ACETYLCHOLINE

Professor F R Fraser's Croonian Lectures, the last of which appears in our columns this week, give a lucid and well-documented account of the present state of knowledge of the therapeutic uses of acetylcholine and related substances, and afford an opportunity for discussing briefly a few points in connexion with one of the most interesting chapters in modern physiology. Experimental work has shown that acetylcholine is liberated in nerve endings in many parts of the body, including the terminals of all the parasympathetic and somatic motor nerves and the preganglionic fibres of the whole autonomic system. There are excellent reasons for believing that acetylcholine is probably concerned with the transmission of the nerve impulse in this region, but it would be unwise to conclude as yet that it is the sole mechanism involved and that no other agencies play a part. Be that as it may, those properties which make acetylcholine highly suitable as a nerve transmitter make it highly unreliable as a therapeutic agent. The transmitter must be a very unstable substance which can be disposed of with great rapidity, so that the peripheral response of the organ to the nerve impulse should not be unduly prolonged. As Professor Fraser has pointed out, when acetylcholine is administered to man by any route it is rapidly destroyed by the specific enzyme cholinesterase in the blood and in the tissues, so that its effects, even when given in comparatively large doses, are uncertain and evanescent and usually disappear completely in a few seconds or minutes. It is improbable, therefore, that much can be expected from the use of acetylcholine in the treatment of high blood pressure or of intestinal atony. To overcome the difficulties enumerated one may use other and more stable choline esters which act for longer periods or else employ drugs of the eserine or prostigmin type which inhibit the action of cholinesterase, preserve naturally formed acetylcholine, and so to speak make it available for therapeutic purposes.

Professor Fraser discusses the use of carbaminoylcholine (doryl) and of acetyl- $\beta$ -methylcholine (micholyl). Both substances have been tested in visospastic conditions but although symptoms

were relieved no permanent effects have been noted on the blood pressure in cases of hypertension. It is claimed that attacks of paroxysmal tachycardia may be brought to an end by injections of these drugs, but anyone with experience of the natural history of this condition would hesitate to dogmatize about the relation of the treatment to the result. Apart from possible uses in ophthalmology it seems well established that doryl especially is useful in overcoming post operative intestinal atony and retention of urine due to weakness of the bladder wall. Of the anticholinesterases studied prostigmin has proved to be the most useful, both for its stimulating action on the bowel and, more especially, for its dramatic ameliorative effects in myasthenia gravis. Eserine, although it has the same general actions, is less satisfactory for systemic purposes as it produces in man severe cardiovascular depression, vomiting, headache, and general malaise. Although the muscular weakness of myasthenia gravis can now be readily controlled no final conclusion has yet been reached as to the underlying disturbance. There is at present no proof of either insufficient formation or excessively rapid destruction of acetylcholine at the nerve endings in muscle. On the other hand, recent observations by Dr Mary Walker indicate that in this disease a substance may be formed at the motor endings which resembles curare in blocking the transmission of the impulse from nerve to skeletal muscles. When a myasthenic patient exercised the arms (after the blood supply to them had been blocked) to the point of exhaustion Walker found that on release of the circulation weakness developed in the muscles of the rest of the body, suggesting that some chemical agent had been freed from the ischaemic limbs. Further observations on these points will be awaited with much interest.

There is still no direct evidence that acetylcholine is concerned with the transmission of impulses in the central nervous system. The researches of Schweitzer and Wright,<sup>1</sup> however, show that both acetylcholine itself and anticholinesterase drugs act directly on the spinal cord in cats, and it has now been confirmed<sup>2</sup> that prostigmin given intrathecally produces striking changes in reflex activity in man. A recent paper by Schweitzer and Wright<sup>3</sup> throws further light on this complex problem. They examined the pharmacological actions of two derivatives of the dimethylcarbamic ester of hordenine—namely, the hydrochloride and methiodide. Both substances are anticholinesterases, they are equally potent *in vitro* and have identical actions on muscle and other peripheral organs, yet they

<sup>1</sup> *J. Physiol.* 1937 89 165 384 90 310  
Kremer M, Pearson H, E S, and Wright, Sam on H, ed  
1937 89 21 P  
<sup>2</sup> *Ibid.* 1938 92 422

differ fundamentally in their central effects the hydrochloride being convulsant and the methiodide a central depressant. Further experiments<sup>1</sup> suggest that these differences are to be attributed mainly to the physical (rather than chemical) properties of the substances concerned. The hydrochloride gives rise in the body to a derivative containing tertiary nitrogen, which is lipid soluble and so can probably penetrate into the interior of the nerve cells. The methiodide on the other hand gives rise to a water soluble derivative containing quaternary nitrogen, which is perhaps compelled to remain outside the surface membranes of the nerve cells. More extensive investigations suggest that this general rule probably applies to the anticholin esterase group as a whole so far as their action on the central nervous system is concerned. These conclusions will have to be taken into serious consideration when any theory of central transmission is ultimately promulgated.

## TREATMENT OF PNEUMONIA

We referred not long ago in these columns<sup>2</sup> to the great advances which have been made in the United States in the study of pneumonia and in the direction of making serum treatment for this disease generally available. One of the great organizations taking part in this campaign published two years ago a useful practical handbook entitled *Lobar Pneumonia and Serum Therapy* which we reviewed at that time.<sup>3</sup> A second edition has now appeared with a significant change in title—*Pneumonia and Serum Therapy*—the word 'lobar' being omitted. Implied in this change is one of the advances which have taken place in these two years and are recorded in this edition. The study of the 'higher types' of pneumococcus has shown that some of these types, which more often occur in bronchopneumonia than the classical Types I, II and III are capable of causing a severe form of the disease such of these infections by the higher types as have been subjected to serum treatment have been found amenable to it. Among the data assembled in this volume are the results including some hitherto unpublished elsewhere so far obtained in treating pneumonia due to Types V, VII, VIII and XIV. Another new factor in the situation is the advent of rabbit therapeutic serum. It will be remembered that in this animal according to recent observations antibodies to the pneumococcus are produced more rapidly and in greater quantity than in the

horse and they have the advantage owing to the smaller size of the rabbit globulin molecule of greater diffusibility in the body. Although results with this serum continue to be encouraging they are not considered to have reached such a stage as to justify general use. Besides reporting these new developments and bringing up to date the imposing mass of evidence on the results obtainable with serum treatment this volume remains an invaluable practical guide in which every detail of procedure connected with serum administration, including preliminary typing and tests for hypersensitiveness, is carefully and simply explained and illustrated by diagrams. Special emphasis is laid on the importance of blood culture as a prognostic aid and a guide to serum dosage. It is also emphasized that even in apparently mild cases there may be a rapid or gradual transition from a condition of apparent safety to one of great gravity<sup>4</sup>, for this reason every case amenable to serum treatment should receive it. This is a vital question and it is here that the American attitude differs from that usually taken here whether this difference is justified by a lower mortality from pneumonia and a generally more favourable course followed by the disease in this country is a matter which as we have pointed out before calls for careful investigation and decision.

The stupendous effort which has organized the treatment of pneumonia in some of the eastern States of America and achieved such results as have been mentioned has been financed by the States themselves by insurance companies, and by large charitable funds. It has no parallel in this country and as we pointed out in reviewing this subject before, serum treatment cannot be made universally available without concerted action, in which it seems that public health authorities should take a leading part. It is possible that even if such an effort were accepted as desirable and feasible it may become unnecessary and indeed that the whole of the vast structure which has been built up in the United States may yet be abandoned having served its turn. Chemotherapy having conquered in the sphere of streptococcal infection, is turning its attention more seriously to the pneumococcus and it is reported by Whutby<sup>5</sup> that an entirely new sulphonamide compound—2(*p*-aminobenzenesulphonamido) pyridine—has a striking curative action on pneumococcal infection in mice. An account by Drs W. A. Oliver and Maxwell Telling<sup>6</sup> of its effect on three cases of pneumonia suggests that this experimental action will be confirmed clinically. But for the fact that experimental results with these drugs have always hitherto

<sup>1</sup> Schweitzer, A. Wright, Samson and Stedman, Edgár  
*J. Physiol.* 1933 92 6 P.  
<sup>2</sup> *British Medical Journal* 1933 1 76  
<sup>3</sup> *ibid.* 1936 1 753  
<sup>4</sup> *Pneumonia and Serum Therapy* by F. T. Lord and R. Heffron  
New York: The Commonwealth Fund, London: Oxford University Press, 1933 (2s. 6d.)

*Lancet* 1933 1 1210  
*ibid.* 1933 1 1391

been amply borne out in the clinical field, it would be unwise to be too sanguine but hitherto animal experiment has consistently been followed by therapeutic success. If chemotherapy can equal or even approach serum treatment in efficacy serum will stand little chance of more extended trial. The practical difficulties of pneumococcus typing and of administering serum intravenously will remain considerable, however perfect the facilities for them, the new chemotherapy involves nothing more than the swallowing of tablets. This is speculation rather than prediction, but it is a very real and important question whether the best treatment for pneumonia will ultimately be found in the form of immunotherapy or that of chemotherapy.

### ONCHOCERCIASIS

Onchocerciasis is transmitted by small but viciously biting Simuliidae and is characterized by subcutaneous nodules containing adult filaria the embryos of which migrate radially for varying distances through the skin. If the nodules are in the region of the head the migrating microfilariae may invade the tissues of the eye and give rise to conjunctivitis, keratitis, iridocyclitis, and other lesions, resulting in many cases in blindness. The disease has been known up to the present time only in rather sharply circumscribed areas in Southern Mexico and Guatemala, and in parts of Africa. In America the nodules are generally situated in the region of the head or scalp and since the first description of the malady more than twenty years ago the disease has been associated there with cases of ocular disturbance and blindness. In Africa it was generally held that the nodules tended to occur more on the trunk or limbs than on the head, and up to a few years ago there was little clear evidence that ocular disturbances there were caused by onchocercal infection. Observations to the contrary led to more detailed investigations one of which is summarized in a recent publication by Strong, Hissette, Sandground, and Becquaert.<sup>1</sup> They confirm the growing opinion that ocular onchocerciasis is not uncommon in Africa, and in fact they go so far as to state that in parts of the Belgian Congo and in Northern Rhodesia onchocerciasis is one of the three most important diseases. The sum of suffering attributable to ocular onchocerciasis may be gauged from the figures of only a few workers. Hissette in one village of 150 inhabitants in the North-West Congo, found sixty-eight with ocular disturbances due to onchocerciasis and fifteen of them were blind. Cruikshank<sup>2</sup> states that 4.5 per cent of the population of the Anglo Egyptian Sudan suffer from endemic blindness much of which is due to onchocerciasis and Larumbe<sup>3</sup> reported from Chiapas, Mexico, that of 4,000 cases of onchocerciasis about 500 had developed keratitis, iritis and choroiditis, and 100 were totally blind. Since possible vectors are

widespread in certain areas in the western United States and the disease has shown a tendency to northern migration, it has been suggested that the condition may be spread by infected immigrants from Mexico and become endemic in the U.S.A., but this risk does not seem great. However, as the manifestations of the disease progress slowly, ocular disturbances may be encountered far from the locality of origin in those who have formerly travelled abroad, such cases have already been recorded in Germany, France, Belgium, and in this country. The way in which the eye changes are produced is still a matter of speculation. Toxins from the adult worms or the larvae, particularly at their death, mechanical damage by microfilariae, and allergic reactions from sensitization of the tissues to filarial antigen are among the explanations suggested. Hissette for some days injected extracts prepared from adult worms in the neighbourhood of the eyes, but failed to induce any ocular reactions. In another experiment in which microfilariae were introduced into the cornea the corneal microscope and the slit-lamp revealed not the slightest irritation along the course followed by the larvae in the cornea over a period of some days. It is of course not possible to draw any conclusions from these early and isolated observations. As to treatment, removal of nodules presumably containing the parturient parasites may arrest the progress of the disease. Sometimes, however, this fails, perhaps owing to the presence of unencapsulated worms or the existence of undiscovered nodules. In some regions of Africa cases may have a hundred or more nodules, although in Central America and many parts of Africa it is usual to find cases with only comparatively few nodules. The destruction of the parasites by drugs has also been attempted but the results are unsatisfactory as an efficient filaricidal drug has not so far been discovered.

### RADIUM METABOLISM

The effects of stored radium salts in human beings appear to be wholly pernicious. Storage occurs chiefly in the bones, so that the main effects have been necrosis of the jaw, severe anaemia and osteogenic sarcoma. The study of radium metabolism is of much academic interest, and of some practical importance, seeing that cases of poisoning by radio-active substances are likely to occur for some years to come. Thus of the three cases recently reported by J. C. Aub and his associates<sup>4</sup> one had been given radium intravenously ten years before as treatment for chronic arthritis, the second was a dial painter, and the third was a physicist who had inhaled some radon accidentally. In the acute stage, during the first few months after exposure the radium is scattered throughout the body and rather loosely held. Excretion is at first rapid as much as 90 per cent of a quantity of radium taken by mouth being excreted within the first week. Gradually the remaining radium is stored preponderantly in the bones so that the rate of excretion falls. Radium thorium B, and polonium like lead, are at first stored largely in the bone trabeculae but slowly the abnormal metal becomes dis-

<sup>1</sup> *Summary to Amer. J. Trop. Med.* 1938 18 No 1.  
Hissette, Onchocerciasis of the eye (Leuckart) Aberdeen 1934.  
<sup>2</sup> *Brit. J. Trop. Med.* 1936 3 No 5 101.  
<sup>3</sup> *Rev. de S. Hyg. et Prévent. Pub.* Mexico 1926.  
<sup>4</sup> *Med. J. Austral.* See *Brit. J. Trop. Med.* 1938 21 495.

<sup>4</sup> *Aust. J. Trop. Med.* 1938 11 1443.

imbuted equally between trabeculae and cortex. As the cortex is far heavier than the trabeculae most of the radium is stored in the cortical bone and excretion becomes very slow in chronic cases amounting to only 0.1 per cent of the total stored radium per month. The main route of excretion of stored radium is in the faeces but as with lead what part of the intestinal tract is involved is not well known some however is certainly excreted through the bile. The rate of excretion can be increased four to eightfold by decalcifying therapy or de-leading therapy as it has been called. A period of high calcium intake is followed by a period of low calcium intake together with parathyroid extract, thyroid extract and ammonium chloride. The response of radium excretion is slower than that of calcium but more prolonged. By estimating the Ca/Ra ratio in the bones it is found that decalcifying therapy is no more efficient in extracting radium than in extracting calcium from bone for both are excreted in their relative proportion in the body. The difficulty indeed is not so much getting the radium out of the bones into the blood stream as in getting it out of the blood into the excreta for the daily radium elimination is only slightly greater than the total radium content of the blood at any moment of the day. The increased excretion of radium still does not greatly reduce the total store of radium in the body and in chronic cases when it is probable that the cells where radium is stored have been injured the response to medication is even less effective. Nevertheless in one of Aub's patients who had had a severe necrosis of the jaw of two years duration the bone healed following therapy and has remained healed for two years in spite of the fact that only a small percentage of the total radium stored in her body was eliminated during the course of treatment.

## MEDICINE AND NATIVE HEALTH IN KENYA

An exhibition illustrating African progress and activity in Kenya was opened at the Imperial Institute London on Monday by the Duchess of Gloucester. The exhibition for which the Kenya Government is responsible has considerably greater interest for the medical profession than would perhaps appear from its title in that it not only contains a specifically medical section but is based throughout on the conception that only through education and a raising of the standard of rural life in the Colony can the health of the native population be permanently improved. 'Without good agriculture the catalogue states 'ill nourishment a greater cause of ill health in Africa than perhaps any other will never disappear. The reclamation of a papyrus swamp for the growing of rice is consequently shown to have medical significance equally with the training of natives in skilled labour of many kinds and the replacement of native huts by native houses and cottages. The pictures in the medical section proper illustrate the work among other institutions of the native hospital at Kiambu, the mental hospital at Nairobi and the medical research laboratory also at Nairobi. The Kiambu Hospital is taken as being typical of a group of seventeen hospitals in native

reserves. It has fifty beds for medical and surgical cases and twelve beds for maternity cases and with this accommodation serves a population of 100 000. It is interesting to notice that the maternity ward was provided by the local native council out of local funds. Judging from the unusually interesting series of photographs which are shown excellent progress is being made in training native laboratory assistants at the central Nairobi institute to perform such duties as the identification of mosquitos and the preparation of plague and other vaccines. Plans are at the present time maturing for the construction of a new Central Hospital which will ultimately contain about 1 000 beds for native patients. The first part of the hospital is expected to cost about £130 000 towards which £50 000 has already been allocated. The completion of this hospital will in conjunction with the existing Central Laboratory offer exceptional advantages for clinical research. It is also intended to use the hospital for the systematic training of native girls in general nursing to assist the European nursing sisters. Hitherto men have been chiefly employed apart from maternity cases. In addition to the institutions already mentioned there are seven hospitals for Africans in the towns, two hospitals for infectious diseases, two leper hospitals, three hospitals for Europeans, a number of general wards for patients of Asiatic origin and half a dozen other smaller hospitals. There are also more than 200 out patient dispensaries chiefly in the native reserves. In 1936 more than 14 000 operations were performed on African natives alone.

## HOUSING AND PLANNING

The mass of evidence shows that the British housing problem has been cruelly oversimplified. Good housing is not the absence of slums any more than good health is just the absence of disease. Slum clearance in Britain is not merely a question of the substitution of a clean box for a dirty one. It is not a problem that can be solved by better planning.

These sentences are from *Europe Re housed* by Elizabeth Derby, one of the most useful and suggestive books that have lately been written on the general question of housing for the non technical reader and from the wider point of view implied by that quotation. The author after eight years experience of housing and slum clearance in London was enabled by a Leverhulme Research Fellowship to spend a year in ten European countries studying the methods and results which they had adopted or achieved in this field since 1918. In fact she chooses six of these countries for discussion and illustration—'two winners in the war, two neutrals and two losers'—France, Italy, Sweden, Holland, Germany and Austria (or Vienna). The national variations of the housing problem and of the methods of dealing with it are set out in a most interesting fashion and are illustrated by a considerable number of appropriate diagrams and photographs. The lessons for Britain are forcibly and effectively stated. As has been indicated emphasis is laid much more on the amenities within the home and amenities on the planned

<sup>1</sup> George Allen and Unwin 1s. 6d.

estate outside the home than on architectural or legal requirements in the structure itself. The results of these comparisons are striking and not flattering to this country. Great Britain has spent vastly more money per dwelling and far larger sums in total than any other country, but a great deal of this has been extravagant or wasteful and if all-round value for money is to be the test the author would place Vienna first and Sweden second in the order of success. There are reasons which account for this order and for these variations of style and method. They are expounded in the book, and in her final chapter and conclusions the author eloquently drives home the need for a clarification of the view usually taken in Britain and for a vigorous adoption of a most enlightened policy to take advantage of an opportunity which is not yet quite lost. Proper housing and civic planning are now among the major sociological problems and are manifestly and intimately connected with national health and fitness. It is not a mere question of convenient shelter, but rather, as the author points out of "satisfying the incipient demand for healthier conditions greater convenience, and pleasure in the environment of townspeople." As Lord Horder says in a foreword "It is always a satisfaction, when approaching any question of deep human interest to know that the guide is both expert in technology and experience and yet gifted with vision. Both of these assets are here."

### "DENTAL BENEFIT"

Test meals are commonly regarded as unappetizing concoctions of gruel, charcoal, or alcohol lacking in essential oils, by which the stomach is put through its paces and sometimes jerked to even greater feats of secretion by injections of histamine. If Mr Samson had his way a test meal with a difference, would be diagnostically applied to his patients by the dental surgeon. Writing in a recent number of *Wine and Food*<sup>1</sup> he deplores the mental anguish of the sufferer while the dentist prospects with pick and mirror and searches out those nooks and crannies so ready to react to painful stimuli. How much better it would be to combine pleasure with pain and to observe the dental patient's reaction to a skilfully planned luncheon! The "menu de dents" is Melon Canteloup au Marasquin, Lobster Mayonnaise, Cotelettes d'Agneau au Concombre Glacé à l'Eau aux Framboises, Canape Fedora. The effects of this delicate repast on the patient are watched with notebook and concealed stop-watch. The iced melon causes a wince and a pause in mastication until the food has warmed. "Exposed nerve, sensitive to cold left eye closed, indicates decayed tooth on same side" runs the anamnesis. The fibres of the lobster lodge in the cavities between the teeth only to be recovered by much sucking and tongue-twisting or the use of a toothpick. The stop-watch comes into play with the cutlet and cucumber, delay in mastication or gulping indicates loose teeth or ill opposed ones. The raspberry water-ice reveals the poorly fitting denture with a sudden leap as the pips get under the plate, this is followed by cautious chewing and gulping of the

fruit, and at the same time the coldness of the ice reveals that the receding gums are hypersensitive to cold. The savoury departs from the orthodox recipe as the olive is left unstoned on its bed of bacon and mushroom, and to strip the flesh completely from the stone without the aid of fingers indicates a full complement of concerted teeth. So ends the dental diet. Diagnosis is complete and remedial measures may be begun, but to dull the pain of these Mr Samson advises that the meal should be preceded by several glasses of sherry and accompanied by a bottle of red burgundy. Gastronomically this is hardly correct and may require a subsequent visit to a gastro-enterologist, but, as he says "the patient will soon emanate a kind of roseate aura of benevolence and comfort akin to that produced by the best type of anaesthetic and submit to the most violent form of treatment with only a faint grimace."

### LIVE VACCINES FOR GONORRHOEA

Chronic gonorrhoea in women, especially when it involves the deeper layers of the cervix uteri and the adnexa, is notoriously a difficult and unsatisfactory condition to treat. It is doubtful if even those antiseptics which are said to penetrate beneath the surface ever reach the gonococci buried in the cervical glands. In a case in which the cervix of a woman who had had gonorrhoea was removed sections showed below the mucosa yellowish spots from which pus exuded, examination of this pus revealed gonococci in smears and cultures. Histological examination showed the cervical glands covered with squamous epithelium in manifold strata and the musculature was infiltrated with round cells and plasma cells. It is obvious that locally applied antiseptics can have no effect on such lesions, while on the other hand the various forms of cauterization recommended by different workers to be effective in killing all the gonococci must destroy tissue as well. As far back as 1922 Loeser<sup>2</sup> injected killed vaccines into the cervical tissues and found these much more effective than vaccines given in the ordinary way, but even so results were not satisfactory. He now believes that true immunization is only obtained when living active gonococci are injected into the skin. Numerous strains of gonococci from fresh untreated cases are grown on ascitic agar. A subculture (not later than the fourth) forty-eight hours old is washed off the plate with 3 c.c. of a sterile isotonic salt solution. The suspension which should contain 8,000 to 12,000 million organisms is shaken and 1.5 c.c. are injected into the skin of the patient's left upper arm, forming two or three wheals. "Slimy" cultures are better than "flaky" ones. To prevent pyrexia salicylates are prescribed. Two more such injections each of 3 c.c., are given at intervals of seven days. If fresh live cultures are not available, a preparation known as "gonovitan" (Sachsische Serumwerke, Dresden) may be substituted. Usually the gonococci tend to disappear from the discharge immediately after the first injection but they may show a temporary increase before finally disappearing after eight to twenty-one days. The experi-

<sup>1</sup> *Wine and Food* 1938 17, 8

<sup>2</sup> *Brit J Venere Dis* 1938, 14, 42



cases of thirty nine workers who give 10 102 injections to 3000 men and women are quoted. The average proportion of cures was 80 to 85 per cent. The results are particularly good in chronic gonorrhoea in cervical gonorrhoea with ascending infection and in affections of the joints and tendon sheaths. The treatment is of no great value in acute urethritis. Harmful effects were negligible and amounted to only 0.06 per cent. most of these consisted of abscess formation which may have been due to other organisms. The principal point about this treatment is that it is the skin which plays a powerful part in the development of immunizing bodies. This has been realized by others notably Lambkin and Dimond who recommend that their ecto antigen should be given intracutaneously. Most venereologists will welcome any method which holds out good hope of success in the treatment of chronic cervical gonorrhoea especially if it is harmless and easy to apply. If the occurrence of complications is feared the patient may be given a preliminary dose of 0.3 ccm. The only practical difficulty is the source from which the live vaccine is to be obtained. In a clinic with a laboratory attached material may be always available but in private it would probably be best for the clinician to obtain a fresh polyvalent culture from a laboratory and add the necessary saline himself withdrawing the suspension direct from the plate with a syringe and injecting at once. Live vaccines certainly seem worthy of trial. Judging from the literature they appear to have been hitherto little used in this country.

### MODE OF ACTION OF DIGITALIS

Few drugs have been investigated more extensively than digitalis but the manner in which it produces certain important clinical effects is still obscure. The dramatic result obtained by digitalis in auricular fibrillation can be reproduced in laboratory experiments and has been satisfactorily accounted for but it is more difficult to explain the clinical improvement effected in cases with a normal cardiac rhythm. Digitalis was shown by Cushman to augment the activity of the mammalian heart under certain conditions and recently McKen Cattell and Gold have demonstrated the beneficial action on isolated strips of muscle from the cat's heart of ouabain in dilutions of even one part in seventy millions—which is equivalent to the concentration probably achieved therapeutically in man. Similarly digitoxin diluted to one part in ten millions had a powerful augmentor effect. These results indicate one possible mode of action of digitalis on hearts with a normal rhythm but other laboratory evidence suggests that in such cases the drug affects the peripheral vascular system rather than the heart. Most workers are agreed that in the intact animal digitalis decreases the minute volume the size of the heart and the venous pressure. It is difficult to account for these manifestations by any direct cardiac action and Dock and Tainter suggested that the drug caused a constriction of

the hepatic veins with a consequent pooling of blood in the liver. The problem has been investigated by Katz and his co workers who conclude that in therapeutic doses digitalis (digitofoline) affects the heart only indirectly its primary action being on the sphincter of the hepatic vein and on other blood vessels of the liver. This pools the blood in the splanchnic area and thus decreases the venous return to the heart and the size of the heart. The chief action of toxic doses however is they conclude directly upon the heart. Digitalis is generally recognized as by far the most important drug available for the treatment of cardiac disease but the simultaneous appearance of two papers pointing to such divergent conclusions does indicate that our knowledge of its mode of action is still very imperfect and that this action is probably more complex than has been thought.

### THE HEBERDEN SOCIETY AND ITS MEDAL

The Heberden Society was formed as a committee for the study of rheumatism about two years ago. Its membership includes all the medical staff present and past working at the British Red Cross Society's clinic in London and a limited number of other workers interested in the study of rheumatic diseases. Meetings are held quarterly or more often to discuss lines of research read papers and show cases. As the



name "Heberden" is always associated with one of the manifestations of rheumatism it seemed an appropriate and euphonious title for a group of workers in that field. The society has now instituted a Medal to stimulate research into the causes and incidence of rheumatic diseases. This will be awarded yearly for the best work done in that direction and the recipient will be invited to deliver a Heberden Lecture. We reproduce the obverse of the Heberden Research Medal. The honorary secretary is Dr Kenneth Stone 58 Chesterfield House Mayfair W1 to whom inquiries should be addressed.

Dr E. H. Cluver, Director of Medical Services, Union Defence Force and Deputy Chief Health Officer, has been appointed Secretary for Public Health and Chief Health Officer for the Union of South Africa in succession to Sir Edward Thornton who is retiring.



# SURGICAL PROCEDURES IN GENERAL PRACTICE

*This is one of a series of articles contributed by invitation*

## MINOR DENTAL EMERGENCIES IN GENERAL PRACTICE

BY

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As most of the diseases of the jaws arise from the teeth and the hard and soft tissues surrounding them a general knowledge of their anatomy is important, a cross section of a tooth *in situ* is therefore given below (Fig 1)

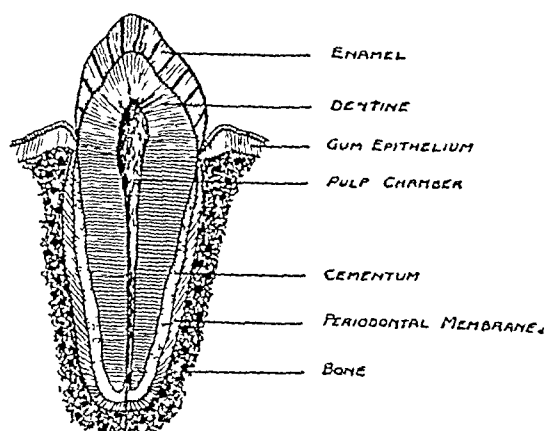


FIG 1—Cross section of a tooth *in situ*

### Pathological Conditions

Decay is the breaking down of the prisms of enamel of the crown of a tooth. Foodstuff collected on or between teeth ferments, and in the process of fermentation an acid is produced which dissolves the interprismatic substance holding the prisms together. The latter breaks down and a cavity into the tooth ensues. This may progress into the dentine and lead eventually to the destruction of the pulp. It is also believed that a metabolic form of caries exists, due to deficiency of the calcium which is necessary for hard and resistant teeth. This view is supported by the occurrence of the pregnancy type ("white") caries, in which the internal dentine structure breaks down before a flaw appears in the surface enamel.

Toothache may arise from two factors (1) pulpitis, and (2) periodontitis. It ensues when the decay reaches deep into the dentine, which shows nerve endings in its substance. Irritation of the latter, due to the progressing decay, causes a pulpitis, or irritation of the pulp, which is the so called "nerve" of the tooth.

### Pulpitis

The pain of pulpitis is throbbing and intermittent, thermal changes, especially heat, cause pain owing to the expansion of inflamed tissues within the solid walls of the tooth. Cold at this stage gives relief, as it constricts the tissues. Tapping of the tooth causes no pain. This is important in distinguishing pulpitis from periodontal inflammation, which is dealt with below.

Sedative dressings of oil of cloves, carbolyzed resin, or eugenol inserted into the carious cavity on a pledget of cotton-wool usually give immediate relief. If no relief results the pulp must be removed. When the pain abates the cavity should be cleaned of all decayed substances and

then filled with some replacement material. If the disease has progressed too far the pulp dies and disintegrates resulting in the formation of an abscess at the apex of the root.

### Periodontitis

This is an inflammatory condition of the periodontal membrane, a thin fibrous membrane which surrounds the tooth and which can be likened to the periosteum of bone. Its fibres sling the tooth into its bony surroundings and therefore act as a cushion or buffer during mastication. Inflammation and swelling of this membrane force the tooth from its socket, and the patient will complain of the tooth being too long. Pressure and tapping on the tooth are very painful. The pain is dull and constant, but is not evoked by thermal changes.

The condition may arise from two causes.

(a) *Trauma*—When this arises from a blow on a tooth counter-irritants such as aconite and iodine are best applied to the gum around the tooth for twenty-four to forty-eight hours. If no relief results, or the pain gets worse, extraction is indicated.

(b) *Degeneration of the Pulp*—This may cause inflammation of the periodontal membrane, in which case the tooth should be opened, the pulp removed, and drainage established. Again if no relief is obtained the tooth should be extracted.

### Neuralgia

This may be local or be referred by either a pulpitis or a periodontitis. Certain teeth affect certain areas (see Head's classification). The pains are always associated with a tooth or teeth on the same side of the head as the neuralgia. Referred pains never cross the midline. The offending tooth should be treated or, if no relief is obtained, removed.

### Extractions

For straightforward extractions two pairs of forceps only are necessary. For the lower jaw a pair of "duck-

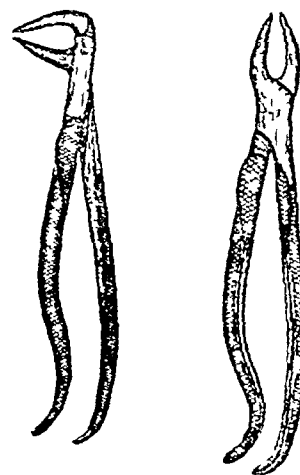


FIG 2—Duck bill and universal forceps used for removing lower and upper teeth

'bill' forceps are required, and for the upper jaw a "universal" pair (Fig 2). For the actual removal, be it of tooth or root, it must be remembered that one blade of the forceps is inserted buccally or labially and the

other blade will automatically follow on the palatal surface in the upper jaw and the lingual surface in the lower jaw.

The secret of extraction is to drive the forceps as high or as low as possible (depending on whether it be the upper or the lower jaw) and then to close the forceps until a good grip of the tooth or root is obtained. Once the tooth has been firmly gripped the correct movement of dislodging it is undertaken. This latter varies with almost every tooth but it is of the utmost importance to remember that *pressure should be maintained towards the apex of the tooth throughout the extraction*. The idea of this is to make the apex the fulcrum otherwise the crown or part of the tooth fractures. The operator stands in front of the patient for the removal of all teeth except those in the right lower jaw when he stands behind and to the right. The left hand should always be used to hold away the lip or cheek with one or two fingers and to guide the forceps into position (Fig. 3). In the case of the lower teeth the left hand is used to support the jaw. The left lower teeth are removed by placing the index

wards. In other words a to and fro movement should be employed (Figs. 4 and 5).

**Lower Premolars and Canines**—These teeth have conical roots and rotation is indicated.

**Lower Incisors**—These have roots flattened on their medial and lateral sides and only a to and fro movement towards the tongue and then outwards should be undertaken.

**Lower Wisdom Teeth**—These are of especial interest as their position is so far back that removal by forceps is not always easy or even possible. Furthermore the roots often tend to curve back sharply, and their removal is

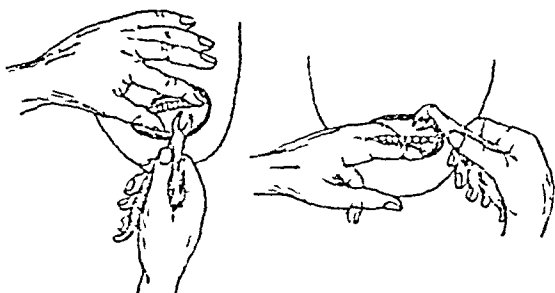


FIG. 3—Position of operator's hands for removal of upper teeth.

FIG. 4—Position of operator's hand for removal of left lower teeth.

finger into the sulcus, the middle finger on the lingual side and the thumb below the horizontal ramus of the jaw. This gives a grip and the necessary support to the mobile lower jaw during the extraction (Fig. 4). The right lower teeth are removed by supporting the jaw with the whole hand, the thumb being placed on the lingual aspect, the index finger into the sulcus while the rest of the fingers and hand support the horizontal ramus and the operator stands behind and to the right of the patient (Fig. 5).

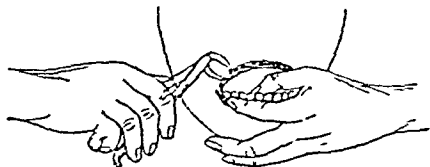


FIG. 5—Position of operator's hands for removal of right lower teeth.

#### INDIVIDUAL FORCEPS MOVEMENTS

**Upper Molars**—As these are three rooted teeth the movement of the forceps is outwards (Fig. 3).

**Upper Premolars**—The first premolar has bifid roots and the movement should be only outward. The second premolar is single rooted, and slight rotary movement can be applied at the same time as the outward movement.

**Upper Canines and Incisors**—These are conically rooted teeth and rotation and an outward movement should be combined.

**Lower Molars**—These are two rooted with anterior and posterior roots that are flattened on these aspects. The movement is inward towards the tongue and then out-

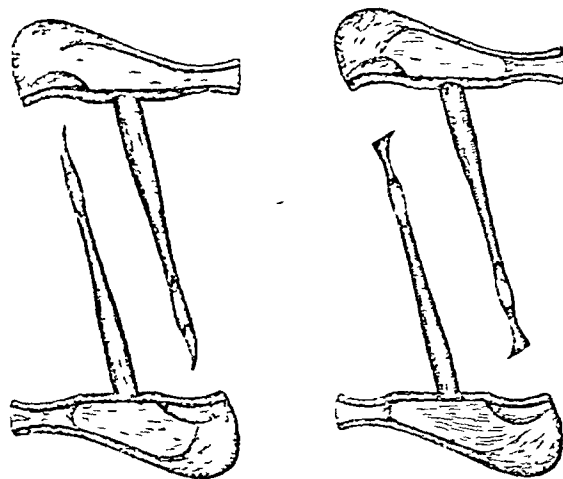


FIG. 6—Straight lever used for removing wisdom teeth.

FIG. 7—Right and left right angled levers used for removing roots.

therefore much more easily undertaken with a straight elevator or lever (Fig. 6). The lever has two surfaces rounded on one side and flattened on the other. The point is inserted and driven downwards between the second and third molars with the flat surface against the third molar or tooth to be removed. The lever is then bent downwards and the point engages against the surface of the anterior root of the tooth to be extracted, the second molar and the outer alveolar plate being used as a fulcrum. The second molar can well be removed by the same procedure. Two levers are necessary, one for the left and one for the right hand side.

#### Complications of Extractions

**Fractured Roots**—These occur most frequently in the lower jaw. If an empty socket is present next to the root its removal is undertaken by inserting the right angled

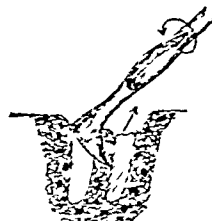


FIG. 8—Lever to remove root.

elevator (Fig. 7) into the empty socket and twisting it so that its point penetrates the septum or intervening piece of bone and engages the root which is then easily displaced (Fig. 8).

**Fractured Alveolus**—If a piece of bone is fractured during extraction it is best removed

**Fracture of the Mandible**—As a temporary measure a four-tailed bandage should be applied to the jaw and held in position until the splints have been made and the jaw set and splinted in the correct position

**Septic Socket**—Wash out with hydrogen peroxide and then follow with some mild antiseptic solution. If very painful a "dry socket" has occurred, and this is usually due to the sequestrum of bone between the roots having become necrotic. It is advisable to remove this, and when the socket has been syringed out a sedative dressing, in the form of a light tampon dipped in "dentrolone," should be inserted. If the socket is too painful to treat, pain is best relieved by the insertion of a 5 per cent or 10 per cent solution of cocaine. The wound should then be cleansed and a dressing inserted.

**Haemorrhage**—Primary and reactionary haemorrhages are treated in the same way. Reactionary haemorrhage usually starts several hours after the extraction. The clot should be removed and the socket syringed out with a mild hot antiseptic solution. Plugging is then undertaken with a strip of gauze dipped in a 1 in 1,000 adrenaline solution or oil of turpentine, or one of the modern drugs, such as sangostop, or snake venom from the Russell viper, which appears on the market under the proprietary name of stypten, can be used. The socket is replugged in twenty to thirty minutes if the bleeding has not ceased. In the case of haemophiliacs a local styptic is always indicated, and if bleeding is not brought to a standstill within a few hours a blood transfusion may have to be undertaken. Blood grouping, etc., should have been performed before the operation, and all arrangements made for an emergency.

**Secondary Haemorrhage**—This is rare, and is always associated with sepsis. Its treatment is the same as that for primary haemorrhage. After the septic material has been removed and the cavity thoroughly irrigated replugging should be done frequently to prevent the further accumulation of septic material. Bone infection must be watched for as a likely possibility.

**Dislocation of the Mandible**—This occurs more often than is usually supposed, and is especially liable to happen when extractions are done under a general anaesthetic. The dislocation may be unilateral or bilateral, the treatment being the same in either case. The thumbs are placed over the lower molars and the mandible forcibly depressed and pushed backwards. If the reduction does not occur—and this is rarely the case—the patient must be completely relaxed under a general anaesthetic. The dislocation is then easily reduced.

**Root Driven into the Antrum**—If the patient is seen shortly after the penetration of the root into the antrum the opening is enlarged and the root is readily removed by plugging the antrum with long strips of gauze and gently pulling it out again. Invariably the root comes out with the gauze, although the process may have to be repeated several times. The hole in the antrum is closed by dissecting up the mucous membrane from the sulcus until a serviceable flap has been obtained. This is drawn over the hole and sewn to the palatal mucous membrane.

**Root in the Antrum with Acute Infection**—Drainage must be established. Usually a probe inserted into the tooth socket will allow the pus to escape. This gives instant relief and converts the acute case into a chronic one. After a day or two the antrum can be washed out via the tooth socket. This is repeated several times,

if necessary, and then the same operation is undertaken as that described for the removal of a freshly fractured root in the antrum. It is advisable, however, to make an opening between the antrum and the nose, below the inferior turbinate bone, to establish free drainage, before closing the wound between the antrum and the mouth.

**Treatment of an Acute Abscess**—The patient usually appears with a swollen face, the size of the swelling varying considerably. Sometimes it is localized over the apex of the tooth only, or it may be very much more diffuse. Treatment consists in the establishment of drainage. An incision is made into the abscess under general anaesthesia (gas), or the surface of the swelling is frozen with an ethyl chloride spray and the scalpel inserted. The incision should be made as near the tooth as possible—namely, into the muco-periosteum, and not into the cheek or its soft structures (Fig 9). This prevents profuse

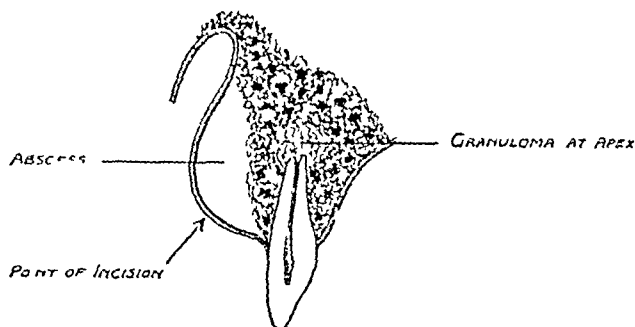


FIG 9—Incising an abscess

bleeding or the possibility of carrying the infection deeper or of incising some important structure. The offending tooth should be removed a few days later. If it is loose and accessible (in contradistinction to a deeply buried root) it can be removed at the same time as the incision is made. In single-rooted teeth an incision with drainage of pus relieves the condition, and after the acute symptoms have subsided treatment of the tooth can be undertaken, and it can be saved—a useful entity. This is especially important in the case of young girls and children who have a more or less perfect complement of teeth, and in whom the loss of one incisor tooth would result in a great aesthetic blemish.

M L-M Pautrier (*Ann Derm Syph Paris*, January, 1938) points out that lupus pernio of Besnier, sarcoids of Boeck, and small fibrotic lesions in the lung are probably all manifestations of a single reticulo endotheliosis, and that although the condition is only recognized by dermatologists because of the skin lesions there are cases in which the lung and glands are affected without any skin manifestations. He describes the case of a small boy, aged 10 suffering from spinal caries, who developed subcutaneous nodules near the affected area, which, on microscopical examination, showed a large number of giant epithelioid cells surrounded by lymphocytic infiltration. Later cystic rarefactions were demonstrated at the base of the phalanges, diabetes insipidus developed, and finally after a number of years, lupus pernio. The author recalls a case of diabetes insipidus reported by Tillgren, in which there was generalized adenitis with enlargement of liver and spleen, and many epithelioid nodules and cells demonstrable on microscopical examination. Pautrier reports, too, a case in which an apparently fit man requested removal of cervical glands which had been enlarged for many years and only worried him on account of their appearance. He was found, on further examination, to be suffering from generalized adenitis and enlargement of the spleen, and typical giant epithelioid cell collections were found on biopsy.

## THE LISTER INSTITUTE ANNUAL REPORT

On June 2 the Lister Institute of Preventive Medicine published its forty fourth annual report. We give here a brief review of some of the work done during the past year and recorded in the report.

### Virus Studies

Dr G H Eagles and his collaborators have continued their work on the agglutination by serum from cases of haumatic fever and rheumatoid arthritis of suspensions of virus like bodies obtained from similar cases. Positive agglutinations were observed considerably more often with such sera than with sera from patients suffering from other infections of joints: positive reactions were especially frequent during first attacks of rheumatic fever or rheumatoid arthritis.

Dr M H Salaman has confirmed Craigie's finding that the elementary bodies of vaccinia virus contain a heat stable and a heat labile antigen. Elementary bodies treated in the cold with the least amount of formalin which would render them non infective retained the heat labile antigen and a part of their power to absorb virus neutralizing antibody which property was destroyed by heating or treatment with alcohol. A lowered infectivity was brought about in elementary bodies by treating them with antiserum and then separating off the antiserum by centrifugation and washing. Dr Marjorie G Macfarlane has found that suspensions of vaccinia virus contain phosphatase and catalase in relatively large amounts. Studies by Dr A S Macfarlane and Mr R A Kekwick suggest that the particles of this virus need a water envelope for their stabilization and that salts cause flocculation by removing the water. Dr D McLean is investigating in nurses the possibility of producing immunity by the intracutaneous injection of a suspension of elementary bodies.

### Serological Studies

Dr A Felix and Miss R Pitt have found that the inactivation by phenol of the immunogenic function of the Vi antigen of *Bact. typhosum* seems to be due to some type of reversible reaction: the phenol can be removed and replaced by fresh saline with restoration of the immunogenic property. The search for a sterile antigen which could be used instead of living bacilli in the preparation of anti typhoid serum in horses for therapeutic use in man has been continued by Dr Felix and Dr G F Petrie. The position remains much the same and the bacilli are still the indispensable source of the "natural" Vi antigen required for the elaboration of the Vi antibodies. It has been observed however that the "denatured" Vi antigen present in whole bacterial cells after chemical treatment will induce an abundant Vi antibody formation in the rabbit though not in the horse. Dr W T J Morgan has obtained by diethylnegylcol extraction substances corresponding to the Vi and O antigens apparently free from proteins and capable of producing an antigenic response in the horse and rabbit but the immune body produced by this Vi antigen is less effective in protection experiments than that produced by suspensions of living bacilli. Dr D W Henderson has shown that twenty to fifty times more antibody may be needed to protect mice against relatively avirulent strains of *Bact. typhosum* than is the case with fully virulent strains, suggesting that the degree of virulence is of far less significance in this respect than is the total amount of antigen which requires to be neutralized.

Dr Felix has obtained further evidence of the value of the Vi agglutination reaction in the serological detection of chronic typhoid carriers: he was also partly

responsible for recommendations on the standardization of the Widal reaction which have since been adopted as a provisional international standard.

Dr H L Schutze has shown that the envelope antigen of *B. pestis* is the determining factor in prophylactic vaccination in the white rat and can be developed equally well by both virulent and avirulent strains and both rough and smooth varieties. Dr P A Gorer with Dr Schutze has been able to correlate H antibody production for *S. typhi murium* with resistance to infection with this organism in highly inbred mice. By brother-sister inbreeding for over thirty generations a pure mouse line has been obtained with a remarkable uniformity of reaction to infection. The value of such a line in laboratory experiment and in the standardization of biological products is obvious.

Work on the standardization of therapeutic sera has proceeded with particular regard to Type I anti pneumococcus serum and tetanus antitoxin. An interesting finding is that the therapeutic effect of an intravenous injection of tetanus antitoxin varies with the time interval between the injection and the previous administration of lethal doses of toxin: some effect is apparent even with injection at a time representing one third of the survival period of untreated control animals.

### Endocrinology

Dr V Korenchevsky contributed an article on the bisexual properties and co-operative activity of sexual hormones to this *Journal* last year (1937 2 896). His work on this subject using rats as experimental animals has been continued with the assistance of Miss K Hall and Mr R C Burbank. Antagonistic as well as co-operative activities are now being studied—for example the suppression by progesterone, testosterone, or androstenedione of the cornifying effect of oestrogens. During the pro-oestrus phase it has been noted that while the deeper layers of the vaginal epithelium are cornified as in oestrus the superficial cells become large and lucid resembling mucous cells: these changes have been termed pseudomucous metaplasia. Changes in the uterus and vagina in the prolonged resting phase (dioestrus) commonly occurring in the winter months and remanent of slight pregnancy changes were shown to be the same as those produced by the administration of small doses of progesterone and oestrone. Large doses of progesterone and very small doses of oestrone caused changes in the sexual organs histologically identical with those of pregnancy but the size and weight of the organs remained much less than during pregnancy. Better development was obtained when testosterone and other male hormones were also administered. Large doses of oestrogens it was found antagonize and suppress the pregnancy changes produced by progesterone. Another effect of large doses of oestrogens is the production of a uterine epithelial metaplasia which may become carcinomatous: this effect is suppressed by the simultaneous administration of progesterone. Large doses of male hormones are also dangerous in that they cause in the adrenals of males marked pathological changes.

### Vitamin Studies

A large scale investigation organized by Miss E Margaret Hume has given results in substantial agreement with the conversion factor of 1600 adopted in 1934 by the International Conference (League of Nations) on Vitamin Standardization connecting results of vitamin A assays by biological and spectrophotometric methods respectively. It has also shown that the value of 3000 international units of vitamin A per gramme previously ascribed to the U.S.A. reference cod liver oil is too high, the exact figure is more nearly 2600 I.U. per gramme. Equally extensive has been a biological investigation of

the potency of synthetic crystalline vitamin B<sub>1</sub>. Work done at twenty-two laboratories, the results being pooled and averaged, shows that 3  $\mu$ grammes of the crystalline material may be regarded as equivalent in potency to one international unit (10 mg of the adsorbite on fuller's earth of an extract of rice polishings).

Dr A R Todd and Dr F Bergel, after their synthesis of vitamin B<sub>1</sub>, have continued a study of the synthetic analogues of aneurin. With certain bacteria—for example, *Staphylococcus aureus*—the pyrimidine and thiazole derivatives of which vitamin B<sub>1</sub> is now known to be composed, when presented separately, had a growth-stimulating effect equal to that of vitamin B<sub>1</sub>. The vitamin B<sub>1</sub> complex has been shown to be concerned in some way with tissue-oxidation processes. Attempts have been made by Dr T F Macrae, Miss Constance E Edgar, and Dr M M El Sadr to purify the two dietary essentials other than lactoflavin in autoclaved yeast extract. Neither of these factors can be replaced by nicotinic acid imide in the nutrition of the rat, though nicotinic acid amide is present in one of them—the yeast eluate fraction of the vitamin B complex. This fraction, according to Sir Charles Martin, Dr Harriette Chick, and Dr A P Martin, will maintain in health pigs fed on the maize pellagra producing diet, which, in the absence of this small daily supplement of yeast eluate fraction, gives rise to a severe nutritional disease.

Nicotinic acid which has a curative effect on human pellagra the "black-tongue" of dogs, and the corresponding nutritional disease of pigs, has been shown in rats to be either inessential or necessary only in quantities small enough to be supplied even by the maize dietary which causes such severe disturbances in pigs and dogs. Dr P Ellinger, with Professor Ali Hassan and Mr M M Taha, obtained promising results in the treatment of Egyptian pellagrins by the administration of lactoflavin with the eluate and the filtrate obtained after adsorbing autoclaved aqueous yeast extract with fuller's earth. Dr Ellinger also noted in a group of seventy patients the association with pellagra of porphyrimuria and parasitic infection of the gastro-intestinal tract. This work was exhaustively reviewed in a leading article in the *Journal* of January 15 (p 127).

Dr S S Zilva has studied the alleged antitoxic properties of L-ascorbic acid in diphtheria. Groups of guinea-pigs subsisting at vitamin C levels ranging from almost complete depletion to supersaturation were given 1 to 2 minimum lethal doses of diphtheria toxin. The course of the toxæmia and the length of time before death ensued was the same in all the various groups. Dr Zilva has also shown, with Dr F Kidd and Dr C West, the gradual alteration in the balance of L-ascorbic acid and dehydro-ascorbic acid brought about during the growth of apples by an enzyme identical with the apple phenolase. Attempts are now being made to increase the vitamin C content of canned apples by the addition of an extract made by boiling and pressing the peel. Other work by Dr Zilva seems to suggest that the "vitamin P" activity (alteration in vascular permeability) observed by Szent-Gyorgyi and his collaborators may have been due to contamination of the crystalline substances obtained from lemon juice, with which they worked, by traces of L-ascorbic acid.

Drs A R Todd, F Bergel, T S Work, and H Waldmann have elaborated a process yielding from wheat-germ oil concentrates which show full vitamin E activity in a dosage of 15 mg. They have also isolated pure  $\beta$ -tocopherol, a nearly colourless oil showing full vitamin E activity in rats in doses of 3 to 5 mg. Routine biological testing of vitamin E preparations has been carried out by Miss Alice M Copping since April, 1937.

It is impossible to mention all the other activities of the Lister Institute, but its report is a document worthy of study indicating as it does the recent trends in several of the more important departments of modern research.

## LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

The annual meeting of the London and Counties Medical Protection Society was held at Victory House, Leicester Square, London, on June 8. Sir CUTHBERT WALLACE, Bart, who presided, referred to the loss which the Society had sustained in the deaths of Sir Squire Sprigge, a vice president, and of Dr R L Guthrie, treasurer, and in the retirement of Dr C M Fegen, one of the founders of the Society and until lately its secretary. He also welcomed the new secretary, Dr R W Durand.

### Review of a Year's Work

Speaking of the year's work of the Society, Sir Cuthbert Wallace said that of its nearly 16,000 members 10 per cent had occasion during the year to seek the Society's advice or assistance in one form or another. An important point to remember was that municipal hospital authorities were now insisting that their medical officers should join a protection society. There could be no evasion of personal responsibility on the part of such officers. The need for protecting their interests was exemplified during the recent Croydon typhoid inquiry, for had the Society not undertaken the defence of its member Dr Holden, M.O.H. for Croydon, he would either have had to arrange for his own representation and bear the heavy burden of expense entailed or to go unrepresented. Sir Cuthbert Wallace again mentioned the desirability of having radiographs taken in all cases of suspected fracture, or, if the patient refused to be x-rayed, of having an authentic record to that effect. Another very important thing the lack of which frequently embarrassed the Society in taking up cases for its members, was the keeping of proper records. He sympathized with the doctor who was impatient of records, they had been the bane of his own professional career and he had often said to his students, "There is nothing hard in medicine or surgery the only hard thing is to get the truth out of a patient." But records were necessary, among other reasons, having in view the protection of the doctor in subsequent contingencies. It seemed scarcely necessary to urge accuracy in certification but the experience of the Society showed that many practitioners were tempted by good patients and their own good nature to give certificates which economized the truth, they should remember that the members of the medical profession had to serve not only their patients but the public. Finally he mentioned that the Society had received many applications from practitioners overseas asking for a similar protection to that accorded to their colleagues in the home country, and the council was exploring the situation.

### Financial Position

In presenting the financial report Mr W M MOLLISON the treasurer, said that during the last two years the expenditure of the Society per member had exceeded the subscription. This was due to one very expensive case which had cost some £7,000. Otherwise the average expenditure over a series of years was well within the subscription limits, and the Society was to be congratulated upon a very sound financial position. Its membership was 15,825, and 1,152 members (616 of them in their first year of registration) were elected during 1937.

On the motion of Dr G F STEBBING seconded by Sir CHARLES GORDON WATSON Sir Cuthbert Wallace was re-elected president. The vice presidents and retiring members of council were also re-elected, Dr Durand's appointment to the secretaryship was confirmed, and votes of thanks were recorded to the solicitors and other officers. The annual report, which was adopted, embodied a narrative by the solicitors to the Society (Messrs Le Brasseur and Oakley) of the more interesting cases arising during the year. It was mentioned that the Road Traffic Act still causes a number of difficulties and that doctors should realize that if the provisions regarding payment of fees for emergency treatment are not strictly adhered to the fees to which they would otherwise be entitled will be irrecoverable. It is particularly to be noted that claims for fees should be rendered to the driver of the vehicle and not to an insurance company or employer.

## THE RED CROSS CONFERENCE

### DELEGATES FROM SIXTY NATIONS IN LONDON

The sixteenth International Red Cross Conference opened at St James's Palace on June 20. It was attended by delegates from nearly sixty countries appointed in most cases both by the Government and by the National Red Cross organization. The British Government delegation was headed by Lieutenant General W. P. MacArthur, Director General Army Medical Services, and the Red Cross delegation by Sir Arthur Stanley and Lord Ebbisham, among other members of the delegation were Sir William Willcox, Sir Harold Lawes, and Dr H. Golden Thompson. The French delegation was headed by M. Basdevant, of the Ministry of Foreign Affairs, and the Marquis de Lillers, president of the Central Committee of the Red Cross in Germany by the Duke of Saxe-Coburg and Gotha (Mr. Aenstools) that of the United States by Mr. Norman Davis, of Norway by M. Colbin, Norwegian Minister in London, the Netherlands by Surgeon General S. W. Prins, of the Army Medical Service, and the Papal State by Sir George Macdonagh. In addition to the Government and Red Cross organizations a number of other bodies sent delegates in an advisory capacity. The League of Nations, the International Labour Office, the International Hospital Association and the Permanent Committee of International Congresses of Military Medicine and Pharmacy were represented. Colonel L. M. Cowell and Mr. A. W. Haskett (Public Relations Officer) attended on behalf of the British Medical Association. Sir Harold Pink and Major R. P. Woodhouse on behalf of the British Hospitals Association. Major General Sir John Duncan on behalf of the Order of the Hospital of St. John and Colonel Donald J. Mackintosh on behalf of St. Andrew's Ambulance Association.

The Conference, which meets every four years, was to have been held in 1935 in Madrid but that being impossible, the venue was changed to London which was last the scene of such an international conference in 1907. After the formal opening and one plenary session at which four commissions (general legal relief and educational) were appointed, the Conference sat in commissions for three days, these meetings being held at the British Medical Association House. It reassembles in plenary sessions on to-day (Friday), when the reports of the commissions will be presented. A report on the general business and conclusions of the Conference will appear in our next issue.

#### Opening Ceremony

At the opening ceremony, over which Sir Arthur Stanley presided, a welcome to the delegates was given by H.R.H. the Duke of Gloucester, Chairman of Council of the British Red Cross Society. He also brought a message from H.M. the Queen, President of the Society, in which she expressed the earnest hope that the Conference would "bring nearer the day when the Red Cross will be universally regarded as an effective guarantee that human sufferings, where they cannot be prevented, shall nowhere continue to go unrelieved."

In the course of his speech the Duke of Gloucester suggested that in the commissions consideration should be given to the question of whether some part at least of the sufferings which are being endured in different parts of the world to-day are not avoidable sufferings which could be prevented by the exercise of that mutual good will which the Red Cross has done so much to engender and the extension of that spirit of chivalry which is fundamental in its work.

The international Red Cross conventions (His Royal Highness continued) and the international co-operation which these conventions guarantee have come to assure to sick and wounded soldiers in war time and to prisoners of war, a degree of protection which as short a time as a century ago might have seemed unattainable. But

simultaneously with the progress made in this direction the evolution of modern methods of warfare has created a new category of war sufferers. I would ask the Conference therefore to consider very carefully whether it cannot usefully make its voice heard on behalf of these unfortunate people. While I fully realize the difficulties in the way, might it not at least be looked upon as a duty incumbent upon the Red Cross to assist with all the moral and material force in its power the protection of women, children and defenceless persons?

#### Responses by Delegates

The first response was made by M. Max Huber, President of the International Red Cross Committee. Nothing can shake the principles which are at the basis of the Red Cross movement, he declared, not because there are no other organizations which join with us in the alleviation of human suffering but because the Red Cross differs in one respect from other humanitarian bodies—it is a thing apart because it came into being on a battlefield and its emblem has become the sign of the protection of those who are defenceless amid the passions which are inevitably aroused by war. The protection accorded by the existing Geneva Conventions to the sick, the wounded, and prisoners of war should be equally applied to all who are equally defenceless. To the consideration of that extension as the Duke of Gloucester had suggested, the Conference would address itself.

Mr. Norman Davis, chairman of the Board of Governors of the League of Red Cross Societies, said that while the Red Cross movement developed through the vision and activity of Henri Duvant, he in turn derived his inspiration from an Englishwoman—Florence Nightingale. It was therefore most appropriate and a source of real satisfaction that at this critical period in world history the Conference should be held in Florence Nightingale's country.

His Royal Highness (Mr. Davis continued) has alluded in feeling terms to some of the great problems which to-day confront the Red Cross, laying particular emphasis upon a possibility which I, for one, should warmly welcome. The questions on the agenda of this Conference provide for various ways and means by which the Red Cross may alleviate distress and suffering whenever called upon to do so. If however we can go further than this and by any action of this Conference help to prevent some of the suffering from arising at all, I may say to your Royal Highness that I am persuaded such action will be taken without hesitation by the Conference and with the cordial support of the Red Cross movement as a whole.

Messages were read from the President of the French Republic, the German Red Cross, the King of Sweden and Prince Tokugawa of Japan, who was described as a most ardent and faithful supporter of the Red Cross.

#### Red Cross Activity throughout the World

At the afternoon session a very long report was read by M. de Rouge, secretary general of the League of Red Cross Societies, reviewing the activities of these societies since the previous conference held at Tokyo in 1934. He mentioned that the German Red Cross had presented to the Conference an outline of the latest developments in its society—that is to say, its adaptation to the ideology of the Third Reich and the complete reorganization of its formations. The Central Committee of the Spanish Red Cross gave a statistical account of the medical activities undertaken, and while this was necessarily incomplete it showed that a great work had been accomplished. After reviewing the reports from many different countries M. de Rouge said that it was impossible to read them incomplete as many of them were without feeling a sincere admiration for the huge task which had been accomplished.

Mr Norman Davis, chairman of the League, said that it was not the function of the Red Cross, nor within its power, to determine the rules and methods of warfare. Nevertheless, it could not be indifferent to the destructiveness of modern warfare and to the appalling increase in human suffering which it entailed. He was glad to note that on the agenda of the Conference was a discussion of a plan for the creation of neutralized hospital areas ('villes sanitaires'). This proposal was referred to the Legal Commission, as was the further question of the function and activity of the Red Cross in time of civil war.

The task of the League of Red Cross Societies, added Mr Davies, grew in importance each year, and the material support of the national societies must likewise increase. The world needed the League, and those national groups which were giving it support were making a genuine contribution to world betterment.

### Red Cross Work in Spain and China

In a long statement on the work of the International Red Cross Committee, M. Max Huber referred to Red Cross enterprise in Spain, the most important action the Red Cross has taken since the great war. Only thirty-six of the national societies out of sixty contributed in money or material to the work of the International Red Cross in the civil war, and 80 per cent of the funds were contributed by four societies only. Only some fourteen national societies responded to the appeal for help in China. In the three centres of international action of the Red Cross during the last two and a half years—Abyssinia, Spain, and China—the national societies have given or collected something under five million Swiss francs (£240,000). The point was made that at the beginning of each conflict contributions rise steeply, but the effort is not sustained after the first year or so.

### THE ST. JOHN AMBULANCE BRIGADE

The report on the work of the St John Ambulance Brigade carried out in 1937 was presented on May 20 to the Chapter General of the Order by Sir John Duncan, Chief Commissioner. In these days of intense activity for everyone it is remarkable that more and more men and women can be found to give up their time and energy voluntarily. During 1937 the Brigade expanded by 151 divisions, representing a personnel of 2,381 over 850 of these new members were boys and girls joining the cadet corps. The total membership of the Brigade has now risen to 84,419, and this is not a climax for the increase has been steady over a number of years and there is no reason to believe that it will not continue. Increased membership has meant increased activity. The number of cases dealt with was 688,823, being over 74,000 more than the year before. Cases included almost everything, from a cut finger to a fatal car smash. The busiest day of the year was Coronation Day, on that day 7,500 men, women, and cadets were on duty and dealt with over 9,500 accidents.

The Brigade has also been busy on the roads. There are 216 roadside huts and 1,148 first aid posts. The presence of these huts and first aid posts contributes to safer roads as they act as a warning to drivers. Staff voluntarily in attendance are able to deal immediately with accidents if they do occur. The motor ambulances also had a busy year. The total mileage was 141,157 and the cars were used for 123,359 cases—11,000 more than in 1936. Apart from their usual work the ambulances were called to 22,300 road accidents and covered 190,000 miles on this work. The St John Ambulance Brigade was to the fore in assisting in air raid precaution arrangements, and the work has already been in hand for three years. These extra activities have added considerably to demands on members' time. It was in fact necessary to set aside thirteen week ends in the year for special instruction. The result of this activity can be summarized as follows:

Instructors trained 6,003  
Members awarded certificates 25,011  
Members of public awarded certificates 10,348  
Four films have been made illustrating A.R.P.

### EPSOM COLLEGE

The eighty-fifth annual general meeting of the Governors of Epsom College was held at the office 49, Bedford Square, W.C., on June 17, 1938, with Dr Henry Robinson in the chair. The President Lord Leverhulme, was unavoidably prevented from attending, as he was in Canada.

The result of the first election of pensioners and foundation scholars was announced by the Chairman, as follows:

#### Foundation Scholarships

Andrew, Alfred T.	Maclean, Robin W.
Beswetherick, Anthony F.	McKintosh, Ian B.
Bisset, Norman G.	Oldershaw, Kenneth L.
Collingwood, Christopher N.	Playfair, Henry R.
Evins, Hugh A.	Robertson, John A.
Huddy, Francis W.	Treves, John K.
Jackson, Markham A.	

#### Pensions

Ordinary and Dr Strong Pensions (£40 per annum)
Goulston, Mrs. Mary J.
Thomas, Mrs. Florence J. M.
Pugh Pension (£30 per annum)
Cooper, Mrs. Annie G.
"Brodie Swell Pension (£30 per annum)
Row, Miss Jane S.
"Highett Pension (£42 per annum)
Eyton Jones, Dr. John A.

In addition, grants were made to various unsuccessful candidates.

The Chairman referred to the loss which the College had sustained by the death of Sir Raymond Crawford, who was for twenty-three years a member of the Council and its chairman for thirteen years. Sir Raymond's administrative ability, wide knowledge of educational matters in general and of medical education in particular, and his personal energy were all placed at the disposal of Epsom College with the one idea that it should take a leading place among the public schools of England.

#### Annual Report and Elections to Council

In presenting the report, Dr Robinson said that over 400 subscribers had signed seven yearly covenants. The report gave interesting details of the progress of the school in work and in play, with some outstanding records attained by Epsom boys and Old Epsomians, and showed that Old Epsomians were among the recent benefactors of the College. For instance, Colonel W. L. Crawford had given £5,000 to found a leaving scholarship and £250 to found a prize for an essay dealing with the Overseas Empire. Mr E. E. Fisher, FRCS, had sent £250 as an expression of gratitude to the College, the sons and daughters of the late Mr William Murray Wilson had established a prize to perpetuate the memory of their father, and Dr W. Rushton-Parker had given £1,000 to be expended for the benefit of science and £100 for the library. Mrs H. G. Tetley had given a further £500 to augment the Tetley Scholarship Fund which she founded a few years ago.

The following members of the Council were re-elected for a further period of three years: Mr D. C. Birtley, Sir John F. H. Broadbent, Bt. M.D., Surgeon Vice Admiral Sir Reginald Bond, K.C.B., Sir Ernest Goodhart, Bt. Mr R. M. Handfield Jones, FRCS, Mr Frederick G. C. Morris, Sir Cosmo Parkinson, K.C.B., Dr Harold Spitta, Mr T. Hollis Walker, K.C., and Dr Daniel O. Twining was elected to fill a vacancy. Dr C. E. Douglas, LL.D. of Fife was elected a Vice President in recognition of his great interest in the College, and the valuable services he had rendered to the Royal Medical Foundation as honorary local secretary for thirty-six years.

The By-laws of the College were varied so as to widen the terms under which contributors can become life governors with a special reference to the widows of subscribers who wish to carry on their late husbands' subscriptions. A new by-law was approved ensuring the solvency of Trust Funds by limiting the value or the number of pensions and scholarships to within the income of the fund.



Colonel Norman C. King, Mr. H. H. Rew and Mr. H. A. Dwyer, F.C.A., were appointed auditors for the coming year and the Chairman proposed a hearty vote of thanks to all honorary local secretaries, the British Medical Association, the Medical Insurance Agency, the Charities Committee of the British Medical Association and the Editors of the *British Medical Journal* and the *Lancet* for all the work that they had done on behalf of the Foundation.

## INTERNATIONAL GUILD OF HOSPITAL LIBRARIANS

The second international conference of the International Guild of Hospital Librarians was held in Bern, from June 7 to 11. Delegates came from Belgium, Finland, France, Germany, Great Britain, Norway and Switzerland and other countries which were not actually represented sent interesting reports about their work together with good wishes for the success of the conference. Very many subjects of hospital library work were discussed and it is evident that steady progress has been made in important directions since the Paris conference in 1936.

Three reports were presented by the British Section of the Guild. Mr. M. E. Roberts (hon. secretary) spoke on "Methods of Establishing Hospital Libraries" and papers were sent by Mrs. Raymond and Mrs. Beddington on "Methods of Collecting Books" and "The Hospital Librarian for Recruitment and Status" respectively. There were some interesting accounts of library work in sanatoria for tuberculous patients and during one discussion it was decided how experiments in Paris have shown that risk of infection is fairly negligible. Great interest was aroused by Dr. Warth's address on "Books and Reading for Mental Patients".

During the conference an important meeting of Swiss delegates was held at which it was strongly recommended that a representative committee should be formed for the purpose of developing hospital libraries in Switzerland and that this should be carried out under the auspices of Veska (the Swiss Hospitals Association) which it was further suggested should be affiliated to the International Guild—a recommendation which added to the undoubted success of the Congress. Dr. Sand, the president of the International Guild at the end of his report announced that an invitation had been received to hold the next conference in London in 1950. The delegates unanimously agreed to this.

All the papers read in English at the conference will be reprinted in numbers of the *Book Trolley*, the organ of the Guild together with summaries of the French and German papers. The latter will be published in full in the journal of Veska which may be obtained from Dr. Otto Binswanger, Kreuzlingen, Switzerland or the hon. secretary, 48 Queens Gardens, W.2.

W. H. Wright and E. B. Cram (*Amer. J. Dis. Child.* Decem. ber 1937) discuss the treatment and control of threadworms. There is no known anthelmintic which in single doses will remove all the worms. In the present investigation tetrachlorethylene seemed to be the best drug for treatment by a single dose, santonin was not as effective as it is usually thought to be. The fact that oxyuriasis is often a familial condition calls for simultaneous treatment of all infested members of the family. Medicated and non-medicated enemas were of value but the prolonged use of these is irksome especially when several members of the same family are affected. Enemas when used too frequently also irritate the large bowel and later cause constipation. Ointments may relieve irritation but do not prevent the migration of the ova from around the anus. Experiments are in progress to find a safe, cheap anthelmintic for this common trouble. It is not usually recognized that the ova of the worms are not deposited in the intestines but are expelled by the gravid female after migration out of the anus on to the perineal region.

## Reports of Societies

### TREATMENT OF CEREBROSPINAL FEVER

A meeting of the Fever Hospital Medical Service Group of the Society of Medical Officers of Health was held in London on May 27 when the subject of discussion was the modern treatment of cerebrospinal fever. Dr. E. H. R. HARRIS was in the chair and the first speaker was Dr. C. G. K. THOMPSON.

Dr. Thompson gave a brief description of the new screw cannula and other apparatus used in the treatment of cerebrospinal meningitis by continuous spinal drainage. The results of this treatment had been encouraging in spite of a 35 per cent case mortality. Large doses of intravenous serum, up to 160 ccm. on three successive days to combat the toxæmia and sterilize the cerebrospinal fluid were administered in addition to the treatment by continuous drainage. He produced the results of an experiment carried out in conjunction with Dr. V. D. Allison of the Ministry of Health to show that (1) serum given intravenously appears in measurable quantity in the cerebrospinal fluid within two hours of administration and that (2) artificial agglutinins also appeared in the cerebrospinal fluid within the same period. This important finding greatly supported the principle of continuous drainage. Twenty-eight cases in all were treated. Nineteen of these were in the severe category in which occurred all the deaths—a total of ten. Six of these were in the main due to the added complication of bronchopneumonia which in the light of past experience could perhaps have been avoided. The actual case mortality from meningitis alone worked out at 1-3 per cent.

### Continuous Spinal Drainage

The drainage was carried out for an average of 150 hours. The greatest amount drained was 4.185 ccm. and the average amount was 2 litres. The treatment showed considerable advantages over the routine diurnal lumbar puncture, the more important of which were the rapid relief of acute symptoms, the avoidance of the blocking of the clefts of the fourth ventricle and the avoidance of loculation of the inflammatory exudate in the subarachnoid spaces—particularly the perineural diverticulae of the cord—which gave rise to the distressing spinal rigidity. It was quite rational to relieve the increased intracranial tension caused in the main by the outpouring of inflammatory exudate from the meninges and the congestive enlargement of the cranio-spinal contents and to keep the pressure normal so that an increased congestion could occur and hasten the process of repair. Any treatment which did not provide an adequate escape for the large amount of meningeal exudate produced entailed a grave risk of distressing sequelae. These sequelae were the result of adhesions round the nerve roots of the cord and brain, set up by loculated exudate.

### Meningococcus Antitoxin and Sulphanilamide

Dr. H. STANLEY BANKS said that everyone would be impressed by the ingenuity of the continuous drainage technique but that his experience had led him to an entirely opposite conclusion as to the treatment of acute cases—namely, that drainage was unnecessary provided that the cerebrospinal fluid could be rapidly freed from organisms. In most cases this could be achieved either by the intensive use of meningococcus antitoxin or by sulphanilamide. In the last four and a half years he had treated 107 acute cases. Thirty-eight had been treated with the serum alone intravenously and spinally with a fatality rate of 16 per cent. Fifty-eight had been treated with the serum intravenously and sulphanilamide in high dosage by mouth, with a fatality rate of 12 per cent, and



eleven selected cases were treated with sulphanilamide alone, with one death. This comprised all the cases observed during the period, except for certain groups of cases which were excluded as not being amenable to specific treatment. In the group receiving combined therapy there were ten infants under 1 year, with one death. An investigation carried out at the Southern Group Laboratory had shown that serum given intravenously in this disease rapidly appeared in fractional amount in the cerebrospinal fluid and was maintained therein for several days. Sulphanilamide given by mouth appeared in the fluid in about the same proportion as in the blood stream, it had to be maintained at a level of about 5 mg per 100 ccm for at least three days. The dosage required in order to secure this was high, averaging 1 gramme per stone of body weight, and in infants two or three times this amount. The dose was reduced after three days and the administration terminated in about nine days. Early cyanosis was not in itself an indication for reducing dosage. It was not due to sulph- or methaemoglobin-æmia. The drug, even in the acute stage of this disease, could be administered by mouth. He considered that sulphanilamide therapy was a most important advance, but that in moderate and severe cases serum should be given in addition in a large dose, not intrathecally but intravenously, or in infants intraperitoneally.

### General Discussion

Dr SAGE SUTHERLAND stated that during the five years 1933 to 1937 201 cases of cerebrospinal fever had been treated in hospital at Manchester. The annual mortality rate varied from 28 per cent to 47 per cent. During the last twelve months the mortality rate, excluding deaths within forty-eight hours was 36.8 per cent, and during this period antibacterial and antitoxic serum was administered intramuscularly, intravenously and intrathecally, the average dosage being about 100 ccm. In a survey of the cases treated during the last five years the lowest mortality rate was 14 per cent, in the 5-10 age group and the highest 67 per cent, in the under 1 year group.

Dr J V ARMSTRONG said that he felt that the principle of continuous drainage—namely, that of giving free drainage to a purulent exudate which was under pressure—was physiologically sound. The method had eliminated basal block, but unfortunately was inapplicable to infants, amongst whom basal block and hydrocephalus were frequent complications. The fact that an infant discharged apparently cured might later develop hydrocephalus should always be taken into account in assessing any form of treatment.

Dr R A O'BRIEN suggested that the favourable results in Dr Banks's series were due to the action of sulphanilamide both on the meningococci and on the streptococci, which might cause fatal bronchopneumonia. Antibacterial serum properly made would protect mice against lethal doses of culture. Miss Branham had recently favoured the use of sulphanilamide as well as of serum proved by mouse experiment to contain protective antibodies.

Dr J E MCCARTNEY said that the most significant point about Dr Banks's work was the swift disappearance of organisms and rapid reduction in the number of cells in the cerebrospinal fluid. The cells indicated the degree of inflammatory reaction and showed that the infection was quickly overcome. In the absence of infection therefore, there were no inflammatory products to remove and repeated puncture and continuous drainage were not necessary. There should be no aftermath of infection due to chronic fibrosis, and hydrocephalus should not supervene. In the continuous drainage method the products of inflammatory reaction were removed but the infection itself was not touched and in consequence chronic inflammation with hydrocephalus was more likely to occur.

Dr ERIC C O JEWESBURY said that there must be general agreement that Dr Banks's results were most impressive. He spoke of six cases at St Bartholomew's Hospital in which sulphanilamide combined with specific therapy and regular

lumbar drainage had been employed. Lack of experience had led to the sulphanilamide being given by various routes and the dosage had been smaller than that Dr Banks advocated. The response had therefore been slower. All the cases however had been severe ones and all had made good recoveries. Dr Jewesbury mentioned one case in which the concentration of sulphanilamide in the cerebrospinal fluid fell after the dose by mouth had been doubled. The concentration and the effectiveness of sulphanilamide in the cerebrospinal fluid seemed to be variable and unrelated to one another. Crawford and Fleming, for instance, found that in one case a concentration of 1.39 mg per 100 ccm in the cerebrospinal fluid sterilized it whereas in another similar case a concentration of 17.8 mg per 100 ccm failed to do so. A constant dose by mouth often led to very variable concentrations in the cerebrospinal fluid.

### ANAEMIA OF PREGNANCY

At a meeting of the Edinburgh Obstetrical Society on March 9, with the President, Professor HENDRY (Glasgow), in the chair, Dr MOIRA STEVENSON read a paper on "Anaemia of Pregnancy."

She said that although most people were aware that anaemia was a common complication of pregnancy and the puerperium, this was not the impression one gained from a summary of the literature. Since the introduction of liver therapy in pernicious anaemia, however, more interest had been taken, and recently many cases of "secondary anaemia of pregnancy" had been recorded, but it would appear that "pernicious anaemia of pregnancy" was very rarely found in temperate zones. It was accepted as common in India, but there the condition was considered to be tropical macrocytic anaemia complicated by pregnancy.

Impressed by the rapid response to liver therapy in some ward cases where "pernicious" anaemia appeared to date from a pregnancy, and by the apparent frequency of puerperal anaemia in the out-patient department, Dr Stevenson began an investigation in 1928. One hundred patients were examined during a period of six years. Some were seen during the routine work of one medical unit of the Glasgow Royal Infirmary, and some as cases of special interest in the Glasgow Royal Maternity Hospital. They were not collected at a clinic for anaemia, and in no way represented the frequency of anaemia in the Maternity Hospital.

For purposes of description she used the simple classification of (1) pernicious, megalocytic or hyperchromic anaemias, (2) secondary, microcytic or hypochromic anaemias. There were thirty cases in the first group, and seventy in the second, but these figures gave no indication of the relative frequency of the two types, as more attention had been paid to the first.

It appeared to be more common than was generally realized. It was a serious and sometimes fatal complication of pregnancy. She detailed her findings and differentiated it from true Addisonian anaemia as follows: (1) It occurred at an earlier age. (2) Multiparity was a predisposing cause. (3) Poor nutrition was common. (4) It was more rapid in development. (5) Achlorhydria was uncommon, but the gastric secretion was abnormal. (6) Retinal haemorrhages were the only signs of involvement of the nervous system. (7) Haemolysis was relatively slight. (8) The blood picture reflected a more plastic marrow, and varied with the chronicity of the illness. The red cells were sometimes deficient in haemoglobin. Price-Jones curves usually showed a broadened base, without a shift to the right. (9) Response to suitable therapy was usually more rapid. (10) Maintenance treatment was not required. With regard to aetiology, it appeared that there was a temporary lack or insufficiency of the intrinsic factor in certain individuals during pregnancy. Dietary deficiency of the extrinsic factor probably played a part in causation.

A brief description of the seventy cases of the secondary group was given. It was more common than the pernicious type though still a rule not so serious. It was a microcytic hypochromic anaemia resembling idiopathic hypochromic anaemia but differing from it in the following features: (1) It usually occurred at an earlier age. (2) While ichthyohydria was common hyperchlorhydria was sometimes found. (3) Icteric tinging of the skin and slight excess of urobilinogen in the urine were common. (4) There was often anisocytosis with considerable numbers of large polychromatic cells. Price-Jones curves showed a broadened base as well as a shift to the left. Leucocytes were sometimes increased. (5) While massive iron therapy usually was the most satisfactory form of treatment the addition of liver was sometimes helpful. (6) Some cases recovered very rapidly and remained well without maintenance iron therapy. The main aetiological features appeared to be the strain of repeated child bearing, dietary deficiency and abnormal gastric secretion with poor absorptive powers.

### General Survey

Dr Stevenson was becoming more and more convinced that these anaemias could not be separated into two watertight compartments. Some resembled pernicious anaemia, and some resembled idiopathic hypochromic anaemia but this was a group which had morphological and possibly aetiological features of both and where the liver factor plus iron were required in treatment.

In the course of the investigation certain questions of interest had arisen the most important being related to haemolysis—slight in the pernicious group and occurring in many cases of the secondary group.

She stressed the importance of adequate nutrition and ante-natal care as possibly preventing their occurrence.

### BRITISH ORTHOPAEDIC ASSOCIATION

The spring meeting of the British Orthopaedic Association was held in London and Oxford on May 27 and 28 under the presidency of Mr NAUGHTON DUNN. The guests included a large contingent of Scandinavian orthopaedists and their ladies, led by Dr GUILDBL (Denmark). Professor WALDENSTROM (Sweden) and Dr PLATO (Norway). One day was spent at the country establishment of the Royal National Orthopaedic Hospital at Stanmore and another at the Wingfield Morris Hospital at Oxford. Clinical demonstrations were given at both hospitals. The material shown covered a very wide range of deformities and disease, tuberculous and non tuberculous. The excellent occupational training centres at both hospitals aroused great interest. During the meeting the following short papers were presented.

*Distribution and Treatment of Extra articular Foci in Tuberculosis Arthritis of the Hip joint*—Mr J. A. CHOLMELEY (London) gave an account of fifty five children treated at Stanmore for tuberculous foci in the immediate neighbourhood of the hip. The most common sites were in the ilium adjoining the acetabulum and in the metaphysis of the femoral neck. In forty three patients the treatment had been conservative and in twelve the focus had been excised. In both these groups the hip joints eventually became involved in the large majority. Less than 10 per cent of the fifty five children escaped with movable hip joints. Thus the conclusion was drawn that attempts to excise extra articular foci had no advantages over conservative treatment.

*Structure and Function in Synovial Joints*—Mr M. A. MACCAILL (Sheffield) elaborated the remarks which he had made in October (Journal 1937 2 1191) on the principles of joint mechanics. He outlined the relation and adaptation of joint function to its lubrication by the synovial fluid and gave a detailed account of the structure and function of

ligaments. He ended by describing several joints in detail in the light of his researches.

*Osteochondritis of the Adult Tarsal Scaphoid*—Mr J. F. BRADFORD (Birmingham) gave details of nine cases of osteochondritis of the scaphoid occurring in adult women and affecting both feet. The characteristic lesion was an oblique splitting of the scaphoid and separation of the two fragments. The smaller outer fragment was displaced dorsally, the larger inner fragment was displaced only gradually and came to lie on the medial aspect of the head of the astragalus. Subsequently gross osteoarthritic changes developed in the mid tarsal joint.

*Operation to Restore Opposition of the Thumb*—Mr F. J. ALLAN (Birmingham) reviewed forty three patients on whom he had operated to restore opposition of the thumb. Marked improvement in the function of the hand had resulted in all but one patient. The operation was applicable to both flaccid and spastic paralyses and involved the insertion of a tibial graft between the index finger and thumb metacarpals so that the thumb was maintained at right angles to the palm.

*Arterial Occlusion in Relation to Volkmann's Contracture*—Mr D. LLOYD GRIFFITHS (Manchester) argued that the venous obstruction theory was no longer tenable as explaining the cause of Volkmann's contracture and that the bulk of the evidence suggested that the condition was due to arterial obstruction. He quoted two patients in whom following occlusion of the femoral artery by a proven embolus changes in every way similar to those associated with elbow and forearm traumas occurred in the calf muscles. A plea was made for a more careful recording of these cases. It was important to record for example whether the radial pulse was present or absent. It seemed likely that the only effective treatment was operation which should include liberal opening of the deep fascia and inspection of the brachial artery. If the artery was obstructed by spasm it was not yet certain what should be done. Periarterial sympathectomy and arterectomy had in the main been disappointing.

*Preliminary Account of a Method of Arthrodesis for Healed Tuberculosis of the Hip*—Mr H. A. BRITAIN (Norwich) illustrated by a film an operation which consisted in performing a short oblique subtrochanteric osteotomy and displacing the distal fragment inwards until its upper end came into contact with the ischium over an area which was sawed with a special osteotome. If the hip was adducted the procedure could be carried out blindly through a limited antero-lateral approach if abducted the classical posterior approach was employed. It was claimed that this ischio femoral arthrodesis was a much sounder mechanical procedure than the usual ilio femoral arthrodesis. In either approach the operation could be performed well away from the diseased joint. Eight patients who had been observed for at least two years since operation were reported in all but one who committed suicide after the removal of the plaster. The functional results were excellent and there had been no recurrence of the disease.

The association dinner was held at the Langham Hotel and the after dinner speeches were reported in the *Journal* of June 4 (p. 1227). Other extremely enjoyable features of the social programme were visits to Windsor Castle and Hampton Court tea in St John's College Oxford a sherry party at Blenheim Palace by invitation of the Duchess of Marlborough, and a dinner in New College Oxford at which Viscount Nuffield was present and addressed the association.

The University Grants Committee has now published the returns for the academic year 1936-7 from universities and university colleges in receipt of Treasury grant (H.M. Stationery Office 1s 3d). The number of full time students to which this relates was 49,689 of whom 36,612 were in English, 3,197 in Welsh and 9,880 in Scottish university institutions. Of the total number 13,263 are grouped in the section headed Medicine and Dentistry—11,430 men and 1,833 women.

## Local News

### ENGLAND AND WALES

#### Medical Aid in Childbirth

The Minister of Health has communicated with local supervising authorities (Circular 1705) on the methods they might suitably adopt in order to secure that the best obstetric skill is available to expectant mothers on occasions when midwives have to call in a doctor. The suggestions made follow consultation with the various local government bodies interested, as well as the British Medical Association. The recommendations are

(1) That a panel of doctors who will be available for this service should be drawn up for the area of each local supervising authority

(2) That a small advisory committee of general practitioners and obstetric specialists should be set up in each area under the chairmanship of the medical officer of health to advise the authority in regard to the operation of the arrangements and on any alterations which may be found necessary in order to secure and maintain a high standard of obstetric practice

Such arrangements are facilitated by the fact that under the Midwives Act of 1936 midwives attending patients in their own homes are in the main, and increasingly, the employees of the local authority. They will be supplied with a copy of the list of doctors and will ask their patients, at an early stage, to select a doctor, to be sent for in case of need, from the panel. It is hoped that the adoption of arrangements on these lines by local authorities will help in reducing the maternal mortality rate still further

#### Ready Reference to L C C Hospitals

For the two pence which the Good Samaritan tendered to the innkeeper his successor in modern London may provide himself with a booklet issued by the London County Council giving every necessary particular of its general and special hospital services and ambulance service so that the sick and injured may be sent to their appropriate destination with the minimum of delay. The orange-covered booklet takes up next to no room in the doctor's pocket or on his desk, and it contains just those details the busy and harassed practitioner wants to have at hand—not a laudation of the largest municipal hospital service in the world, with facts and figures which are merely interesting, but such things as essential telephone numbers, the exact whereabouts of the different hospitals and clinics, the bed accommodation, the name of the medical superintendent, the availability of ambulances, the charges for out-patient treatment, the hours during which clinics are open, the fees for the attendance of midwives, and so forth. The Council administers thirty-seven general hospitals and a rather smaller number of special hospitals, but many of the general hospitals are themselves special in the sense that they provide particular services not common to them all. For example, the treatment of cancer by means of high-voltage x-ray apparatus and radium is available at Lambeth and Hammersmith Hospitals, certain special and expensive technical appliances such as the electrocardiograph are at present located only at certain hospitals. Eight hospitals have psychiatric out-patient clinics. Even the infectious diseases hospitals are differentiated. Thus at various hospitals there are units for puerperal fever cases, for diphtheria carriers, and for acute poliomyelitis. Maternity units are provided at twenty-two general hospitals. It is mentioned that extensive arrangements are made to co-operate with the metropolitan borough councils, which are respon-

sible under the Public Health (London) Act for maternity and child welfare. Whether the expectant mother elects to attend an L C C clinic or a borough clinic the reciprocal arrangements obtain so that she receives the expert supervision necessary during pregnancy.

#### The British Association Meeting

This year the annual meeting of the British Association for the Advancement of Science will be held at Cambridge from August 17 to 24 under the presidency of Lord Rayleigh. There will be twelve sections, the president of the Section of Anthropology is Professor Gordon Childe, of Psychology, Dr R. H. Thouless, of Botany, Professor W. Stiles, and of Chemistry, Professor C. S. Gibson, OBE. The preliminary programme has been issued and may be obtained from the office of the British Association, Burlington House, London, W1. Among the subjects to be dealt with by the presidents of sections and in discussions are the chemistry of gold, problems of the Australian aborigine, repercussions of synthetic organic chemistry on biology and medicine, the effect of the cinema and wireless on the life of the school child, magnetic alloys and x-ray methods, the eye and brain as factors in visual perception, problems of road and air transport, and scientific investigation in relation to the community generally. Various receptions and entertainments are being organized by the Senate of the University and by Colleges. Owing to the coincidence of the International Physiological Congress, which this year is to be held at Zurich from August 14 to 19, the Section of Physiology will not hold separate meetings at Cambridge. The annual meeting of the British Association in 1939 will be held in Dundee.

#### King Edward VII Sanatorium, Midhurst

The report of King Edward VII Sanatorium, Midhurst, for the year July, 1936, to June, 1937, shows that 262 patients were admitted during the twelve months, of whom fifty-seven had previously been in the institution. The number of patients discharged, excluding nineteen who remained less than nine weeks and thirty-eight who were readmitted, was 189. Of these no fewer than 154 were classified on admission in group I or II, which according to the classification used at Midhurst, means that in none did the disease, if of "slight severity," affect more than the whole of one lobe, or, if "severe," more than half of one lobe. The degree of severity is based on physical signs by "disease of slight severity" is understood "disseminated foci characterized by slight dullness, indefinite rough or weak vesicular or bronchovesicular breathing, and fine medium crepitations," by "severe disease" is understood "massive infiltration recognized by definite dullness, broncho-vesicular or bronchial breathing, with or without crepitations." This classification, although admittedly unsatisfactory, does show that a high proportion of the patients admitted at Midhurst are relatively early cases. The average duration of disease was one year eleven months, but as the extreme limits were four weeks and twenty years the average figure really gives no useful information. Of the 154 patients in groups I and II ninety-one were discharged as "arrested" (corresponding to "quiescent" in the Ministry of Health classification). Of the twenty-seven patients in group III one only was discharged as "arrested", in the remaining eight discharged patients no evidence of pulmonary tuberculosis was found. Sixty-two of the 189 patients still had positive sputum on discharge, and the medical superintendent suggests some factors that account for this. The most important appears to be the short average length of stay—just under six months—and the reason given for this is pressure on the available beds in the sanatorium. If this explanation is correct (almost all authorities are agreed that six months in an institution is quite inadequate for the satisfactory treatment of the majority of cases of phthisis) the question of the accom-

meditation at this sanatorium deserves the earnest attention of the council of management and the sympathy of the public, since the Midhurst Sanatorium is one of the very few institutions in this country that cater for tuberculous patients of the middle class.

#### Seaside Convalescent Home for Women

The new convalescent home for women which the London County Council has provided at Margate was open for inspection last week. The site of the home was previously occupied by Princess Mary's Hospital for Children, a hospital transferred to the Council from the Metropolitan Asylums Board under the Local Government Act 1929 and formerly used for the treatment of children suffering from surgical tuberculosis. In February 1935 however the Council decided to transfer children suffering from this disease to its Heather Wood Hospital at Ascot Berkshire. In the following June it decided to reconstruct Princess Mary's Hospital in order to make it suitable for the reception of convalescent women. The patients will be sent to the home on the recommendation of the medical superintendents of the Council's London hospitals, and while at Princess Mary's Convalescent Home their treatment will be continued and completed in ideal surroundings. The home is equipped to give massage and electrical treatment. It stands in about four acres of ground and has accommodation for 223 women and fourteen babies. The first batch of patients was admitted on June 10. The work of reconstruction which has cost over £76,000, has involved the remodelling of some of the existing buildings and the erection of a new dormitory block on a site previously occupied by four single story blocks. Everything possible has been done for the comfort of the women during their stay. Great improvements have also been made to the grounds of the home. New gardens have been made and the existing gardens remodelled.

#### Joint Tuberculosis Council

A meeting of the Joint Tuberculosis Council was held in London on May 21 with Dr S Vera Pearson in the chair. Dr N Lloyd Rusby and Dr R L Midgley were welcomed as new members representing the Tuberculosis Association and the Tuberculosis Group of the Society of Medical Officers of Health respectively. Information concerning a proposed visit to this country of French tuberculosis physicians was discussed briefly and the Council agreed to co-operate in every way with arrangements which the National Association and the Tuberculosis Association might make for the visitors. The resignation of Dr F G C Blackmore from the Council was accepted with regret and the secretary was instructed to convey to Dr Blackmore the thanks of the Council for his work. Dr W Brand who has done so much for postgraduate study in this country was elected a co-opted member of the Council. No additional committees were set up, but it was decided that the Artificial Pneumothorax (Dr Trail convener), Employment (Dr J B McDougall convener), Radiology (Dr G Jessel convener), Nursing (Dr Carling convener) and the Finance and Publicity Committees should remain in office. The committee dealing with work in the Colonies is now to become the Overseas Committee, with Dr F Heat as convener. By the requisite two-thirds majority two alterations were made in the constitution which will allow of wider representation on the Council. An important discussion was initiated by Dr G Lissant Cox who moved that the Ministry of Health be asked to resume publication of the summary of returns of work rendered to the Ministry under Memorandum 37/T. He did not suggest that they should necessarily be published monthly but they should be available at two- or three-monthly intervals. Support for the motion was given by Drs Jessel, Tattersall and Sutherland and the Chairman pointed out that one of the great advantages in the

returns was that they tended to stimulate the more backward local authorities. It was resolved that a deputation comprising Drs Lissant Cox (Lancashire), Sutherland (Manchester), Tattersall (Leeds) and Professor Jameson (London) should meet the Ministry to discuss the matter more fully and report back.

#### Harveian Society Banquet

The Curators of Patronage of the University of Edinburgh of London was held at the Merchant Taylors Hall on June 14 with the President of the Society, Sir Alfred Webb Johnson, in the chair. "The Society" was proposed by Major the Hon J J Astor MP. Major Astor sketched briefly the life of William Harvey and referred particularly to Harvey's dissection of the toad believed to be the familiar of a witch at Newmarket and to the part that Harvey played in the trial of the Lancashire witches. He said that one of the most striking things about Harvey was the fact that he had been demonstrating the circulation of the blood for nearly twelve years before rushing into print. This seemed to suggest a lack of news sense to those who were accustomed to seeing important medical discoveries announced in glowing though perhaps premature terms to day. In replying Sir Alfred Webb-Johnson referred to the generosity of Sir Buckton Brown and in connexion with Sir Arthur Hurst's Harveian lecture recounted the tale of an ostrich that swallowed the book of common prayer and was able to digest everything except the Thirty-nine Articles. The Society hoped some day to have a home of its own where all the Harveian relics that it possessed might be placed. He pointed out that the annual prize of £100 would be given this year for the best essay on the value of periodic medical examinations in the prevention of serious disease. Dr John Taylor then proposed The Visitors a toast to which Captain H F C Crookshank MP, the Rev Patrick McCormick and the Hon Mr Justice Humphreys responded on behalf of the many distinguished guests.

## SCOTLAND

#### Edinburgh Chair of Medicine

The Curators of Patronage of the University of Edinburgh on June 14 appointed Professor L S P Davidson to the chair of medicine in the University in succession to Professor W T Ritchie who retires at the end of the present session. Professor Davidson, who at present holds the post of regius professor of medicine in the University of Aberdeen began a medical course at Edinburgh in 1911. This was interrupted by the war during which he served for three years as a captain in the Gordon Highlanders but when he was invalided out of the Army he resumed his medical studies graduating M B Ch B with first class honours in 1919. In 1925 he secured his M D with a thesis for which he was awarded a gold medal and in the same year was elected a Fellow of the Royal College of Physicians of Edinburgh. After various resident appointments he became assistant to the professor of bacteriology in Edinburgh and later assistant to the professor of medicine. He was subsequently appointed an assistant physician to the Royal Infirmary of Edinburgh. During this time he did research work under a grant from the Medical Research Council, and published a number of papers. It was in 1930 that he was appointed professor of medicine in the University of Aberdeen succeeding Sir Ashlev Mackintosh. In the Aberdeen appointment he has been a popular and successful teacher who has gained a reputation for energy and scientific enthusiasm. It is understood that at Edinburgh Professor Davidson will act both as a physician to the Royal Infirmary and as director of the Medical Unit in the Western General Municipal Hospital.

## University of Aberdeen

At a meeting of Aberdeen University Court on June 14 the resignations of Professor L S P Davidson from the chair of medicine and of Emeritus Professor R W Reid from the post of honorary curator of the Anthropological Museum of the University were accepted. A gift of £5,000 from Imperial Chemical Industries, to be applied towards the cost of erecting a new chemistry department at the University was intimated. The Court agreed to a general reconditioning of the buildings at Marischal College, at an estimated cost of £144,000, to provide up-to-date accommodation for the departments of physiology and anatomy with additional accommodation for several other departments, and for new examination halls and administrative buildings. This work is to be carried out at Marischal College when the clinical part of the medical school has been removed to the new buildings, which are almost completed at Forresterhill in connexion with the new Royal Infirmary and Joint Hospitals Scheme. It is expected that these new medical buildings will be ready for formal opening in September. Plans were also approved for a new residence near the buildings of the Joint Hospitals Scheme to house final-year medical students in order to facilitate clinical training during the final year.

## Proposed Maternity Centre for Moray, Nairn, and Banff

At a meeting of the Public Health Committee of Moray and Nairn Joint County Council, held at Elgin on June 6, a letter was read from the Department of Health in regard to the question of a joint maternity hospital for Moray, Nairn, and Banff. The question arose out of a proposal by the County Council of Banff to erect a small maternity annex to the Seafield Cottage Hospital at Buckie. The Department referred to the recommendation in the report on maternal mortality in Scotland, issued in 1935, which pointed out that the provision of small units did not secure the high standard of service and of specialist skill that were essential for maternity cases if the death and disability rates were to be sensibly reduced. The Department further expressed the view that centralization of institutional treatment for maternity cases must be carried out when it was at all possible, and that the situation of a hospital was not of so much importance as the adequacy of the treatment available. The problem in this case might be solved by the provision of an institution for, say, twenty-five beds by the combined local authorities of Moray, Nairn, and Banff. The chairman of the meeting stated that the present practice in these counties was to use Aberdeen, but this city was rather far away, and it would be of advantage to have a maternity hospital and specialist nearer at hand. The medical officer of health for the joint county had originally proposed to combine with Inverness, where, however, there was as yet no maternity accommodation, and now proposed that an attempt should be made to secure co-operation with Banffshire. It was agreed that the matter should be further investigated.

## Astley-Ainslie Institution

The annual report of the Astley-Ainslie Institution, Edinburgh, shows that there have been several innovations during the year. A school conducted for the children undergoing treatment has been recognized as a hospital school under the Education (Scotland) Act, 1918. A training centre has been opened for occupational therapy in the institution, and a detailed scheme comprising a two and a half years course of instruction has been inaugurated, five students being enrolled for the first term last October. A scheme of shorter hours of duty for nurses has been introduced, their working hours have been reduced to an average of ninety-six a fortnight. The total number of patients treated during the year was 1186 and it has been noted that men tended to pass through the hospital rather more quickly than women.

## Correspondence

Telephoned Prescriptions for Poisons  
A Warning

SIR—A number of instances of non compliance with an important provision of the Poisons Rules has been brought to the notice of the Pharmaceutical Society by the inspectors under the Pharmacy Acts, and the Society, after consultation with the British Medical Association, finds it necessary to warn both practitioners and chemists that further breaches of the Rule may be followed by prosecutions.

The Rule referred to provides that the poisons listed in Schedule 4 of the Poisons Rules may be supplied to the public only on medical prescription. Those in common use are einchophen, amidopyrine, and the numerous barbiturates. They may be supplied direct to medical practitioners in response to a telephone order, but not to patients on a telephoned prescription. Reports from the Society's inspectors show that many practitioners are ordering and chemists are supplying these drugs to the public by means of telephoned orders.

In these circumstances the Society, as the authority responsible for the administration of the Rule, can no longer acquiesce in non compliance with its provisions and must shortly bring offenders before the courts. The Society is most reluctant to proceed to extreme measures and before doing so, wishes to make this appeal to medical practitioners to observe the legal obligations placed upon them. A similar appeal is being made to chemists.

Medical men will perhaps realize that the pharmacist is placed in a difficult position. To comply with the regulations it is his duty to refuse to supply these drugs on telephoned prescriptions, but he is naturally unwilling to offend a practitioner in his neighbourhood. The abolition of "telephoned prescriptions," though causing inconvenience, need not affect adversely the relationship between doctor and pharmacist, and I have little doubt that medical practitioners will appreciate the necessity for strict compliance with their legal obligations—I am, etc.,

HUGH N LINSTED,

Secretary, Pharmaceutical Society  
of Great Britain

London, W C 1, June 17

## Matrimonial Causes Act

SIR—The medical man immediately concerned with the Matrimonial Causes Act is the patient's regular attendant—either the medical superintendent or medical officer of the hospital in which the patient resides. He is confronted by a twofold problem when called upon by the prospective petitioner to assist in operating the Act. First, he has to satisfy himself whether the patient in question is incurable, and, secondly, he has to decide whether to pass his opinion on to the petitioner. It would be doing less than justice to medical officers in mental hospitals if the situation in which the Act places him were interpreted in a legalistic light, and this is what contributors to the discussion have been inclined to do. The medical officer is not nearly so much concerned with the possibility of being involved in litigation in consequence of his participation in the divorce proceedings—though such concern may arise later—as with the ethics of giving

an opinion which may have disastrous results for his patient.

There is nothing really in dispute about the patient. The patient has been in the mental hospital for five years or more, and no one will question that he or she is insane. As for the prospects of recovery, figures show that five years' residence in a mental hospital indicates such a degree of chronicity that they become practically nil. What agitates the medical officer is not that he should be asked to take part in a battle of opinions—for there is really no foundation for any considerable divergence of opinion—but that his voice must necessarily condemn his patient to isolation. The patient matters to him above all else. In participating in the divorce proceedings he puts himself against the patient by the very nature of the unfavourable prognosis he must express. To focus his distress on the breach of professional secrecy which is involved or on the possibility of vindictive litigation which may follow in error of judgment on his part gives an entirely false rendering of his feelings and distorts the problems the Act create. It is his care for his patient and not for himself that produces the dilemma. How is the medical officer to be released from his predicament for the law must be fulfilled? The only way it seems to me is for the court to appoint experts to assist it, not for their expertness but it noted but because they have no professional relationship to the patient. In this way the medical officer would be absolved from a duty under the Act which would do violence to the feelings of protection which he entertains for his patient.

The question of incurability is by no means so formidable as is generally supposed. A review of 3700 cases resident over a period of seventeen years in a county mental hospital yielded a recovery rate of not more than 0.4 per cent after five years' residence, this works out to about 0.7 per cent of the total cases left in hospital after five years. Within the limits of this probability of error a medical man can express himself with confidence on the question of incurability. If he were to attempt to reduce the margin of probable error by relying on the symptoms of the case he might very well produce a greater degree of error—I am etc.

Beurmouth June 13

D. PERK

### Tuberculin in Diagnosis

SIR—The replies which you have published to my letter (*Journal* May 21, p. 1131) concerning the evidence for the value of the tuberculin reaction in the diagnosis of active tuberculosis have not entirely cleared my mind of doubt. It was with the diagnostic application only that my letter was concerned. Dr Camiac Wilkinson's reply (June 4, p. 1234) if I understand it correctly seems to deal mainly (or is it solely?) with the therapeutic application. I have been unable to scrutinize the results of his investigations which he mentions as being incorporated in his book *Tuberculin in the Diagnosis and Treatment of Tuberculosis* as I have not yet been able to obtain a copy of the book.

Dr Halliday Sutherland says (June 4, p. 1233) that I do not appreciate the difference between generic and selective tuberculin reactions. I am well aware that such a distinction is made by some but as yet I have not seen proof of its validity. Dr Sutherland states his belief but offers no evidence to support it. The quotation from Bandler and Roepke as he gives it makes no distinction whatever between generic and selective reactions. And Kolmer's work in cattle is not relevant to man as

I understand that the results of tuberculin injection in these animals are not comparable with those obtained in man. Since the tuberculin reaction [in man] does not tell us the difference between latent infection and active disease the tuberculin reaction cannot be used as a diagnostic agent in tuberculosis. In cattle however a positive reaction usually means active disease (Simplic in *Agents of Disease and Host Resistance* by Gay and associates 1935).

I am relieved to find that I had misinterpreted Dr John R. Gillespie's description of his method for diagnosing active tuberculosis by the tuberculin reaction. I had not written for his paper because I understood from his first letter that it dealt only with the technique of administering tuberculin in diagnosis and treatment and not with the evidence for its diagnostic value. I have since read it and it seems to me that this is indeed the case. I have been unable to find in it any of the evidence I sought.

Dr H. S. Burnell Jones (June 4, p. 1234) seems to me to assess the position well when he says: "It is impossible for those who believe that the earliest diagnosis of pulmonary disease can be made with tuberculin to bring forward convincing evidence that such diagnosis is reliable. It would seem therefore that like many things in medicine the value of tuberculin as a diagnostic agent rests upon belief rather than upon scientific proof—I am etc."

London SE1 June 15

J. R. FORBES

### Anti-venereal Measures

SIR—In your editorial note in the *Journal* of June 11 (p. 1277) on anti-venereal measures in Scandinavia, you appear to accept the conclusions of the Commission that almost equally good results in reducing the incidence of syphilis have been obtained in those countries where there is no compulsion to undergo treatment. In arriving at these conclusions the Commission were content to compare the present day incidence of the disease in Britain and the Scandinavian countries omitting—one would like to think by accident and not by design—the far more relevant comparison of the actual reduction in the number of cases that has occurred in these countries in the post-war years. According to the Commission's report (p. 67) the number of cases of syphilis occurring in Sweden in 1935 totalled less than one-thirteenth of the figure for 1919, in Stockholm it was less than one twentieth. Not even the most ardent supporters of our English come and go-as you please methods of dealing with venereal disease will dare to claim anything comparable for England or London.

According to the Ministry of Health's official figures the number of cases of syphilis fell from 25,000 in 1922 to 18,000 in 1936—a reduction of less than 30 per cent. In Denmark during the same period the figure fell from 2,400 to less than 800—a reduction of over 300 per cent. Yet the Commission (p. 120 of their report) claim that in the countries employing compulsory treatment and in those which rely on a voluntary system the degree of success in reducing the incidence of syphilis has been broadly similar and that therefore compulsory treatment has not been an important factor in influencing results. While one has every respect for the clinical acumen of the personnel of the Commission one may be forgiven for questioning the accuracy of conclusions based on the assumption that 30 and 300 per cent are even broadly similar—I am etc.,

Brentwood, June 14

ROBERT FORGUS

## The Changing Ground of Surgery

SIR—I read with interest Mr W H Ogilvie's address in the *Journal* of June 4 (p 1193), and feel that some discussion on certain points would be of value.

Mr Ogilvie states that duodenal ulcer is essentially a disease of civilization. I think observers in the Tropics, working among mainly uncivilized natives, should try to check up on this. In Uganda my observations, in at least three regions, suggest that peptic ulcer is far from uncommon, and all varieties can be diagnosed or suspected, clinically in the absence of special methods—such as x rays—which do not happen to be available. Some time ago I was particularly interested in the frequency of the occurrence of pain in the chest which the natives always believed to be due to old syphilis. I very soon came to regard this symptom as due to trouble in the stomach and duodenum and with patience and avoidance of leading questions a fairly typical history was often elicited and epigastric tenderness was often present with a tendency to propagation upwards to a point about half-way up the sternum. On clinical grounds it frequently appeared that there was trouble in the duodenum or in the pyloric region and there was generally a marked relation to the taking of food. It so happened that I was to receive confirmation of the view taken—for example that peptic ulcer was fairly common—because Mr A H Mowat, surgical specialist, joined us in 1931, and I think I am correct in stating that he was only a few months in the Protectorate when he was proving by laparotomy the existence of duodenal ulcers.

It is surprising how often one meets with cases of this kind among the most primitive peoples—natives with a history going back for years, and with a facies which can be noticed yards away. I recollect, some years ago, performing a necropsy on a native who came in dying as the result of a large haemorrhage from the bowel. There was a duodenal ulcer, which had caused a large excavation in the head of the pancreas. This had opened the artery and the haemorrhage had been entirely within the gut. The interest of the above lies in the fact that the native is almost entirely a vegetarian, and the food eaten contains only a small proportion of protein. As Hurst stated about 10 per cent of individuals have a hypersthenic gastric diathesis, this is obviously true of the native also, and it is certain that the protein-deficient diet does not check excessive secretion of HCl. Must we look for other factors than the hypersthenic diathesis to explain the causation? Worry and overwork are negligible among natives, who are often non-smokers.

Mr Ogilvie suggests that appendicitis may have a dietetic cause. I have stated that our natives are mainly vegetarian. I can definitely support Mr Ogilvie by stating that in the last ten years I have only found three cases in Uganda. One was chronic, and the diet was probably vegetarian. One was a perforation with general peritonitis; the diet was more mixed. The third was a localized abscess, the dietary included meat.

It may be worth while here to state that malignant disease appears to me to be as common in Uganda as at home. I have seen most types, and sarcomata and epitheliomata figure quite largely, certainly in my own practice. The belief that malignant disease is uncommon among primitive races appears to have originated before the disease was looked for—I am, etc.,

A FORBES BROWN M.D., D.T.M. and H.,  
Uganda Medical Service

JUNE 16

## Cancer and Vitamin A Deficiency

SIR—Dr J L Mott in a letter in the *Journal* of February 19 (p 421) suggests that the high maternal, tuberculosis and gastric cancer mortalities in North Wales might perhaps be due to a low amount of vitamin A in the diets of the people of this area. It might perhaps be helpful to estimate the daily intake of vitamin A of those races among which cancer is very rare. Sir Robert McCarrison has told us that he did not see any cases of cancer during the seven years that he spent with the people of Hunza. The great consumption of apricots and the high vitamin A content of some of the Indian green vegetables suggest that the diet of these people may be high in vitamin A. Dr Ernest H Tipper in *The Cradle of the World and Cancer* states that among the two million people of the Bene tribe living in the palm belt of the Niger he saw no cases of cancer in twenty years work there; he also informs us that these people use 4 oz of red palm oil daily. The *Indian Health Bulletin* gives the vitamin A content of this oil as 44,000 international units per 100 grammes, which represents the rather amazing figure of approximately 50,000 units of vitamin A from this one food daily. Compare this with the daily intake of the people of the United Kingdom given in Sir John Boyd Orr's *Food Health and Income* of 774 international units in the poorest group and 2,875 units in the wealthiest group.

Whether necropsies on children of the Bene tribe would show that 63 per cent of them suffered from infections of the ears or sinuses, as shown by Dr J H Ebbs to be true of the children examined in Birmingham, is a question of considerable interest. It is not unreasonable to suggest that a daily intake of vitamin A of between 775 and 50,000 international units may impart immunity to such infections. If we could know the vitamin, mineral, protein, etc., content of the daily diets of the world's healthiest races we might be able to arrive at a truer estimate of the optimum quantities of these food essentials. If any such investigations have been made I should like to know of them—I am, etc.,

Auckland May 9

V E HASTINGS

## Tonsillectomy

SIR—Referring to Mr Lionel Collidge's interesting contribution on tonsillectomy (*Journal* June 11, p 1274) I would like to point out that he, in common with most others, continues to repeat an error with regard to the so-called capsule. Sound surgery must be based upon correct anatomy, and the tonsil problem will never be solved until this fact is recognized. Mr Collidge says the tonsil is not in direct relation to the superior constrictor muscle but is separated from it by the pharyngopharyngeus. The point I wish to make is this: the so-called capsule is not the capsule at all but either aponeurosis—as Mr Collidge says—or the constrictor, and that as such every effort should be made to leave it behind. I have endeavoured to solve the problem by modifying the guillotine so as to employ it as a clutch, into which I draw the tonsil with forceps. A further device secures a single ligature which when released surrounds the base of the tonsil so that all is safe in a single pedicle. This is severed by means of a controlled narrow blade attached to the instrument and operating not on the slot principle but rather on that of the bacon



ster Cases so operated upon have been very satisfactory there being no raw surface and no bleeding.

I should have added before this that the true anatomical capsule is a band of fibrous tissue which holds the renal substance together—quite a different structure from that generally understood and described. Professor M. R. Drennan anatomist of the Cape University South Africa made many sections for me to prove this point and he suggests that those interested should turn to the first edition of Lewis and Stohr's *Textbook of Histology* which is edited by Bremer—I am etc.

London June 14

J. L. AYMAR

### 'The Psychology of the Medical Profession'

SIR—I would suggest to Dr. A. J. Brock and to others who are of his mind, that they should authorize their housemaids to destroy all medical circulars as they arrive. This will then be preserved from the influence of insidious propaganda against which apparently five or six years of medical education have afforded no protection. Secondly I would suggest to your correspondent that he should seriously consider whether he or any of his colleagues is in a strong enough position to adopt a patronizing attitude to the literature and products of these commercial organizations.

My own experiences since qualification—embracing periods as H.P. in a London hospital casualty officer in a country hospital medical officer in a mental hospital clinical assistant to a neurological hospital ship surgeon lecture tenens in varying types of practices and in my own practice—have forced me to the by no means unique conclusion that the majority of prescriptions issued can have no possible desirable therapeutic effect. In fact many of these prescriptions are not even given with the intention that they should exert any well defined pharmacological action but merely to make the patient feel he is getting some benefit. Of course the patient who is given a tonic with a little strychnine a little quinine and a lot of water receives also a lot of suggestion. This suggestion which might with equal truth be called "barney" has as its implicit basis the inculcation of faith in the mixture and hence recovery through faith. How then can organized medicine honestly condemn the worst of the proprietary remedies which are advertised to the medical profession? Remedies advertised to the general public are in a different category, as they introduce the potentially harmful element of self medication.

There are of course many valuable official drugs but the need to use these arises relatively seldom in the course of an average general practice. Furthermore many practitioners are unwilling to reflect on the probable pharmacological actions of the medicines which they prescribe so freely or to use them intelligently. Instead they are content to order perhaps a dozen stock mixtures in Winchester bottles—for example mist gastric co conc mist gastric co conc pro infant mist hepat et diuret co conc. In a country practice at which I had the misfortune to act as locum the favourite prescription for any functional nervous disorder was 5 drops of tinct iodi made up to 8 oz with tap water! In this case the doctor did his own panel dispensing and economy was a material consideration.

These examples are not exceptional. They constitute the stuff of which medical practice is made. Squeeze the clamp on the rubber tube of the Winchester quart allow one ounce of the coloured fluid to run into the 8 oz bottle, fill up at the tap, and—hey presto!—a mistura is

made! Not a patent medicine but *real* medicine from the doctor. In the wealthier type of practice the proprietary remedy often replaces the stock mixture of official drugs and a physical examination (often omitted in a mist gastric co conc practice) is thrown in. Many of these proprietary remedies are useless and are advertised by means of specious claims but their utility is no less than that of the tonics or cough mixtures prescribed or dispensed from official drugs. They cost more but they are more elegantly dispensed and more attractive to the patient. Many practitioners are as credulous as their patients in attributing healing powers to their pills and mixtures and keep little notebooks of favourite prescriptions which in most cases were oracularly disclosed by a long since deceased physician at a teaching hospital.

During the last decade or so the expenditure of vast sums of money and the indefatigable labours of first-rate chemists pharmacologists and biologists employed by modern chemical and dye industries promise to change the face of medicine. Active principles of drugs are isolated and their actions recorded with precision. Vitamins and hormones are synthesized in the laboratory and made available in bulk. New and hitherto unknown substances with powerful and well defined therapeutic actions are discovered. Nearly every major advance in the realm of drugs or therapeutic substances has resulted from the collaboration or original work of industrial chemical firms. For every new substance which has finally been placed in the hands of the medical profession there are hundreds which have been tried and discarded. Were all the remedies introduced by commercial organizations to be withdrawn the structure of modern medicine would collapse.

With regard to the question of medical circulars, pamphlets and booklets I would suggest that the lack of knowledge of many practitioners with regard to the recent developments in biochemistry—for example the sex hormones—is little short of astounding. For those who have no time to read the medical journals the circulars from the scientific commercial firms and the visits of representatives often constitute a necessary reminder of advances in therapeutics.

Though the argument in this letter may seem to be overstated it may perhaps serve as an antidote to the complacent and unthinking denunciations of the pharmaceutical industry by members of a profession which is itself far from invulnerable. It is not for nothing that Parliament has recently voted a sum of £30,000 for the foundation of an institute for chemotherapeutic research in Great Britain which is to be conducted on the systematic lines of the research laboratories of German and Swiss chemical firms—I am etc.

June 9

N. HOWARD JONES

### Tetanus and Ectopic Pregnancy

SIR—In the *Journal* of April 9 (p. 779) I read the interesting report from Mr. Frank Stabler of a case of extra uterine gestation with a live child. Although these cases are comparatively rare it is perhaps worth pointing out the possible risk of tetanus supervening if the usually accepted modern treatment of leaving the placenta and membranes in the abdomen to absorb is adopted. Even in the presence of strict asepsis there is some evidence that tetanus infection may be transmitted from the bowel to the adherent and absorbing placenta. A case of my



own which had this tragic termination is recorded, along with a successful case of Dr Eula Enos, in a paper published in the *Chinese Medical Journal* for January, 1937. A preliminary dose of anti-tetanus serum is such a comparatively easy precaution to take that I feel it is worth while to draw attention to this point—I am, etc.,

Lester Chinese Hospital,  
Shanghai May 21

AGNES E TOWERS

### Acriflavine Emulsion

SIR—In his letter in the *Journal* of March 26 (p 697) on acriflavine emulsion, Professor L P Garrod asks that the assertion I made (January 29, p 256) that a 1 in 1000 emulsion of acriflavine in equal parts of lime water and olive oil is 'highly antiseptic' should be supported by proof additional to that afforded by clinical experience alone. Through the courtesy of Major-General Marrian Perry, Director and Professor of Pathology at the R A M C College Millbank, London, I have had an experiment carried out on the antiseptic activity of this emulsion, and quote his report below.

Acriflavine emulsion was prepared according to the formula suggested by Dr J Walker Tomb

Acriflavine (B P)	1 gm
Lime water (B P)	500 ml
Olive oil (B P)	500 ml

In the course of a week only slight separation of the components of the emulsion took place

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Two tubes of broth were sown with <i>Staph aureus</i>
Two " " " " <i>B. pyocyanus</i>
Two " " " " <i>B. coli</i>

These six tubes were incubated for one hour thereafter the broth in one set of three tubes was covered with about one inch of acriflavine emulsion and the other three were kept as controls. All were incubated

May 11 1938

Controls show heavy growth. Tubes treated with acriflavine emulsion remain clear the broth having taken on a rich yellow colour. Sub cultures were made from the latter for four days with the following results

	<i>B. Pyocyanus</i>	<i>Staph. Aureus</i>	<i>B. Coli</i>
May 11 1938	+	+	+
May 12 1938	+	+	—
May 13 1938	+	+	—
May 14 1938	+	—	—

The acriflavine diffuses sufficiently to inhibit growth. *B. coli* is killed in forty eight hours. *Staphylococcus aureus* in ninety-six hours and *B. pyocyanus* is still alive after that time—I am, etc.,

Dublin June 1 J WALKER TOMB M D, D P H

### Chicken-pox with Unusual Features

SIR—In view of the case reported by Dr J B Tilley and J F Warin (*Journal* June 11 p 1265) the following account of an unusual case of chicken-pox may also be of interest

A patient aged 25 contracted a cold which was followed four days later by the appearance of a rash on the face. At first glance the case appeared to be one of measles on account of the facial distribution of the rash, the catarrhal symptoms conjunctivitis photophobia etc. When the rest of the body was examined, however a few vesicles char-

acteristic of chicken pox were found on the left leg. On closer examination the rash on the face proved to consist of numerous tiny flat confluent nodules, some of which were already in the stage of turning into vesicles. In the course of the disease, which lasted for the unusual period of just over a month five or six crops were observed, and the skin of the whole body, particularly the scalp, was literally covered with vesicles some of which turned into pustules, whereas others ruptured and exuded a clear, sticky, evil-smelling fluid, which when dried up a few days later, formed thick scabs. Thus the different stages characteristic of chicken pox—namely, nodules, vesicles, pustules, scabs and desquamation—could be seen simultaneously. The highest temperature (102.6° F) was registered on the fifth day after the appearance of the rash. On that occasion small areas on the abdomen still free from chicken pox showed a scarlatiniform rash for not more than a day or two. The urine, which was examined daily with sulphosalicylic acid, revealed traces of albumin after the tenth day from the onset of the disease but the albumin disappeared a week later. The photophobia persisted almost throughout the disease and was caused by minute vesicles spread over the conjunctivae.

Cases of chicken-pox accompanied by a morbilliform or scarlatiniform exanthema are not unknown. These exanthemata are not due to true measles or scarlet fever but only represent a background of the chicken-pox. Although there exists theoretically the possibility of a simultaneous mixed infection, the present case did not seem to me to fall into this group. The most interesting features were (1) the long duration of the disease and the unusual number of crops, (2) the great number of vesicles and pustules, of which a few, perhaps through confluence, attained an unusual size (that of a walnut), and (3) the occurrence of slight albuminuria. A general toxæmia lasted only for a few days during the acme of the disease. Three adults unavoidably in touch with the patient contracted chicken-pox in a mild degree—I am, etc.,

London NW6 June 14

LEO SPIRA M D

### Aperients and Sulphanilamide

SIR—I have only just read a letter from Dr Joseph Jones, published in your issue of June 4 (p 1236), in which he reports that his colleague, called in to a case of puerperal pyrexia, was prevented from administering sulphanilamide because the midwife had recently given the patient a dose of Epsom salts. Dr Jones pleads that midwives should be instructed not to give to their patients in the later weeks of pregnancy any aperient containing sulphur. I would like to back his plea.

The commonest of these sulphur-containing purgative drugs and mixtures are Epsom salts, Glauber's salt, and compound liquorice powder. There are excellent saline and other aperients available which contain no trace of sulphur compounds. Liquid paraffin and Seidlitz powders are probably the safest aperients to give during the last month of pregnancy—I am, etc.,

Stepney E1 June 18

HARRY ROBERTS

### Treatment of Complications of Gold Therapy

SIR,—Those of us who have experience in the use of gold salts in the treatment of chronic arthritis are familiar with the unfortunate patient who develops a 'gold dermatitis'. Such a case was in my care for several months. The patient had a most extensive exfoliative dermatitis which affected the face, neck, trunk and limbs. After some months the skin cleared with the exception of that

of the nose which was so infected that the patient resembled the classical wooden soldier with a red patch on either cheek. A preparation of tannic acid and jelly was applied to the left cheek. A firm coagulum formed and after a week separation took place leaving a perfectly healed skin. The right side was then treated but for some reason the coagulum did not form so well and the healing took place in patches. The method was persisted in the jelly being reapplied to the parts where the coagulum was not satisfactory. Now only a small patch the size of a half penny remains with a thin coagulum which if it will remain in position long enough should give perfect healing. In view of the difficulty of treating this complication of aurotherapy any small advance seems worth recording.—I am, etc.

B. 5 June 17

JOHN B. BENNETT

### Nasal Sinusitis in Childhood

SIR—I was very pleased to read Mr James Crook's article in the *Journal* of April 30 (p 933). For twenty years I have been endeavouring to persuade the profession in Australia that treatment of sinusitis should precede operations on enlarged tonsils and adenoids. If this is done at least 75 per cent. of the tonsils and adenoids will recede. I long ago came to the conclusion that lavage was only of temporary benefit and up to 1913 performed radical operations freely. Since that date I have used diathermy and antrostomy. I prefer long wave to short wave diathermy, and I perform antrostomy by electro-coagulation as I find the opening is practically permanent if made large enough. On withdrawing the needle it is useful also to electrocoagulate the outer wall of the inferior turbinate. I adopt the same treatment for chronic sinusitis in adults. Diathermy has the great advantage that it acts upon the whole of the nasal mucosa. I use a low voltage, a frequency of one and a half millions and 200 to 500 milliamperes. For the first fortnight treatment should be for half an hour daily then three times a week for another fortnight and finally twice a week for a month.—I am, etc.

W. KENT HUGHES

Late Laryngologist Royal Melbourne Hospital  
Consulting Surgeon Children's Hospital Melbourne

June 6

### Digital Clubbing

SIR—I was very interested in Dr E. Montuschi's memorandum in the *Journal* of June 18 (p 1310). The author tentatively suggests a causal relationship between the digital clubbing and the congenital lung cyst in the case reported. Is it not more likely that these two abnormalities are fortuitous in their association as it is well known that congenital anomalies are often multiple? I agree up to a point with Dr Montuschi as to the desirability of bronchography in these cases, in that it 'dots the T's' as Hanaud said, in any investigation of the lungs. I would only say that in a chronic suppurative lesion of the lungs or pleura the degree of clubbing is a rough measure of the extent of the disease and it is not at all common to find marked clubbing in, say, bronchiectasis without physical signs or suggestive changes in the radiographs. I can explain if not excuse my own omission (*Journal* March 19, p 614) by saying that at the time when I wrote my article there were no adequate facilities for bronchography at the hospital at which I was working.—I am, etc.

London W2, June 20

D. R. SEATON

### The Doctors' Cookery Book

SIR—I would like to congratulate those responsible for the article on *The Doctors' Cookery Book 1938* which appeared in the *Journal* of June 18 (p 1326) for having for the first time so far as I am aware taken vitamin D requirements into consideration in the establishment of their diet. With the possible exception of the case where calcium occurs in such foodstuffs as milk vitamin D would seem to be essential for the metabolism of this substance. Indeed calcium in the form of the ordinary salts such as the chloride carbonate lactate etc. appears to be incapable of efficient utilization in the absence of vitamin D. It seems likely also that the addition of vitamin D to the diet will lessen considerably the amount of calcium needed therein for correct nutrition. It is superfluous to refer to its anti-rachitic action. No arrangement occurs in Stiebeling's table as issued originally by herself or as referred to by Sherman for ensuring a supply of vitamin D in the diets recommended while Orr in his *Food, Income and Health* in employing Stiebeling's data as a standard for his diet for the production of optimum health omits any reference to vitamin D or its requirements. Curiously enough however (with out of course mentioning vitamin D) he has a section (p 41) dealing with rickets on the basis of its being a disease due to a deficient diet!—I am, etc.

Aberdeen June 18

J. P. MCGOWAN

### Doryl in Functional Urinary Retention

SIR—Professor F. R. Fraser (*Journal* June 18 p 1293) summarizing the therapeutic value of doryl and mecholol in relation to urinary retention that their value appears to have been established for retention following surgical operations, labour and lesions of the spinal cord. He says that Dr E. P. Sharpey-Schafer has demonstrated a rise of intravesical pressure ending in extrusion of the catheter following the intramuscular injection of 0.5 mg of doryl in a case of hysterical retention.

Since the publication of the work of Chassar Mont (*Lancet* 1937, 1 261) and of J. S. Maxwell (*ibid* 1937, 1 263) I have used doryl for urinary retention in a variety of neuropsychiatric diseases. It has been successful in acute organic reactions (deliria) and in chronic organic reactions—for example general paralysis and cerebral arteriosclerosis with hemiplegia—where some neurogenic factor may be at work. It has been equally successful in purely functional reactions such as hysteria, acute depression and the stupors. Catheterization always involves a risk of infection, and this risk is greatly increased in those cases of mental disorder where the patient, by resisting catheterization, may quickly break down the aseptic technique. In such cases it is most important to avoid the use of the catheter if at all possible. In female patients one can easily satisfy oneself that no organic obstruction is present but in male patients this is more difficult—for example a man of 57 suffering from schizophrenia suddenly developed acute retention coincidentally with an acute mental excitement, rectal examination showed no prostatic enlargement, but later, at operation a pedunculated middle lobe was found.

In all about a dozen cases of urinary retention which otherwise would have needed catheterization have been treated by an intramuscular injection of 0.25 mg of doryl. When this was unsuccessful a second injection half an hour later was sometimes effective, and usually led to a

simultaneous action of the bowels. Sometimes normal urinary control was established after one injection of doryl, in one case, after one success, doryl failed, in others the treatment has been repeated once or twice daily for as long as a week. No complications of note were observed. In three or four of the twelve cases there was no response to doryl.

I am grateful to Professor D. K. Henderson for permission to publish these observations which were made on patients under his charge in the Royal Edinburgh Hospital for Mental and Nervous Disorders.

—I am, etc.,

Edinburgh 10, June 20

HARRY STALKER

### Origin of Cancer

SIR—The statement by Dr J. V. Fiddian in the *Journal* of April 30 (p. 973) that 'conjugation occurs among the cells of malignant growths and was described by Bashford who observed it as identical with the process of conjugation seen in many protozoa' requires correction. Dr E. F. Bashford and Dr J. A. Murray read a paper on the conjugation of resting nuclei in an epithelioma of the mouse, an account of which appeared in the *Proceedings of the Royal Society* (1904, 73, 77). The observations described, however, were subsequently found to have been erroneous, and the original contentions of the observers were withdrawn the following year. The conjugation of cancer cells, in the words of Dr W. E. Gye, the present Director of the Imperial Cancer Research Fund, to whose courtesy I am indebted for the above information, 'is no longer believed in'—I am, etc.,

CHARLES M. BEADNELL,  
Surgeon Rear Admiral

Egham Surrey June 10

### Assistance to Medical Students from Austria

SIR—The letter of Professor John A. Ryle (June 11, p. 1286) raises questions of more than sentiment—a matter of principle is involved. While sympathizing with human suffering in any form, I yet do not see that the medical profession in England should be expected, or even asked, to bring to lives deprived of hope (according to Professor Ryle) the solace and comfort, not to mention pecuniary advantage, of a free home and a free medical education. I have known many a good man of our own race who has been more in need of such hope and comfort as a free medical education could provide, but who because of poverty, has had to look to some other sphere of human activity than medicine to earn a living. The lot of our own medical students is, from a financial standpoint, not a bed of roses, and I have personal recollections of existence for over three years on a diet of cocoa and dry bread, with an occasional kipper for variety, in order to save enough money to pay my hospital fees. Strange to say I do not remember any hospital dean, or anyone else, growing moist-eyed at my harrowing recital of inability to pay hospital fees!

This matter of refugees from certain Continental countries is fast becoming a political ramp, but I do not see why the medical profession of England should have to suffer for it—or are the men of the law equally troubled? If the deans of our large teaching hospitals feel it incumbent on them to offer Austrian or other refugees free medical education then I say that for every alien thus admitted let that hospital admit one of our own countrymen. If we must be generous to aliens in this

matter, then let us extend the same noble feeling to our own kith and kin. I have no doubt the London Hospital could find many suitable candidates for its generosity—I am, etc.,

Bournemouth, June 12

VINCENT NORMAN

### The Psychiatric Service

SIR—In view of the recent letters concerning the L.C.C. mental hospitals and higher qualifications the following points may be of interest.

1. A married man receives a commencing salary of £470 per annum.

2. From this is deducted £23 10s. for superannuation and approximately £2 10s. a month for meals whilst on duty. These are compulsory.

3. To gain promotion to the higher grades the D.P.M. and M.R.C.P. are essential. The cost of the former is £12 12s. and the latter £42, presuming that the candidate is successful on the first occasion of entry. It is not unreasonable to suggest that to gain the M.R.C.P. diploma the candidate should attend a clinical course at a teaching hospital, and belong either to a library or some learned society in order to have use of recent books and periodicals. Taking into account journeys to and from his course at a hospital an outlay of about £100 is necessary.

4. Residence near the hospital is compulsory. This means living in Greater London, where rents are high.

5. He is expected to be on the telephone, but this is omitted from the standing orders, so that income tax relief cannot be claimed.

6. Should he require a garage for his car at the hospital he will be charged £10 annually.

These points ignore the fact that an M.D. degree is also expected, which, in the case of London graduates, costs £21. It is surprising therefore that the L.C.C. continues to expect men of exceptional ability and attainments to enter a service paid at a lower level than an assistant in general practice—I am, etc.,

June 12

ANOTHER A.M.O.

## Universities and Colleges

### UNIVERSITY OF OXFORD

In Convocation on June 14 it was agreed to confer the honorary degree of D.Sc. on Charles Gustave Jung, M.D., LL.D., professor of psychology in the University of Zurich. The degree will be conferred on July 30 during the International Congress for Psychotherapy, which will be held at Oxford from July 29 to August 2 under the presidency of Professor Jung.

The Vice-Chancellor recently unveiled a window in the Museum of the History of Science to commemorate gifts from the Mercers, Grocers, and Merchant Taylors Companies, the Royal College of Physicians of London and Friends of the Old Ashmolean. He referred to the link between the University of Oxford, the great City Companies and the College of Physicians. Dr R. T. Gunther, curator of the Museum, welcoming the representatives of the bodies whose coats of arms are incorporated in the window said that it served as a reminder of what Oxford owed to London whose Companies were helping them to continue the work that Ashmole contemplated but could not pay for and of the University's alliance with the College of Physicians, whose new President Dr Robert Hutchison they were glad to have with them on that occasion.

### UNIVERSITY OF CAMBRIDGE

The following medical degrees were conferred on June 18:  
M.B., B.Chir.—G. W. N. Dunn, P. A. T. Phibbs.

## UNIVERSITY OF LONDON

## WESTMINSTER HOSPITAL MEDICAL SCHOOL

D P Maguire of Beaumont College and R C Bradbury of Westminster City School have been awarded Entrance Scholarships on the result of an Entrance Scholarship Examination held on May 26 and 27.

## UNIVERSITY OF BRISTOL

The following candidates have been approved at the examination indicated

Final M.B. Ch.B.—See on II. Kathleen L. Brett, K. J. A. Carter, Margaret H. Davies, Edith M. D. Knox, G. R. E. Moxley, Margaret E. Morgan, R. H. Owen, Mabel W. N. Ingle, A. H. Wright, In Grade I only: W. H. G. Elliott, J. S. Richardson.

With distinction in First, Second and Toxicology.

## UNIVERSITY OF MANCHESTER

Dr H. K. Ashworth has been appointed Clinical Lecturer in Anaesthesia.

The University Council has appointed Alexander R. Todd D.Sc. of the Lister Institute of Preventive Medicine to succeed Dr J. M. Heilbron as Sir Samuel Hall Professor of Chemistry and Director of the Chemical Laboratories. Dr Todd graduated at Glasgow in 1925 and after holding various scholarships and research posts went to the Department of Chemistry in Relation to Medicine at the University of Edinburgh as Assistant to Professor Barter with a grant from the Medical Research Council and subsequently a Beit Memorial medical research fellowship. At Edinburgh he has worked on the chemistry of vitamin B and related compounds and on antihelmintics.

## UNIVERSITY OF WALES

## WELSH NATIONAL SCHOOL OF MEDICINE

The following candidates for the degrees of M.B. B.Ch. have passed the examinations in the subjects indicated.

Medicine—D. W. Abbe, O. D. Beresford, S. W. Bessick, D. C. Brown, D. G. Evans, W. G. Mile, A. H. Millard, Mary D. Owen, R. Tappin, Emily K. Williams (with distinction), Mary Williams.  
Pharmacology—D. I. Harries, A. B. J. Hill, Helen C. Hodges, R. T. Jones, G. A. Jones, J. V. Jones, H. L. Lloyd, J. E. Lloyd, M. E. Lloyd, S. Love, Brenda M. Mead, J. W. Morgan, D. G. Morris, R. E. Packer, H. V. Roberts, D. C. Taylor, C. E. Thomas, T. Walker, K. M. Wheeler.

The following candidates have attained the examinations in the examination indicated.

Tuberculous Diseases Diploma—H. L. Ackerman, A. Azmy, V. N. Krishna Iyer, H. S. Loharshi, S. Sen, A. V. R. Soliman, W. D. Sulastri, J. H. Vanarase, R. Viswanathan.

## UNIVERSITY OF EDINBURGH

The Senate has resolved to confer the honorary degree of LL.D. upon the Right Hon. Walter Elliot D.Sc. M.B. F.R.S. Minister of Health. It will be conferred on July 20 on the occasion of the installation of Lord Tweedsmuir Governor General of Canada as Chancellor of the University.

The Curators of Patronage have appointed Leysbourne Stanley Patrick Davidson M.D. F.R.C.P.E. Regius Professor of Medicine in the University of Aberdeen to the Chair of Medicine in the University of Edinburgh in succession to Professor W. T. Ritchie.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on June 9 when the President Sir Cuthbert Wallace Bt. was in the chair.

## Examiners

Mr Harry Stobie (Royal Dental Hospital) was re-elected a member of the Board of Examiners in Dental Surgery.

The following examiners were elected for the ensuing year:  
Dental Surgery (Surgical Section)—C. P. G. Wakeley, C. E. Statock, E. G. Slesinger, R. M. Vick, J. B. Hume, L. E. C. Norbury.  
In Medicine for the Licentiate in Dental Surgery—R. A. Rowlands, A. H. Douthwaite, R. A. Hickling.  
Fellowship—Anatomy—P. N. B. Odgers, H. H. Woollard, R. B. Green, E. P. Stubbs.  
Physiology—H. Hartnidge, J. Mellanby, D. T. Harris, A. St. G. J. McC. Huggitt.  
Under the Joint Examining Board—Elementary Biology—W. A. Cunningham, A. E. Ellis, S. R. B. Pask, W. Rushton.  
Anatomy—A. E. Cave, W. J. Hamilton, A. B. Apperton.  
Physiology—S. Wright, D. T. Harris.  
Midwifery—A. C. Palmer, A. F. Lack, T. B. Davies, W. Shaw.  
Pathology—W. G. Barnard, B. W. Williams, D. H. Patey, W. D. Newcomb.  
Diploma in

Health—Part I—H. M. J. Perry. Part II—C. Porter.  
Diploma in Tropical Medicine and Hygiene—Pathology and Medical Hygiene—W. P. MacArthur. Tropical Medicine and Surgery—N. H. Fairley. Diploma in Ophthalmic Medicine and Surgery—Part I—D. L. Davies, R. A. Greeve. Part II—A. Caddy.  
Diploma in Psychological Medicine—F. L. Golla. Diploma in Laryngology and Otology—Part I—E. Caraw Shaw, N. A. Jory.  
Part II—T. B. Lawton. Diploma in Medical Radiology—Part I—H. H. Frost. Part II—H. W. Davies. Diploma in Anaesthetics—H. L. G. Boyle. Diploma in Child Health—A. G. Maitland-Jones.

The Council decided that the Smithdown Road Hospital Liverpool which is already recognized under paragraphs 21 and 23 of the Fellowship regulations in respect of the resident medical officer be now recognized in respect of the first house surgeon (the resident surgical officer) and second house surgeon.

## Diplomas

Diplomas of Fellowship were granted to the following candidate:

L. McK. Crooks, K. K. C. Nambiar, J. A. Currie, R. W. Knowlton, G. H. Pearce, C. D. P. Jones, H. Ackers, W. S. McKenna, H. Goodwin, A. G. Leigh, H. W. Hall, B. J. Sanger, A. Innes, P. H. Newman, R. C. F. Catterall, F. R. R. Martin, J. Schorstein, S. G. Nardell, J. M. Brown, L. B. Joshi, A. C. Bruce, C. D. Donald, B. K. Rank, R. Cox, J. R. Armstrong, J. A. W. Bingham, A. M. Clarke, H. L. Davies, E. H. W. Guirard, J. C. Golightly, R. A. Hall, J. I. Hayward, J. Heslop, J. C. Hile, P. M. J. Morgan, G. H. Kitchen, J. Lannon, E. W. McMeeran, A. Rakot, S. C. Raw, M. G. Talwalkar.

A diploma of Membership was granted to Sidney Locket.

Diplomas in Anaesthetics were granted jointly with the Royal College of Physicians at London to the following candidates:

H. N. Andrew, J. N. Cave, D. C. Clark, J. F. C. C. Cobley, J. D. Conington, E. A. Danino, T. D. W. Fryer, J. S. Hayes, B. P. Hill, K. F. Hulbert, V. J. Keating, B. Law, on T. J. C. MacDonald, Marcelline R. Marhall, J. G. Mitchell, J. G. Murdoch, H. H. Pinkerton, Frances E. Radcliffe, J. A. W. Robinson, S. G. Shippard, Major A. M. Simson, R. A. M. C. H. L. Thornton, O. S. M. Williams, A. H. R. Yousef.

## Primary Fellowship Examination

The following have been successful at the First Professional Examination for the Diploma of Fellow:

H. Abd El Aziz, M. B. Ch. A. S. Aldi, M. B. BS. MRCS, A. C. Beale, M. B. Ch. B. R. Billington, MRCS, A. C. Bingle, R. Blunden, M. B. Ch. B. F. Braithwaite, M. B. Ch. R. MRCS, M. L. Burman, M. B. BS. M. Chaudhuri, M. B. BS. Joan Cleland, J. C. Coates, M. B. Ch. B. MRCS, A. J. Craig, M. D. H. J. Croft, M. B. BS. MRCS, C. H. Cullen, M. B. Ch. B. A. M. Desmond, M. B. BS. MRCS, F. P. Dewar, M. D. N. J. Dhondy, M. B. BS. Aileen M. Dickens, E. P. H. Drake, M. B. Ch. R. MRCS, H. H. Eddey, M. B. BS. G. M. Foote, M. B. Ch. B. R. G. Ginde, M. B. BS. J. D. Gray, M. B. Ch. B. M. W. Hicks, M. D. J. M. J. Jen, M. B. BS. J. H. A. Jewell, M. B. Ch. B. J. S. Joly, M. B. Ch. R. MRCS, R. A. King, R. L. Lammi, M. B. Ch. B. MRCS, L. R. Leach, M. B. BS. MRCS, O. Lloyd, M. B. BS. MRCS, D. A. Lowe, M. B. Ch. B. K. M. MacLeod, M. D. MRCS, J. E. Malcolm, M. B. Ch. B. N. S. Martin, M. B. Ch. B. N. L. Mehta, M. B. BS. Eleanor M. Mills, M. B. Ch. B. MRCS, S. V. Modi, M. B. BS. R. A. Mor, C. P. Nicholas, M. B. Ch. B. MRCS, H. A. Oatley, M. B. BS. R. Parkinson, M. B. BS. MRCS, D. S. Quill, M. B. Ch. B. D. Ranger, W. S. Rees, M. B. Ch. B. J. P. Ready, M. B. Ch. R. MRCS, D. A. Richmond, M. B. Ch. B. MRCS, P. W. S. Riley, M. B. Ch. B. P. A. Robinson, MRCS, M. S. C. Rudd, M. D. C. A. R. Schulenburg, M. B. Ch. B. H. K. Sett, M. B. F. A. Simmonds, MRCS, J. Singh, M. B. BS. W. E. Spring, M. B. BS. A. W. Stewart, MRCS, J. Swaney, M. D. BS. L. R. S. Taalor, W. Thompson, B. M. Truscott, M. B. BS. MRCS, A. K. Tulloch, M. B. Ch. B. Carolina M. van Dorp.

Professor P. B. Ascroft FRCS will deliver a Hunterian Lecture on "The Surgical Treatment of Arterial Hypertension" in the theatre of the College, Lincoln's Inn Fields, W.C. on Friday, July 1, at 5 p.m.

A special lecture on "The Mechanism of Peptic Ulceration: A Review of the Results of Experimental Investigations" will be delivered by Professor Frank C. Mann M.D. director of the Mayo Foundation for Medical Education and Research at the University of Minnesota in the theatre of the College on Friday, July 15, at 5 p.m.

Fellows and Members of the College are invited to attend Students and others who are not Fellows or Members of the College will be admitted on pre-arranged private visiting cards. Tea will be served before the lecture.

## Obituary

FRANCIS JOSEPH BAILDON, M.B., C.M.

Past President Lancashire and Cheshire Branch, British Medical Association

On June 13 Southport lost one of its best-known citizens and the medical fraternity a valued, respected, and much-liked colleague on the death of Francis Joseph Baildon.

A native of Newcastle-under-Lyme, Dr. Baildon graduated at Edinburgh in 1881. After holding the usual house posts he became resident medical officer at the Chalmers Hospital, Edinburgh. He came to practise in Southport in 1883. In 1889 he was appointed medical officer of the small hospital, holding about forty patients and dealing with simple cases only. This institution, then situated in



a back street, was the first step from the old public dispensary to a real hospital, and by his ability, zeal, and perspicacity Dr. Baildon exerted a great influence on the progress—scientific as well as popular—of this valuable development. In 1895 the Southport Infirmary was opened, and he became the senior "honorary medical officer," as the position was then known, in 1896. He retired from this office in 1919, when he was made senior honorary consulting

surgeon. For many years Baildon's opinion was sought in consultation by his colleagues. His powers of diagnosis and prognosis were very keen. He was always scrupulously careful to observe the highest ethical standards. He could not tolerate "show" or flattery, nor could he brook a pretence of knowledge on the part of his associates. Both in medical matters and in general affairs he always showed a discerning and well-ordered mind, which made his suggestions and advice of the highest value, whether in public meetings or in private affairs.

Baildon became a member of the British Medical Association in 1883, and took a keen interest in its work. He was elected chairman of the Southport Division in 1903, in 1906 becoming a member of the Executive Committee of this Division, and from that date till last year, when he insisted on retiring, he remained on the Executive Committee, either *ex officio* or by election. He was made a member of the Lancashire and Cheshire Branch Council in 1903, and again in 1912, remaining so, in view of being a member of the Central Council or as an elected member from the Southport Division till last year. In 1917–18 he was made president of the Branch, an honour which he received again in 1920 when the annual meeting of the Branch was held in Southport. He was the representative of the Southport Division to the Annual Representative Meetings in 1905, 1907, 1908, and from 1911 to 1931. He was elected to the Council of the Association in 1927 and retained his seat till his resignation in 1934. From 1920 onwards he served on the following committees: the Organization, the Journal, the Finance, the Grants, and the Science, and also on the Propaganda

Subcommittee. His last appearance in the council chamber at B.M.A. House was at the June meeting in 1936, when, accompanied by a colleague, he went up to press the invitation of the Southport Division to hold the Annual Meeting in Southport this year.

He was one of the founders of the Southport Medical Society in 1899, and always took a great interest in its activities. He particularly tried to increase the usefulness of the library of the society, acting as librarian for some years. He was president of the society for one term of a twelvemonth, and acted as honorary secretary for a few years. He was for some time honorary lieutenant of the Lancashire Voluntary Medical Corps, before the formation of the Territorial Army, and he also served as a temporary divisional surgeon at the V.A.D. hospital in Southport from 1915 to early 1919. For twenty-three years he served on the Southport Insurance Committee (N.H.I.), being elected as representing the municipal council.

In addition to these medical activities Baildon was always interested in scientific subjects. In 1890 he helped in the foundation of the Southport Society of Natural Science, which afterwards became the Southport Science Society. He gave lectures to that society on many occasions, was treasurer for a year or two, was on the council for many years, and was four times president. A good pianist, he was very fond of music, and took much interest in the Southport Orchestral Society, acting as president for some years as well as taking part in the organization as a member of the council of the society.

Baildon had a sound knowledge of literature. He was very widely read and took a keen interest in the development of the Southport library. He never entered into municipal politics, but readily accepted the invitation to become a co-opted member of the Library and Arts Committee of the municipal council in 1886. He served in this capacity from that year to the time of his death. Indeed, only four weeks ago—a week before the onset of his fatal illness—he attended the opening of the annual exhibition of modern arts organized by this committee. His judgment and advice, on the arts side as well as on the literature side of the committee's work, proved of great value. Socially he was well known to many people, as he had long been a member of the Savage Club. It can well be understood that such a man will be sorely missed in the town's life, but especially by his medical friends. Our sincere sympathy is felt for Mrs. Baildon and her daughter.

E. W. L.

ARTHUR HAWKYARD, M.D., LL.D.

Leeds has lost one of its most public-spirited citizens and one of its most-loved medical men by the passing at the age of 76 of Dr. Arthur Hawkyard, who died on June 17. He was a student of the old Leeds School of Medicine before its amalgamation with the Yorkshire College, and studied partly in Leeds and partly in Edinburgh, where he qualified by taking the diplomas in medicine, surgery, and midwifery in 1882. In 1907 he graduated as Doctor of Medicine at Durham University, having two years before manifested the catholicity of his interests by being called to the Bar. Before starting in practice in 1887 he acted as house-surgeon at the Rothwell Infirmary and he then worked for several years under Dr. Allen who at that time was in charge of the Union Infirmary at Leeds and to whose training Dr. Hawkyard was often heard to attribute much of his subsequent professional success. This success attended him from the time he started in practice in Hunslet and he secured the confidence and the affection of a very large circle of patients,

many of whom were his personal friends. As a loyal citizen of the place of his birth Dr Hawkyard entered fully into the public life of Leeds. He was a member of the Hunslet Board of Guardians for many years and a City Councillor for nine years. He was at the time of his death the son or lay magistrate of the City and a most regular attendant on the Bench where his work was highly prized by his fellow magistrates. He served a term as alderman and in 1930 with the cordial support of the members of all parties he was elected Lord Mayor and it was generally agreed that he carried out the duties and bore the responsibilities of that position with dignity and with great efficiency. During his tenure of office the University of Leeds conferred on him the degree of Doctor of Laws, on being presented for which honour he was happily described as a conspicuous representative of the good physician in general practice and a man of disinterested public spirit. Hawkyard was a man who never hesitated to express his views whether they were in harmony or at variance with those held by others and these views were always considered with respect. His cheerful disposition, his sound judgment, his genuine kindness of heart and his kindly sense of humour combined to build up a personality which will cause him to be greatly missed in the public life of Leeds and by a large circle of friends.

Dr Hawkyard joined the British Medical Association in 1892 was chairman of the Leeds Division in 1927-8 and served as Representative at the Annual Meetings in 1912 and from 1928 to 1936.

### THE LATE DR WINGRAVE

Sir James Dundas Grant writes

In the late eighties I accidentally met a smart dapper, square-jawed clear-eyed young man who told me he was teaching physiology at the Thomas Cooke School of Anatomy. This was Vitruvius Wyatt Wingrave and the casual meeting led to a valued and lasting friendship. I was then preparing for the Primary Fellowship and was led to enrol myself in his class. His claim that he ran through the whole subject of physiology if only up to standard of the Membership, in about three weeks was substantiated and I found his course a marvel of condensation without sacrifice of exhaustiveness or lucidity. It was a fortunate day for us all when I introduced him to my clinic and to my colleagues at the Central London Throat and Ear Hospital. His originality and his skill in practical pathology secured him a warm welcome and during his many years of service on the staff no one commanded in a higher degree the respect and affection of his colleagues. His reputation extended far beyond the immediate circle in which he worked and as an evidence of the appreciation of his ability it is sufficient to recall that the late Sir William Milligan that wise and outstanding otologist and laryngologist secured his co-operation in his great work on *Diseases of the Ear*.

"It was a cause of great regret to his colleagues that his state of health obliged him to give up professional work before the normal time but he had many sides and with a fastidious taste in art he took the greatest interest in all aspects of natural history and archaeology. His latter days were thus brightened by congenial researches which though they brought him no direct profit earned for him the respect and gratitude of those with whom he was immediately or distantly associated. In addition to the tokens of respect on the part of the inhabitants of Lyme Regis, where he died, Coventry where he was born, testified to its pride in its distinguished son by presenting him with the Freedom of the City. Those who knew Vitruvius Wyatt Wingrave were the better for having done so.

Dr ROBERT TAIT MCKENZIE to whom we briefly referred on May 28 (p. 1191) died suddenly of heart disease in Philadelphia on April 28. He had recently returned from the meeting of the Academy of Physical Education at Atlanta Georgia of which he was president. Born at Almonte Ontario in 1867 McKenzie took his M.D. at McGill in 1892. In 1904 he went to Philadelphia as professor and director of physical education in the University of Pennsylvania a post which he occupied until 1930. During the world war he held a commission in the Royal Army Medical Corps, and for a time was inspector of physical training for Kitchener's armies. His fame as an authority on physical culture was eclipsed by his distinction as sculptor with a flair for depicting the human body in action. His bronze medallion, The Joy of Effort to commemorate the Olympic Games at Stockholm in 1912 won him a silver medal from the King of Sweden and his exhibition of statuary in New York City in 1934 attracted national attention. A gentleman in the truest sense of the word, cultured, aristocratic, courteous and charming, McKenzie had made for himself a host of friends in Canada, in Britain, and in the United States.

Dr JOHN MALCOLM HARPER of Bath who died on May 30 at the age of 77 had had an active and very varied career. Born at Bathampton he was educated at Bath College, the London Hospital and the University of Durham. He qualified M.R.C.S. England in 1889 and he obtained the D.P.H. of Bristol in 1917. In addition to his medical practice in Bath he was surgeon to the police force, and was frequently a witness in celebrated cases including that of Hinks in 1934. For many years he was medical officer of health for the Bathampton rural district and was also medical officer for the later-formed Keynsham urban district. In his earlier days he had been an enthusiastic member of the Volunteer Force serving with the 1st Somerset Volunteer Battalion and attaining the rank of surgeon lieutenant colonel. He was a late honorary medical officer to the Eastern Dispensary and the Bath War Hospital and a medical examiner of recruits in the West Wessex area. In 1911 he joined the Bath Division of the British Medical Association. He was actively interested in several branches of Freemasonry and reached high rank in the craft. He was also widely known as an enthusiastic collector of antiques and lent to the Pump Room a valuable series of old naval pictures. He had married twice and is survived by his second wife and two daughters and a sister.

Norwich City Mental Hospital suffered a grievous loss in the untimely death of its medical superintendent Dr CHARLTON ROBERT FREDERICK HALL on June 7. A Lancashire man Dr Hall was educated at Birkenhead School and Trinity College Cambridge where he took the degrees of M.A. and B.Ch. afterwards proceeding to the London Hospital where he qualified M.R.C.S., L.R.C.P. In 1909 he married and was for some years in private practice at Shrewton Wilts. A serious operation prevented him from taking part in the great war, and during those years he was assistant medical officer at the Shropshire Mental Hospital. He was appointed to Hellesdon Mental Hospital in 1918 and became medical superintendent in 1935. He had been a member of the British Medical Association since 1908. He was a keen fisherman and excelled at all games and obtained his tennis blue while at Cambridge. He joined in hospital cricket and football matches for many years but perhaps golf was really his favourite game. A medical colleague writes: During the twenty years Dr Hall was at Hellesdon many great changes came about largely due to his interest and keenness to get away from the asylum atmosphere. He believed in as much liberty as was possible for his patients, and substituted individual clothing in place of drab uniforms thus giving to the patients fresh interest and a feeling of pride in their appearance. He was a pioneer in his administration of the admission

hospital in refusing to allow unsuitable patients to mix with the early and voluntary cases, the excellent results have fully justified his foresight. He was an eager supporter of all reforms, and was fortunate in having a most humanitarian committee to help him in his work. Many poor people in Norwich with mental trouble found in him a good friend. Dr Hall was also medical adviser to the Mental Deficiency Treatment Committee. Norwich has indeed lost one of its best-loved medical men, and it is difficult to believe he has gone from us. That charming voice, that kindly smile, will long be remembered by those colleagues and patients who loved and trusted him.

Dr GEORGE MALLACK BLUETT died on June 8 at Bath after a short illness at the age of 77. Although he had left Guildford for some years he was not forgotten by his colleagues and many friends there, who were sorry to hear of his death. His cheery personality and the good work he did for the British Medical Association endeared him to his medical friends. Educated at University College, London, and Paris, he took his M.R.C.S. in 1884, his L.R.C.P. in 1886, and L.S.A. in 1885. Dr Bluett was assistant medical officer to the Brook Fever Hospital at Woolwich. Later he became honorary physician to the Lying-in Hospital, Lambeth, and contributed papers to the Obstetrical Society's *Transactions*. During the great war he served as captain in the R.A.M.C. After the war he went to practise in Guildford, where he devoted much time and energy to B.M.A. work. He had been a member of the Association since 1887, and was honorary secretary of the Division for several years, and finally was chairman in 1932-3. Failing health caused him to retire to Bath. Our sympathy goes out to his wife, who survives him.—T. B. J.

We regret to record the death in an aeroplane accident of Mr CHARLES FRANCIS MASSY SWYNNERTON, director of tsetse research in Tanganyika Territory. During the past twenty years Mr Swynnerton had studied the tsetse fly problem. In 1921 he published a paper which threw new light on the possibility of reducing this scourge of Tropical Africa by controlling the types of vegetation, and two years ago he published a monumental work, *The Tsetse Flies of East Africa*.

JOHN JACOB ABEL, famous for his work on the chemistry of the ductless glands, has died at Baltimore at the age of 81. It is little more than a fortnight since he was elected a Foreign Member of the Royal Society, and in 1929 he received the gold medal for pharmacology and therapeutics of the Society of Apothecaries of London. Dr Abel, who had been for many years professor of pharmacology at the Johns Hopkins Medical School at Baltimore, was also a director of the laboratory for endocrine research there. His name will long be remembered for the researches which led to the production of adrenaline in a chemically pure state, and for the work which produced insulin in crystalline form. In 1932 he was president of the American Association for the Advancement of Science.

Dr THOMAS LATHROP STEDMAN, editor of *A Practical Medical Dictionary*, universally known as *Stedman's Medical Dictionary*, died in New York City on May 26 at the age of 84.

Dr VLADIMIR M. FORTUNATO, a prominent sculptor of medical models, left the Moscow Medical Museum in 1921 to take up a similar post at Johns Hopkins University. He was busily engaged preparing models for the New York World's Fair when he died of a heart attack on June 10 at the age of 53.

Dr HENRY TURMAN BYFORD, one of Chicago's leading gynaecologists who was honorary president of the International Congress of Gynaecology in 1896, died on June 5 at the age of 84.

The following well known foreign medical men have recently died: Dr EDUARD TRENDEL, an eminent orthopaedic surgeon of Stuttgart; Professor GAMPER, director of the psychiatric clinic of the German University at Prague, as the result of a motor accident, in which his wife was also killed; Dr ANTONIO CESARIS DEMEL, emeritus professor of morbid anatomy at Pisa, aged 72; Professor AUGUSTO GIANELLI, an eminent psychiatrist of Rome, aged 73; and Professor ATTILIO BONANNI, director of the Institute of Pharmacology of the University of Rome, aged 68.

## The Services

### IMS ANNUAL DINNER

The thirty seventh annual dinner of the Indian Medical Service took place in London at the Trocadero Restaurant on June 14, with the Director-General, Major-General E. W. C. Bradfield, C.I.E., O.B.E., K.H.S., in the chair. The official guests at the high table were the Marquess of Zetland, Secretary of State for India, General Sir Sydney Muspratt, Major-General W. Brooke Purdon, late R.A.M.C., Dr N. Hamilton Fairly, Dr N. G. Horner, Editor of the *British Medical Journal* and Dr T. S. Fox, Assistant Editor of the *Lancet*.

After the health of the King-Emperor had been honoured the chairman proposed the toast of 'The Service' and expressed the gratification of all at the presence of Lord Zetland and General Muspratt. He welcomed the junior officers of the Service, remarking that they had chosen a good life and great opportunities. India owed a heavy debt to the Indian Medical Service in the past, but the I.M.S. officers of to-day were doing as good work as their predecessors, and Sir John Megaw was recruiting first rate men to carry on the tradition. Major-General C. W. F. Melville, proposing the chairman's health, made a classification with humorous asides, of the members dining that evening into retired officers, serving officers, and new entrants. He said that General Bradfield was in himself the epitome of the I.M.S., a man whom everyone wanted to serve under. Lord Zetland, recalling a promise from the secretaries that no speech would be demanded from him, told a good story and declined to say more.

The last formal incident of a successful reunion was when the company stood for a moment in memory of Colonel John Anderson and Colonel J. J. Pratt.

The officers present at the dinner were

**Major Generals** Sir Robert McCarrison, I. M. Macrae, C. W. F. Melville, Sir John Megaw, Sir Frank Connor, H. R. Nutt, T. G. Paterson Fergus, Sir Cuthbert Sprawson, Sir Thomas Symons, Sir Leonard Rogers, and G. Tate.

**Colonels** H. Ainsworth, Sir Charles Brierley, H. H. Broom, H. M. Cruddas, H. R. Dutton, A. B. Fry, J. Fuller Good, T. A. Granger, C. R. M. Green, W. H. Leonard, R. G. Lynn, H. M. Mackenzie, F. P. Mackie, A. J. Macnab, A. A. McNeill, A. A. C. McNeill, Sir Richard Needham, C. H. Rheinhold, H. A. Stanger, Leathes, R. J. Taylor, R. G. Turner, J. Norman Walker, and C. N. C. Wimberley.

**Lieutenant Colonels** W. G. P. Alpin, F. J. Anderson, C. H. Barber, Norman Briggs, G. T. Buick, H. P. Cook, H. S. Cormick, D. G. Crawford, J. M. Crawford, H. J. M. Cursetjee, J. B. Dalzell Hunter, I. Davenport Jones, W. R. Dimond, F. F. Elwes, S. C. Evans, S. M. A. Faruki, J. K. S. Fleming, H. R. B. Gibson, E. S. Goss, V. B. Green, Armytage, F. Griffith, A. E. Grisewood, R. Hay, S. N. Hayes, W. L. Hurrett, J. M. R. Hennessey, B. Higham, H. Hingston, J. M. Holmes, E. V. Hugo, M. L. C. Irvine, H. H. King, J. B. Lapsley, J. C. H. Leicester, J. G. M. McCann, D. McDonald, R. F. D. MacGregor, H. M. MacKenzie, G. R. McRobert, S. A. McSwiney, E. C. G. Maddock, S. N. Makand, G. E. Malcolmson, W. A. Meerns, S. H. Middleton, West, T. R. Mulroney, Clive Newcomb, C. Newton Davis, H. K. Rowntree, J. D. Sandes, J. A. Sinton, V. C. R. B. Seymour Sewell, A. L. Sheppard, H. B. Steen, R. Steen, Ashton Street, W. A. Sykes, R. Sweet, C. Thomson, E. Owen Thurston, P. Verdon, E. L. Ward, E. E. Waters, H. Williamson, and R. E. Wright.

**Majors** H. C. Brown, J. A. Cruickshank, J. A. W. Ebdon, Sir Thomas Carey Evans, P. Heffernan, E. S. S. Lucas, V. B. Nesfield, C. G. Seymour, H. S. Waters, and R. A. Wesson.



Grady A H Barzley G F Corden S Cunningham C H Dhall Day Dutt G K Graham R J Jarvis B N Khan M E Kirwan W A N Marro P L O'Neill G R C Palmer R I Red M Sedick Man Singh and G L S Stewart Leers D M Black J H Briscoe Smith J C Telford A C Gordinnik G A Graham N D Jekill G C Reitz and A R Woodford

#### NORTH PERSIAN FORCES MEMORIAL MEDAL

Edward Cochrane M.D. D.P.H. Medical Officer (Health) Gold Coast has been awarded the North Persian Forces Memorial Medal for 1937 for his paper on Tuberculosis in the Tropics published in the *Tropical Diseases Bulletin* 1937 vol. 4 Nos. 10 and 11. The medal is awarded annually for the best paper on tropical medicine or hygiene published in any journal during the preceding twelve months by a medical officer of under twelve years' service of the Royal Navy Royal Army Medical Corps Royal Air Force Indian Medical Service or of the Colonial Medical Service.

#### KITCHENER MEDICAL SERVICE AWARDS

The Lord Kitchener National Memorial Fund Council has made medical service awards for 1938 as follows:

R. Andrew (Epworth College) for Middlesex Hospital Medical School Royal Army Medical Corps H. F. Omond (Halesbury College) for Guy's Hospital Medical School Medical Branch of the Royal Navy R. M. Phillips (Chesham College) for St. Thomas' Hospital Medical School Medical Branch of the Royal Navy J. F. Ward McQuaid (Stonhurst College) for St. Mary's Hospital Medical School Royal Army Medical Corps J. W. D. West (Chesham College) for Caius College Cambridge and St. Bartholomew's Hospital Medical College Medical Branch of the Royal Air Force and C. H. Holden (Wellington College) for St. John's University Medical School Medical Branch of the Royal Navy.

#### ALEXANDER MEMORIAL PRIZE

Major C. V. Macnamara R.A.M.C. has been awarded the Alexander Memorial Prize for 1937 consisting of a gold medal and a sum of £40. The prize is awarded annually to an officer of the Royal Army Medical Corps for professional work of outstanding merit.

#### LEISHMAN MEMORIAL PRIZE

Leutenant Colonel E. V. Whitby R.A.M.C. has been awarded the Leishman Memorial Prize for the year 1937 consisting of a silver medal and a sum of £40. This prize is awarded annually to an officer of the Royal Army Medical Corps or the Army Dental Corps for work of outstanding merit.

#### VOLUNTARY AID DETACHMENTS

The latest official returns of the progress made in the organization of Voluntary Aid Detachments show that 167 men's detachments and 1138 women's detachments comprising a total membership of 33616 have received recognition by the War Office. Since November of last year there has been an increase of 11 men's detachments and 41 women's detachments representing an increased membership of 1395. Of the present membership 1110 men and 5910 women have undertaken the mobile obligation.

The county areas in England which have a total membership of 500 and over are as follows: County of London 2019 East Lancashire 1812 Northolt 1586 Hampshire 1323 Surrey 1263 West Riding 1234 Cheshire 1188 Sussex 1110 West Lancashire 1096 Devonshire 1066 Somerset 1034 Essex 919 Kent 917 North Riding 792 Middlesex 726 Gloucestershire 600 Lincolnshire 559 Nottinghamshire 536 Berkshire 507.

In Scotland there are 167 detachments with a total membership of 318 of whom 100 are mobile members. There are 79 detachments in Wales, the total membership being 1852, of whom 354 are mobile members.

The present scheme for Voluntary Aid Detachments was inaugurated in 1923 and is designed to supplement the medical services of the Naval Military and Air Forces in time of war.

Mobile members are required to give an undertaking that in the event of the embodiment of the Territorial Army they are prepared to serve the medical services either at home or abroad. Immobile members undertake to serve within reach of their own homes.

## Medical Notes in Parliament

The House of Lords this week made progress with the Coal Bill and other measures.

The House of Commons discussed the Finance Bill the Education Estimates and foreign affairs.

The Parliamentary Medical Committee met on June 14. Sir Francis Fremantle in the chair, and appointed four representatives to attend the British Medical Association meeting at Plymouth. This will be the first formal representation of the Parliamentary Medical Committee at the Association's Annual Meeting. The committee also discussed on June 14 the desire expressed among panel practitioners for increases in remuneration to meet the increased complexity of their work. The committee decided to explore this subject with the British Medical Association. A communication was received and considered regarding the registration of medical qualifications in Grenada West Indies. Attention was given to the Infanticide Bill the Registration of Nursing Homes (Scotland) Bill and the Milk Bill which last is not now expected before the autumn. The committee will meet again on July 5.

#### Progress of Bills

In the House of Lords on June 20 Lord ALNESS introduced a Bill to amend the British Nationality and Status and Aliens Act 1914 to 1933 and it was read a first time. The Mental Deficiency Bill was brought from the Commons and read a first time. On the same day in the House of Lords the Children and Young Persons Bill and the Baking Industry (Hours of Work) Bill passed through committee. The Food and Drugs Bill was agreed to on report and the Prevention of Blindness (Scotland) Bill was read the third time and passed.

In the House of Commons on June 20 Sir ROBERT GOWER introduced the Protection of Animals (No. 2) Bill to amend the Protection of Animals Act 1911 and make it illegal to have possession of animals trained prepared or intended for fighting or baiting. The Nursing Homes Registration (Scotland) Bill and the Infanticide Bill were read a third time without discussion in the House of Commons on June 20.

#### Social Services in the West Indies

On May 14 the House of Commons in Committee of Supply considered the vote for the Colonial Office services. Mr. MALCOLM MACDONALD said he would not deny that there was room in the West Indies generally for improvement in many directions. A long-term policy of reconstruction had to be devised the first feature of which should be a steady expansion of the social and other services which could raise the standard of living of the people. There ought to be surveys of housing and more housing programmes. They must push ahead with the work already begun of improving the nutrition of the peoples and carry forward the work already started to develop really effective medical services in the colonies. The Government had decided to advise His Majesty that a Royal Commission should be appointed to inquire into the social and economic conditions in Barbadoes British Guiana British Honduras Jamaica the Leeward Islands Trinidad and the Windward Islands. He hoped to give the terms of reference and the names of the members of the Royal Commission at an early date.

#### Nutrition and Dietary Surveys

On May 14 Mr. COLVILLE informed Mr. Henderson Stewart that the Advisory Committee on Nutrition was carrying out extensive dietary surveys in England and Scotland. In



Scotland the work was in the hands of Professor Cuthcart and Sir John Orr, and it was expected that the studies would be completed in the course of the summer. Sir John Orr was also undertaking on behalf of the Carnegie United Kingdom Trust, a scheme of research to determine the relation between the diets and the state of development and health of children and adolescents. This research included a dietary survey carried out by a team of trained investigators. The experiments covered a period of twelve months and it was not expected that any results could be published until 1939.

### Annual Cost of Tropical Diseases

On June 14 Mr D. ADAMS asked the Chancellor of the Duchy of Lancaster as representing the Lord President of the Council, whether, in view of the fact that the report of the Medical Research Council 1936-7 quoted estimates to the effect that the direct financial loss due to malaria in India alone amounted to between £23,000,000 and £50,000,000 per annum, the indirect losses being still greater, and of the extreme importance of these losses, he would institute inquiries with a view to supplying reliable information on this matter with reference to all important tropical diseases. Earl WINTERTON said that it would be extremely difficult to obtain figures of any real value for the economic loss due to different diseases in tropical territories. Estimates such as those quoted by the Medical Research Council were of necessity very rough and based on incomplete data. They were useful only as illustrating in a general way the magnitude of the problem. It would certainly be true to say that the losses due to diseases other than malaria were also enormous.

### Service Patients in Mental Hospitals

On June 14 Mr RAMSBOTHAM informed Mr Kelly that the number of visits paid by the medical inspector attached to the Pensions Ministry Headquarters to institutions in Great Britain and Ireland in which Service patients were being treated was 135 during 1936, and 212 in 1937. In addition frequent visits were paid by local medical officers of the Ministry to mental hospitals from time to time in connexion with the admission of fresh cases but of these no central record was kept.

### Hospitals in Air Attack

On June 15 Colonel NATHAN asked the terms of reference to the committee appointed to inquire into certain questions relating to hospitals in the event of air raids. He also asked the Home Secretary to consider appointing as additions to the committee some person with experience as a member of the lay committee of the voluntary hospitals, and some person with experience as secretary, or similar executive officer of the voluntary hospitals. Mr GEOFFREY LLOYD answered that Sir Samuel Hoare did not formally appoint a committee to make a report on the organization of casualty hospitals but invited a small number of eminent persons in the medical world to consider the proposals which had been worked out by the Departments and to make recommendations to him on various matters. It was understood that this body could take into consultation anyone likely to be able to help them and it was suggested to the Home Secretary on their behalf that he should invite persons representing voluntary hospitals in the London area to take part in their deliberations. The Home Secretary would have done this but the Minister of Health would take over the supervision of the organization of war hospitals and had issued an invitation on the lines suggested.

### Analgesia at Childbirth

Dr SUMMERSKILL asked on June 16 whether the attention of Dr Elliot had been drawn to the recent conference of 7,000 delegates from women's institutes at the Albert Hall at which it was agreed by an overwhelming majority that analgesia at childbirth should be available for all mothers

who desire it, and whether he would set up an inquiry with a view to steps being taken which would meet the demand of these mothers.

Dr ELLIOT replied that when a doctor was in charge of a case the question of the administration of analgesics was within his discretion. As regards births attended by a midwife, the Central Midwives Board, the statutory authority regulating the practice of midwives, had resolved, following a report by the British College of Obstetricians that midwives who had received suitable instruction might, with adequate safeguards, themselves administer analgesics. It was within the powers of local authorities to provide the necessary apparatus as part of the equipment of the midwives whom they employed under the Act of 1936.

### Electrotherapy as Additional Benefit

On June 16 Mr DAVID ADAMS asked the Minister of Health to take steps to place electrical treatment at the disposal of rheumatic patients under national health insurance. Dr ELLIOT replied that the medical benefit to which insured persons were entitled was limited to services within the competence of general practitioners as a class. He had no power to extend the scope of the benefit. A number of approved societies, however, made provision by way of additional benefits for the electrical treatment in approved institutions of their members suffering from rheumatism.

### Recommendations of Voluntary Hospitals Commission

Dr ELLIOT stated on June 16 that a Provisional Central Council had been set up by the British Hospitals Association to consider the best methods of implementing the main recommendations of the report of the Voluntary Hospitals Commission. The Council was likely to issue a report towards the end of this year.

### Registrar-General's Statistics

Captain ELLISTON asked on June 17 whether the attention of the Minister of Health had been drawn to the belated publication of annual health reports, and whether he could arrange for earlier issue by the Registrar-General of the local vital statistics required by medical officers of health for the completion of such reports. Dr ELLIOT said in reply that every effort would be made to secure the completion and distribution of these statistics to medical officers of health at the earliest possible date.

### Advisory Committee on Mental Health Research

No Government grants have been made to county and borough councils during the past seven years for the purpose of research into the cause and treatment of mental disorder. An advisory committee has been set up with the approval of Dr Elliot by the Board of Control to consider the general question of research into mental disorders.

### Nursery School Provision

During the discussion of the Education Estimates by the House of Commons on June 20 Mr KENNETH LINDSAY said there were 105 recognized nursery schools, with an accommodation of 7,685. There had been an increase of 19 per cent on the year, but the total was still small, though many authorities made provision for children under 5 years.

**Hospital Finance**—On May 14 Mr D. ADAMS asked the Minister of Health whether he was aware of a growing body of opinion to the effect that British hospital finance was in need of fundamental overhauling and whether he would consider the possibility of instituting a corporation on the lines of the British Broadcasting Corporation including representatives of the central Government local authorities.

voluntary hospitals, and the medical profession to be put in complete charge of all hospital finances. Dr LLOYD said he was aware that opinions had been expressed on the lines indicated in the first part of the question but he could not commit himself to the view that the action proposed by Mr Adams would provide an appropriate solution.

*Sensitivity to Mustard Gas*—On May 14 Mr G. GRIFITHS asked the Home Secretary whether in view of the statement in the *Air Raid Precautions Handbook* No. 5 that all persons not previously exposed were about equally sensitive to mustard gas he would give details of the experiment by which the conclusions of Professor Marshall and others published in the *Journal of Pharmacology and Experimental Therapeutics* for 1922 that some people were 140 times as sensitive as others, were refuted. Mr LLOYD said he gathered that Mr Griffiths referred to a report published in 1919. The experiments described in that report were carried out with comparatively high concentrations of gas, whereas the statement in the handbook reflected recent similar experiments with lower concentrations. The difference in experience was probably due to that difference in concentration.

*Progress of Silicosis Investigations*—On June 14 Mr J. GRIFITHS asked what further steps it was proposed to take in the investigation into the problem of silicosis and other lung diseases in the anthracite coalfield of South Wales. Earl WINTERTON replied that as soon as the examination of the data and material recently collected at Ammanford had been completed the Medical Research Council proposed to extend the investigation to at least one further colliery. Thereafter a report on the whole of the findings would be prepared.

*Remuneration of Air Force Medical Officers*—Mr DENVILLE asked on June 16 if the Secretary of State for Air would give immediate consideration to the complaint of medical officers attached to the Royal Air Force recruiting depots of the insufficiency of their remuneration and of the ineffect of their engagement. Captain BALFOUR replied that consideration had been given to the representations made by the officers referred to but it had not been possible to modify their conditions of employment.

*Vaccine Therapy in Foot and Mouth Disease*—On June 20 Sir JOSEPH LEECH asked the Minister of Agriculture whether he was conferring with the Danish Government on the results of the foot and mouth vaccine experiments at Reims Island and whether His Majesty's Government was testing the efficacy of the vaccine. Mr MORRISON replied: I have seen reports on the active immunization of animals against foot and mouth disease in Germany. In a preliminary scientific account that has been published no details are given of the methods of preparation of the vaccine but it is stated that they will be published in the near future. The results of the use of the vaccine in the field will also be published later. The Foot and Mouth Disease Research Committee is aware of the work which has been carried out in Denmark and its recent application in Germany and is keeping in touch with the situation.

*Slum Clearance*—In England and Wales some 200,000 slum houses have already been demolished, closed or made fit and a further 250,000 occupied by about 1,000,000 persons still fall to be dealt with. Action has been initiated in respect of about 170,000 of these. In the twelve months ended April 30 last over 70,000 replacement houses were approved as compared with about 59,000 approved in the preceding twelve months.

#### Notes in Brief

Six cases of small pox were notified in England and Wales in 1938 up to and including the week ended May 21, 1938. During the quarter ended March 31, 1938 one death was assigned to small pox.

With regard to the suggested legislation under which local authorities are to have power to decide whether or not there shall be compulsory pasteurization of milk sold in the area under their control the Ministry of Health and the Ministry of Agriculture are in consultation with representatives of the associations of local authorities concerned.

The total number of houses completed by private enterprise in England and Wales with State assistance from 1919 up to March 31, 1938 was 426,276.

On May 31 Mr RAMSBOTHAM informed Viscountess Astor that 7,776 ex-service men in receipt of disability pensions died in the twelve months ended last March their mortality rate being 17.9 per 1,000. For the general male population of corresponding ages in England and Wales the mortality rate for the same period was approximately 13 per 1,000.

The number of houses required in Scotland to replace unfit houses and to put an end to overcrowding is about 250,000. Houses built by local authorities specifically for these purposes in 1937 numbered 12,857.

## Medico-Legal

### CRIMINAL NEGLIGENCE OF AN UNQUALIFIED PRACTITIONER

A practitioner of medicine qualified or unqualified, must bring reasonable skill as well as care to his treatment of a patient and if he attempts a task which is obviously far beyond his powers and harm results, his negligence may be regarded as so flagrant as to be criminal.

A school teacher aged 23 who suffered from diabetes was for four years on a strict diet and insulin. On the advice of a friend she consulted an osteopath and radiologist named Herbert Jones who said she had not got diabetes and never had had it but was suffering from anaemia. He advised her to starve herself for four days and take nothing but orange juice. This she did discontinuing her insulin and in three days she had lost seven pounds. Her father telephoned to Jones and he replied that she should continue with the treatment until she saw him in a few days time. On that day she went into coma and although she was taken to hospital she died a week after consulting Jones. He was sent for trial at the Gloucester Assizes before Mr Justice Charles and Dr Thomas Haslett a pathologist said that cessation of the insulin treatment would lead to death. Jones giving evidence in his own defence said he had found no objective symptoms of diabetes but had found symptoms of anaemia. He put the patient on a four days fast with hot water and orange juice as a preliminary clearing of the system for further treatment. He had intended getting a medical friend to carry out tests for diabetes. In answer to the judge he said that he had not put the patient off insulin. In cross examination he admitted that he had no experience of diabetes and that he had made a mistake in his diagnosis in view of the absence of objective symptoms. Asked by the judge why he had not sent her back to her doctor when he heard she had been treated for diabetes, he replied that she had not come to him as a diabetic. He said he had taken up the science of healing twenty three years ago when he had cured by the laying on of hands a man who was dying of consumption.

The judge remarked that Jones's conduct was a danger to the State and to the public and that if it had not been for his good character he would have been bound to send him to prison for a long term not only to correct him but also to deter others who might be likely to undertake the treatment of sick folk without proper knowledge. He sentenced Jones to six months in the second division.

# INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended June 11 1938  
 Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for (a) England and Wales (London included) (b) London (administrative county) (c) Scotland (d) Eire (e) Northern Ireland Median values for the last 9 years for (a) and (b)  
*Figures of Births and Deaths recorded under each infectious disease are for* (a) The 126 great towns (123 in 1937) in England and Wales (including London) (b) London (administrative county) (c) The 16 principal towns in Scotland (d) The 13 principal towns in Eire (e) The 10 principal towns (9 in 1937) in Northern Ireland  
 A dash — denotes no cases, a blank space denotes disease not notifiable or no return available

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(i)	(b)
Cerebrospinal fever Deaths	20	4	8	2	3	26	6	13	1	—		
Diphtheria Deaths	912	113	159	39	26	977	127	193	38	34	929	158
Dysentery Deaths	23	4	1	—	—	24	1	3	—	—		
Encephalitis lethargica acute Deaths	32	13	81	—	—	33	2	19	1	—		
Enteric (typhoid and paratyphoid) fever Deaths	4	3	—	1	—	4	—	1	—	—		
Erysipelas Deaths	30	2	3	1	1	19	2	11	13	—		
Infective enteritis or diarrhoea under 2 years Deaths	—	—	68	6	1	—	—	1	—	—	31	—
Measles Deaths	43	12	11	4	2	6	10	7	4	—		
Ophthalmia neonatorum Deaths	12	—	309	4	6*	—	174	—	2	—		
Pneumonia influenza† Deaths (from Influenza)	91	6	45	—	—	105	7	44	—	—		
Pneumonia primary Deaths	801	63	11	1	17	607	55	6	8	6	859	64
Polio encephalitis acute Deaths	30	6	3	—	—	16	3	5	3	—		
Poliomyelitis acute Deaths	—	18	210	6	15	—	169	10	10	12		
Puerperal fever Deaths	5	—	1	—	8	—	—	—	—	—		
Puerperal pyrexia Deaths	—	1†	17	4	2	37	1	8	2	—		
Relapsing fever Deaths	160	18	27	—	5	125	15	23	—	—		
Scarlet fever Deaths	—	—	—	—	—	—	—	—	—	—		
Small pox Deaths	1,743	149	420	74	66	1,647	161	359	85	63	1,629	224
Typhus fever Deaths	1	—	—	—	—	—	—	—	—	—		
Whooping-cough Deaths	—	—	—	—	—	—	—	—	—	—		
Deaths (0-1 year)	11	—	56	1	2	17	2	17	3	244		
Infant mortality rate (per 1 000 live births)	307	46	77	18	22	297	49	41	68	33	15	
Deaths (excluding stillbirths)	4 321	827	633	152	135	4 097	807	598	178	129		
Annual death rate (per 1 000 persons living)	10 6	10 5	12 9	10 3	12 0	10 2	10 2	12 2	12 1	12 3		
Live births	6 262	1 202	948	296	240	7 101	1 337	998	414	265		
Annual rate per 1 000 persons living	15 4	15 3	19 3	20 0	21 3	17 6	16 8	20 4	28 2	25 4		
Stillbirths	278	45	—	—	—	281	43	—	—	—		
Rate per 1 000 total births (including stillborn)	43	36	—	—	—	38	31	—	—	—		

\* Includes primary form in figures for England and Wales London (administrative county) and Northern Ireland

† Cases in Belfast alone  
 † Death from puerperal sepsis

## EPIDEMIOLOGICAL NOTES \*

## Small pox

The notification of small pox in England and Wales is the case reported at Gravesend on June 9 referred to in this column last week.

During the week ended June 11 there were in Hong Kong 6 cases of small pox with no deaths. In the same week 5 cases and 4 deaths were notified in Burma 42 cases and 35 deaths in Calcutta 137 cases and 35 deaths in Bombay (Presidency), 13 cases and 6 deaths in Madras (Presidency), 84 cases and 12 deaths in Sind. In the same week in the Central Provinces 38 (102) cases and 11 (25) deaths from plague were reported and in the North West Frontier Province 45 (9) cases and 10 (7) deaths. In Indo-China 35 cases were notified in Tonking compared with 85 in the previous week (ended June 4). In the week ended June 4 in the United States of America 425 cases of small pox were reported.

## Enteric Fever

During the week under review there were 20 notifications of enteric fever in England and Wales compared with 31 in the previous week. Of these 2 (4) were in London—1 each in St. Marylebone and Wandsworth. In Scotland 3 cases of typhoid fever were notified—1 each in Glasgow, Berwick County and Motherwell and Wishaw. There have been no fresh cases of typhoid in the Hawick outbreak during the week, and up to the time of going to press 5 deaths have been recorded.

## Diphtheria and Scarlet Fever

In England and Wales notifications of diphtheria dropped during the week under review from 986 to 912, and in London from 139 to 113. There was a slight increase in notifications for Scotland but a decrease in Eire and in Northern Ireland. Deaths in the 126 Great Towns of England and Wales fell from 24 to 23, but in London they rose from 2 to 4. Of the 23 deaths from diphtheria recorded in the 126 Great Towns 2 each occurred in Birmingham (0) Newcastle under Lyme (1), and Stoke-on-Trent (1). There was 1 death from diphtheria in Scotland during the week—in Dundee. A fall in the notifications of scarlet fever was noted in England and Wales during the week under review—1967 compared with 1743—also in London where 149 cases were recorded as against 188 in the previous week. The figures for England and Wales however were slightly in excess of the median value for the last nine years but for London they were less. In the Great Towns of England and Wales 4 deaths were recorded from scarlet fever compared with 6 in the previous week, there were no deaths from scarlet fever in London during the week. Notifications in Scotland rose from 396 to 420—there were no deaths. In Eire the figures fell from 103 to 74, with 1 death, and in Northern Ireland from 91 to 66.

## Primary and Influenzal Pneumonia

Notifications of primary and influenzal pneumonia tell appreciably in England and Wales and in London during the week under review—from 919 to 801 in England and Wales and from 72 to 63 in London, the figure for England and Wales is well below the median value for the last nine years while that for London is slightly less. Fewer deaths from influenza were reported in England and Wales and London during the week but in Scotland the deaths rose from 1 to 3. In the West Riding (Yorks) 121 (107) cases were notified of which 38 (25) were in

the Administrative County 34 (35) in Sheffield 19 (19) in Leeds 10 (10) in Bradford. In Warwickshire there were 49 (59) cases of which 38 (36) were in Birmingham. Of the 120 (180) cases reported in Lancashire 27 (53) were in Liverpool and 19 (43) in Manchester. There were 30 deaths from influenza in the 126 Great Towns of England and Wales during the week, of these 4 (3) were in Manchester and 2 each in Birmingham (5) and Bristol (1). In Scotland 210 cases of primary pneumonia were notified compared with 240 in the previous week, there were 11 cases of influenzal pneumonia—compared with 7 in the previous week—and 3 deaths 2 in Glasgow and 1 in Ayr. In Eire there were 15 deaths from pneumonia of which 10 (8) occurred in Dublin and 3 (2) in Limerick. There were 15 (10) deaths from pneumonia in the ten principal towns of Northern Ireland during the week 11 (6) in Belfast and 2 each in Londonderry (1) and Lurgan (1).

## Measles and Whooping-cough

In the 126 Great Towns there were 12 deaths from measles compared with 20 in the previous week, of these 2 each occurred in Tottenham (1) Leeds (1) Newcastle-upon-Tyne (1) Sheffield (1) and 1 each in Twickenham (0) Bury (0) Salford (0) Exeter (1). There were no deaths from measles in London but there was a slight increase in some of the notifications during the week 660 cases were reported from the LCC elementary schools compared with 812 in the previous week. The average daily admissions to the LCC fever hospitals were 33 compared with 31 in the previous week, and the number of cases of measles under treatment in these hospitals on Friday June 10 was 1108 compared with 1171 on June 3. On the same day there were under treatment in the LCC fever hospitals 1014 (1012) cases of diphtheria 800 (824) cases of scarlet fever 268 (259) cases of whooping cough. Notifications for the week ended June 11 in the eleven metropolitan boroughs in which measles is notifiable were 348 (341) distributed as follows: Battersea 39 (14) Bermondsey 8 (8) Finsbury 24 (13) Fulham 61 (23) Greenwich 67 (96) Hampstead 21 (28) Lambeth 32 (61) St. Pancras 47 (36) Shoreditch 11 (18) Southwark 12 (14) Stepney 26 (30). In Scotland 309 cases of measles were notified compared with 271 in the previous week, the figures for Glasgow were 76 (65) Lanark County 67 (30) Dundee 36 (68) Falkirk 35 (25) Edinburgh 29 (17) Dunfermline 25 (—), Kirkcaldy 21 (43) Aberdeen 10 (14). During the week there were 4 (10) deaths from measles in the 16 principal towns of Scotland, of these, 1 each occurred in Glasgow (2) Dundee (4) Aberdeen (1) Coatbridge (0). In Eire and Northern Ireland there were no deaths from measles.

In England and Wales there were 11 (13) deaths from whooping cough during the week under review, there were no deaths in London. In Scotland 56 cases of whooping cough were notified compared with 102 in the previous week while there was only 1 death—in Dundee. In Northern Ireland 17 (18) cases of whooping-cough were recorded, with 2 deaths—both in Belfast.

## Cholera

During the week ended June 11 84 cases of cholera were reported in Shanghai and in Hong Kong 9 cases and 6 deaths. In the same week in Burma 9 cases and 8 deaths were notified in Calcutta 84 cases and 30 deaths in Bombay (Presidency) 51 cases and 34 deaths in Delhi 8 cases and 4 deaths. The cholera epidemic is still on the increase in the North-West Frontier Province of India and in Sind but in the Punjab and in the Central Provinces the situation is reported to be slightly better. In the Punjab 569 deaths were recorded in the week ended June 4 compared with 720 in the previous week while in the Central Provinces during the week under review 1,954 cases and 1,024 deaths were notified, compared with 2,528

\* Except where otherwise mentioned figures in parentheses refer to the week preceding the one under review.

cases and 1,334 deaths in the previous week. In Cawnpore (United Provinces) in the week ended June 11, 40 cases of cholera and 14 deaths were reported. In French Indo-China during the same week 158 cases were notified in Annam 305 in Tonking, 11 in Hanoi.

#### • Plague

During the week ended June 11 there were 4 cases of plague and 2 deaths in Burma in British India in the same week 5 cases and 2 deaths were notified in Bombay (Presidency) and 14 cases and 3 deaths in Madras (Presidency).

#### Typhus

During the week ended June 11, 2 cases of typhus were notified in Alexandria and 3 in Cairo, in Palestine in the same week 9 cases were reported—2 at Haifa, 7 in the rural districts. During the week ended June 4 169 cases and 24 deaths were reported in Morocco, mainly distributed as follows: Marrakesh, 42 cases, 1 death; Chaouia 41 cases 9 deaths; Oued-Zem, 24 cases, 6 deaths; Dukkala 16 cases 2 deaths; Rabat, 15 cases, 2 deaths; Casablanca 9 cases 1 death. During the week ended May 28, 88 (100) cases of typhus and 1 (4) death were reported in Poland. They were distributed mainly as follows: Stanislawow, 18 cases, 1 death; Lwow 15 cases; Wolhynia 14 cases; Wilno 13 cases; Polesia, 8 cases and 7 each at Nowogrodek and Tarnopol. During the week ended May 14 in the United States of America 25 cases of typhus were notified: Georgia 8, Alabama 7, Texas 6, Maryland 2, California 1, Florida 1.

## Medical News

Sir James Barrett KBE who presided over the Melbourne Meeting of the British Medical Association in 1935 has contributed this year an interesting series of articles to the *Melbourne Herald* containing reminiscences of his long and varied career in medicine and public life.

The annual dinner of the Cambridge Graduates Medical Club will be held at Corpus Christi College, Cambridge on Friday July 8 at 7.45 p.m. with Sir Walter Langdon Brown in the chair. Annual meeting at 7.15. Price of dinner (including wines and gratuities) 12s. 6d. The honorary secretaries are Mr W. D. Doherty and Dr L. E. H. Whitby.

The fifth conference of the Open Door International for the economic emancipation of the woman worker will be held at Girton College, Cambridge, from July 24 to 29. The subjects for discussion will include modern problems of maternal health, nutrition policies as they affect the woman worker and industrial hygiene and the woman worker.

The next meeting of the German Ophthalmological Society will be held at Heidelberg from July 4 to 6. Further information can be obtained from the secretary, Professor Wagenmann Heidelberg.

The summer meeting of the Association of Clinical Pathologists is being held at Oxford to-day (Saturday June 25). From 9 a.m. to 10 a.m. there are demonstrations in the pathology department of Radcliffe Infirmary by Dr J. G. Greenfield (removal of brain and cord), Dr A. G. Shera (an electrical rotary saw for use in post mortem work) and Dr A. H. T. Robb Smith (technique of exposure of accessory sinuses). From 10 a.m. to 1 p.m. at a scientific meeting at Nuffield Institute Sir Bernard Spilsbury speaks on the technique of the medico-legal post mortem followed by Dr Robb Smith (uses of fresh preparations in post mortem work) and Dr E. Wordley (status lymphaticus).

Doctors Day will be held at the Lord Mayor Trelour Cripples Hospital and College Alton on Wednesday July 6, the principal guests being Lord and Lady Horder.

The ninety-seventh annual meeting of the Royal Medico-Psychological Association will be held in the King's Hall, Ilkley, on Wednesday, Thursday, and Friday, July 6, 7 and 8. The council and committees will meet on Tuesday, July 5. The presidential address will be delivered at Scalegate Park, Burley-in-Wharfedale, on July 6, at 2.30 p.m., and the annual dinner of the Association will be held at Wells House Hotel, Ilkley, at 7.15 p.m. for 7.45 p.m. the same day.

The second International Congress of Anthropological and Ethnological Sciences will be held at Copenhagen from August 1 to 6 under the presidency of Dr Thomas Thomsen. It will be followed by a tour of Denmark. Applications for membership should be sent to the treasurer of the congress, Nationalmuseet 10 Ny Vestergade Copenhagen K. Thos Cook and Son Ltd Berkeley Street London W, have been appointed by the Danish committee as official travel agents.

An international course on malariaology will be held from July 18 to September 17 at the Institute of Malariaology in Rome. The lectures, which are intended for foreign practitioners will be delivered in French. Further information can be obtained from the director of the Institute, Professor G. Bastianelli, Policlinico Umberto I Rome.

The trustees of the Lady Tata Memorial Fund announce that on the recommendation of the Scientific Advisory Committee they have awarded the following grants and scholarships for research in blood diseases with special reference to leukaemia, in the academic year beginning on October 1, 1938. Grants for research expenses or for scientific assistance: Dr Julius Engelbreth-Holm (Copenhagen), Dr M. P. J. Guerin (Paris), Professor Karl Jirmay (Budapest), Professor James McIntosh (London), Professor Eugene Opie and Dr J. Furth (New York), Dr Georg Weitzmann (Leipzig), Dr Joachim Wienbeck (Breslau). Whole time scholarships: Dr Jorgen Bichel (Aarhus Denmark), Dr Edoardo Storti (Pavia, Italy). Part time scholarship: Dr Werner Jacobson (Cambridge).

Dame Florence Barrie Lambert M.B. distributed the prizes and certificates at the London (Royal Free Hospital) School of Medicine for Women on Wednesday June 15 and in her address to the students spoke of the many opportunities for clinical work open to newly qualified women compared with the few when she entered medicine. Nowadays, she said, there were all sorts of good posts open equally to women and men since the passing of the Poor Law Act of 1929 and the taking over in the following year by the London County Council of a large number of hospitals accommodating 40,000 patients. After the ceremony there was a garden party at which the dean Miss E. Bolton, members of the council and students entertained their guests.

Medical practitioners are asked to note that the out-patient department of the National Hospital for Diseases of the Nervous System, Queen Square, W.C. will be closed from July 11 to 19 inclusive. Queen Mary has consented to open the new wing of the hospital on July 19 at 3 p.m.

Professor H. Eppinger and Dr E. Risak have been appointed editors of the *Wiener klinische Wochenschrift*.

Professor Hermann Stieve of Berlin has been nominated president of the international committee for the improvement and unification of anatomical terms.

The King has appointed Dr Percy Selwyn Selwyn Clarke (Director of Medical Services) to be an Official Member of the Legislative Council of the Colony of Hong Kong.

Professor Reynaldo dos Santos of Lisbon was awarded the Violet Hart gold medal for his work on vascular surgery on the occasion of the Surgical Congress of the South Eastern United States.

A monument to Dr Albert Calmette has recently been unveiled at Nice.



## Snoring

Mr J H BADCOCK FRCS (Bury St Edmunds) writes  
Zs patient (*Journal* June 18, p 1348) should ask his dentist to make him a mouth 'valve' or 'shield' which, worn between lips and teeth will make mouth-breathing impossible. If the mouth falls widely open chin support may be necessary in addition the nose must be patent. A simple device for keeping the nares open is made as follows: take a piece of rubber tubing of a diameter to fit the nostrils comfortably and about 2 inches long, double it and with scissors cut a 'window' in the middle about  $\frac{1}{2}$  inch wide leaving about  $\frac{1}{4}$  inch of the circumference intact, thus forming to fit the nostrils two tubes connected by a narrow strip across the septum.

## LETTERS, NOTES, ETC.

## Birthday Honours Addendum

The names of two recipients of Birthday Honours were omitted from the list published in our last issue at p 1329. Dr James Laidlaw Maxwell, General Secretary of the International Red Cross Committee for Central China, is created CBE (Civil Division) and Mr Janardan Sitaram Vaidya, assistant surgeon, Medical Department, Somaliland Protectorate, Honorary MBE.

## Bed-bug in the Human Ear

Dr N VERE-HODGE (St George's Hospital) and Mr A W McKENNY HUGHES (British Museum Natural History) write: On June 6 a middle-aged woman attended St George's Hospital complaining of discomfort and a feeling of fullness and noises in one ear. She was awakened and prevented from sleeping by these symptoms. She did not complain of pain. When examined she was clean in her person and no other external parasites were seen. Both ears were seen to be full of wax and on washing out the affected side much wax appeared followed by a live insect—a male specimen of *Cimex lectularius* Linn., the bed-bug. This occurrence is so rare—in fact this is thought to be the first record in Great Britain—that it seems worth reporting.

## "The Evolutionary Theory"

Colonel G F ROWCROFT DSO (Coonoor, S India), in the course of a letter dated March 28 writes: The answer to Surgeon Rear-Admiral Charles M Beadnell (*Journal* March 5 p 550) will be found at page 44 of *Why be an Ape?* by A London Journalist (Marshall, Morgan, and Scott, price 2s 6d). In 1908, Haeckel published in a pamphlet, *Das Menschen Problem*, diagrams showing the embryos of man and of various types of apes for comparison. Dr Arnold Brass in 1908 in another pamphlet asserted that the diagrams were inaccurate, some being deliberately falsified. Haeckel's reply in the *Münchener Allgemeine Zeitung* of January 1909, contained the following admission: 'To put an end to this unsavoury dispute I begin at once with the contrite confession that a small number of my embryo diagrams are really forgeries in Dr Brass's sense. I should feel utterly condemned and annihilated by the admission were it not that hundreds of the best observers and biologists lie under the same charge. The great majority of all morphological, anatomical, histological, and embryological diagrams are not true to nature but are more or less doctored, schematized and reconstructed.' The London Journalist continues: 'Who among the opponents of evolution has brought any such sweeping indictment of the integrity of science as this admission by one of the world's foremost biologists?' I myself plead guilty to one error. I am afraid I said that Haeckel admitted that many of his illustrations were faked. He actually said that only a small number were. But the falsification of even only one in a chain of such evidence destroys the value of the whole of it. From the above it will be seen that to speak of Haeckel's indignant refutation is hardly accurate, as he has admitted that the 'venomous charge' is a perfectly true one. Your correspondent like many others is evidently unable to see Haeckel's numerous fallacies which only shows that he must be a very subtle writer. Everyone will agree that he has made his great work, *The Evolution of*

Man most attractive and specious, hence its great sale, though a large sale of any work in no way betokens its accuracy, as anyone can see for himself if he will call to mind many books of pure fiction. Where is the inconsistency in believing in other forms of progress while denying the evolution of man from the amoeba? They are not necessarily related in any way. And must there really be retrogression before progress?

## Health Survey of Kedah

Kedah is a State lying on the western coast of the Malay Peninsula. Its area is roughly three thousand square miles, its population nearly half a million. Rainfall is copious, temperature and humidity uniformly high. The terrain comprises a flat coastal belt devoted to rice growing, and a hilly interior, occupied to a considerable extent by large rubber estates, although extensive areas are still clothed in primeval jungle. The inhabitants, except labourers on the rubber estates imported from India, are nearly all Malay. A *Health Survey of the State of Kedah* is a comprehensive report of the investigations undertaken by Dr W J Vickers and Dr J H Strahan during 1931 and 1936. The survey is divided into six parts, one of which is devoted to nutrition. The authors found that the diet of the Malay is deficient in energy value, in good class protein, and in vitamin B, especially in the remoter districts. It is suggested that the intake of vitamin B might be supplemented by instruction in the use of rice polishings as an addition to soup and by the consumption of such leguminous foods as dhal and soya bean. It is also suggested that the insufficient intake of fat might be remedied by the inclusion in the dietary of animal fat, red palm oil and eggs. The authors maintain that a definite degree of subnutrition exists among the general population. The rural Malay lives on the verge of safety. With short hours of work and the maximum amount of rest ill effects are not always apparent, but any increased effort as for example, strenuous road-making work appears to induce mild symptoms of such deficiency diseases as beriberi. The value of the report is enhanced by the inclusion of maps, charts, and excellent photographs, all relevant.

## Medical Postage Stamps

From Holland has recently arrived an artistically pleasing set of five stamps, two of which are of medical interest. Boerhaave, the bicentenary of whose death is commemorated this year, is portrayed on a 12½ plus 3½ cent light blue stamp, and Rembrandt, whose 'Anatomy Lesson' in The Hague is probably the best known medical painting in the world, adorns the olive green 5 plus 3 cent value.

## Prontosil Booklet

We have received a booklet entitled 'Prontosil' from Bayer Products, Ltd., which is a well documented survey of the new chemotherapy. It runs into some seventy-one pages and the ten chapters are divided into three sections: (1) Experimental Findings, (2) Clinical Experiences, and (3) Therapeutics. Copies can be obtained on application to Bayer Products, Ltd., Africa House, Kingsway, London, WC2.

## Disclaimers

Mr T P NOBLE FRCS, Dr A P BROWN and Dr W B SHAW of Ebbw Vale Mon write: In an article which appeared in a London daily paper and a South Wales evening paper reference is made to us in connexion with an operation performed at Ebbw Vale General Hospital. We were greatly distressed on reading the article, which was written entirely without our knowledge or consent, and steps have been taken to prevent any repetition.

Dr SUSAN BEATTY wishes to disclaim any responsibility for the unwelcome publicity given by newspapers to a simple appendicectomy which she performed in mid Atlantic on the *Letitia*.

## Corrigendum

In the reply to an income-tax inquiry by 'Major R A M C' in last week's *Journal* (p 1348) the word 'blamed' in the last line but one should read 'allowed'.







during oral liver treatment, for the anti-anaemic factor is only freed for absorption in acid digestion. After discharge from hospital the patient should continue to take 150 to 200 grammes of raw liver twice weekly, the blood should be examined every two to three weeks, and a watch should be kept for numbness, paraesthesia, or stiffness of the limbs.

#### 543 Heart Failure and Hyperpiesis

A RUHL (*Zbl inn Med* April 2, 1938, p 242) discusses the problem of heart failure in patients suffering from high blood pressure. As a result of a number of experiments carried out on a Starling heart-lung preparation he states that (1) the increased peripheral resistance brought about by high blood pressure imposes an unphysiological burden on the heart and brings about a disproportionate increase in its oxygen consumption, (2) the heart undergoes definite dilatation as a result of high blood pressure, and (3) the peculiar lactic acid metabolism of the normal heart—absorption of lactic acid from the coronary circulation instead of a liberation of lactic acid as is the case in skeletal muscles—is not affected by hyperpiesis. As Ruhl points out, these conclusions only apply, strictly speaking, to the isolated heart-lung preparation and not to the heart under the control, as it actually is in the body, of the sympathetic and parasympathetic hormones, adrenaline and acetylcholine. Experiments in this direction, however, would seem to show that any alterations due to these factors are only quantitative and not qualitative, so that the fundamental validity of his conclusions remains unaffected.

#### 544 Acute Epidemic Phrenic Neuralgia

J TORGENSEN (*Nord med Tidsskr* April 9, 1938, p 572) gives an account of a small epidemic of phrenic neuralgia in a rural area of Norway with a population of about 4,000. Between August 9 and October 27, 1937, he observed eight cases with such a uniform clinical picture that they could be regarded as the units of one and the same epidemic, although the patients lived far apart and had had nothing to do with each other. Their ages ranged from 12 to 48, and the sexes were equally represented. The onset of the symptoms was sudden, with fever and pain in one or other of the shoulders. After a short interval violent pain set in, being referred to the lower part of the chest and the whole of the abdomen down to the iliac fossae. The symptoms were alarming and simulated those of cholecystitis, pneumonia, pleurisy, a perforated ulcer, or appendicitis. Indeed in one of the patients, a man aged 26, laparotomy was performed; it revealed nothing amiss in the peritoneal cavity. In several cases relapses were observed either on the same or on the opposite side. Discussing the aetiology, the author draws attention to the likeness of this epidemic to those of epidemic myalgia or Bornholm disease. What was remarkable was the invariable limitation of the symptoms to the areas supplied by the phrenic nerve.

#### 545 Active Diphtheria Immunization

W REINHARDT (*Dtsch med Wschr* April 8, 1938, p 535) reports from a children's hospital in Lubeck certain observations indicative of the inability of active immunization to protect against diphtheria in many cases. In a convalescent home housing on an average 110 children, as many as sixteen cases of diphtheria occurred although the children had been actively immunized at a time when there was no epidemic of diphtheria. All the children had been examined for diphtheria bacilli in the nose and throat before being admitted to this home, and the bacteriological reports had been consistently negative. The children had in fact been artificially immunized against diphtheria under the best conditions. The shortest interval between immunization and the outbreak of the disease was one of seventeen days, and in four cases this

interval was longer than three months. The behaviour of the diphtheria in these sixteen cases was what might be expected in children not immunized, the disease ran a light course in four cases, a moderately severe course in ten cases, and a severe course in two. In a footnote to his article the author states that twelve further cases of diphtheria have recently broken out in the same convalescent home among children who had been artificially immunized, the interval between immunization and the outbreak of the disease had ranged from one to three months in most cases, but had twice been less than twenty days and had once been almost nine months. The author contrasts these observations with the claims made on behalf of active diphtheria immunization that the immunity it confers begins in four to five weeks and lasts several years. The principle of such immunization is not challenged by him, but he does insist that there is evidently room for improvement in the technique.

#### 546 Pneumothorax in Bullous Emphysema

K BUHLER (*Z Tuberk* March, 1938, p 300) gives an account of the occurrence of spontaneous pneumothorax in a case of congenital bullous emphysema. The patient was a man of 51, who first complained of slight shortness of breath on going upstairs in 1931. X-ray examination showed nothing abnormal apart from a widened aorta. In August, 1936, his family doctor diagnosed "hypertonia and a low-grade emphysema of both lungs," and sent him to a watering place for heart disease. On his second day there he suddenly complained of dyspnoea, which was diagnosed as being due to a spontaneous pneumothorax. This was confirmed by x-rays, and the patient returned to Berlin. Since the valvular pneumothorax showed no signs of closing up and no retracted lung tissue was to be seen, thoracoscopy was performed. This showed a complete right-sided pneumothorax, but the upper and middle lobes were not recognizable as lung tissue and presented the appearance of distended soap bubbles, in one of them a small hole was to be seen, covered by a membrane which moved on respiration. Olive oil was applied to the valvular opening with a view to causing slight local inflammation sufficient to seal the opening. This would seem to have been completely successful, for the patient ceased to suffer from dyspnoea, thoracoscopy eight days later revealed a plug of fibrin sealing the aperture, and a radiograph showed that the lower lobe had re-expanded.

#### 547 Latent Benzolism

P-E WEIL, PERLES and A ASCHKENASY (*Sang*, 1938, 12, 2, 151) give a long account, with elaborate statistical tables, of their investigations of latent benzolism. Fifty-four cases were examined, including thirty-three men, seventeen women, and four children. They were all, so far as appearances went, in good health at the time of examination. The authors comment on the frequency of benzolism in apparently healthy workers. It shows itself by a slightly hyperchromic anaemia, with neutropenia (chiefly in women) or eosinophilia (chiefly in men) and thrombopenia. The anaemia would seem to be hypoplastic from the start, for the bone marrow is frequently affected in these cases, though of course to a lesser degree and later than the circulating blood. In none of the cases was there any sign of an irritant effect of benzol, such as a tendency to polycythaemia or leukaemia as observed in experimental benzol poisoning. Gastric disturbances particularly achlorhydria or hypochlorhydria, are an early accompaniment of these blood signs. The authors recommend better workroom conditions, especially as regards ventilation, shorter hours of work, the establishment of special dispensaries where the workers would have to undergo compulsory medical examinations at stated periods, and the appointment of visiting inspectors to see that the above regulations were being properly observed.

## 548 Epidemic of Streptococcal Infections

L. KJELSTRUP (*Nord med. Tidskr.* March 5 1938 p. 801) gives an account of an epidemic of scarlet fever in Greenland associated with various streptococcal infections, the manifestations of which were polymorphous. Among the 422 cases from all causes in the district during 1935 and 1936 there were as many as 250 traced to scarlet fever or some streptococcal infection of the face, lungs, pericardium or peritonium. The deaths from scarlet fever itself which ran a comparatively mild course numbered only nineteen whereas there were seven from erysipelas, 120 from pneumonia and empyema of the pleura or pericardium and twenty from peritonitis other than that due to purpuril infections. As the population of the district was only 3701 at the end of 1936 the total death rate during the two years was about 11 per cent, at least 6 per cent being due to streptococcal infections. It was remarkable that while the death rate from scarlet fever was only 2 per cent, that from erysipelas was between 20 and 25 per cent.

## Surgery

## 549 Thrombectomy

D. KULENKAIEFF (*Disch. med. Wschr.* April 22 1938 p. 593) claims to have succeeded in several cases in preventing serious or even fatal pulmonary embolism by the operative removal of thrombi from the iliac veins. He considers thrombi formed in the external and internal iliac veins as most often responsible for pulmonary embolism. In four cases he has succeeded in extracting from the iliac vein clots lying free in the lumen of the vein, except at the point of attachment thereto. Under local anaesthesia he makes a 3 cm. long transverse incision just below Poupart's ligament. The vein is exposed, clamped in two places and divided. The peripheral end having been ligatured after noting whether blood escapes from it or not, the central end is freed from its small tributary vessels and is slit open. The thrombus when found is carefully detached and extracted. Only when plenty of dark blood flows freely out of the stump of the vein is it safe to assume that all the thrombus has been removed. In addition to the four cases already mentioned he refers to eleven others in which a thrombus without any stalk projecting into the vein was revealed by this operation.

## 550 Thrombosis and Embolism after Herniotomy

H. F. HARBITZ (*Norsk. Mag. Lægevidensk.* March 1938 p. 287) has studied 1046 cases of hernia operated on in the period 1926 to 1935 at the Ullevaal Hospital in Oslo. In 210 of these cases the patients' ages were under 20. The risks of thrombosis and embolism being small under this age, the study was limited to the remaining 836 patients. Operation was performed as a rule under local anaesthesia. A record of stabbing pain in the chest usually associated with a rise of the temperature and pulse rate was assumed to indicate embolism. Among the 550 patients operated on for inguinal hernia were fourteen cases of embolism and one death. There were five cases of embolism among the forty-seven patients operated on for femoral hernia but no deaths. There was only one case of embolism among the 108 cases of abdominal hernia of various kinds and in this group the only post-operative death was due to pneumonia. In all the above-mentioned three groups the hernias were not incarcerated. The frequency of thrombosis or embolism for all these non-incarcerated hernias was 2.8 per cent and the mortality from this cause only 0.14 per cent. Among 131 cases of incarcerated hernia (inguinal, femoral, etc.) there were four cases of embolism—a morbidity rate of 3 per cent and a mortality rate of 0.77 per cent. The frequency of this complication for all the patients over 20 was

2.87 per cent. Neither the sex of the patient nor the side of the body on which the operation was performed seemed to affect the rate. The author concludes that femoral hernias are more likely to be associated with thrombosis or embolism than either of the other two groups and this seems to be true both for the incarcerated and the non-incarcerated herniae.

## 551 Malignant Tumours of the Small Intestine

D. A. NICKERSON and R. H. WILLIAMS (*Amer. J. Path.* January 1938 p. 53) present a study of ten cases of malignant tumour of the small intestine. The cases are taken from 11206 necropsies performed from 1893 to 1935. Of these ten cases two were sarcomata, eight carcinomata, and as in these necropsies 243 cases of carcinoma of the gastro-intestinal tract were found in all the incidence of small intestine tumour was 2.33 per cent of the total incidence of alimentary carcinomata. Eight tumours took origin from the duodenum, two arose from the jejunum. The average age of the patients agreed with that for malignancy elsewhere (57 years), the youngest patient being aged 30, the oldest 72. Both sexes were attacked equally. Histologically the sarcomata were leiomyosarcomata while the other growths were all adenocarcinomata, six of which were polypoid and stenosing in type, two annular and constricting. In seven cases metastasis was late and followed the lymphatic drainage to the liver and to the mesenteric and retroperitoneal lymph nodes. The clinical picture varied according to the site of the tumour. In the paralytic there was obstruction with profuse vomiting and dehydration; in the peri-ampullary there was jaundice and in the pre-jejunal and jejunal types there was recurrent nausea, abdominal cramps and visible peristalsis. In four cases x-ray examination showed distortion of the duodenal cap.

## Therapeutics

## 552 X-Ray Therapy of Prostatic Hypertrophy

J. KNEIP (*Disch. med. Wschr.* March 11 1938 p. 377) reports from a surgical hospital in Worms his experiences with the x-ray treatment of hypertrophy of the prostate. Since 1930 the candidates for x-ray treatment have been those patients who for some reason or other had been considered as unsuitable for operation. In spite of this selection the author can claim a high proportion of cures and improvements in his series of thirty-seven cases. In sixteen the results were so good that the could be classed as recoveries; in twelve other cases some improvement could be claimed. Two patients had subsequently died of unknown causes and four of sequelae to the hypertrophy of the prostate. In three cases prostatectomy was performed after x-ray treatment had failed. In no case did the treatment do harm and the author concludes that provided the new growth in the prostate is benign, vasectomy followed by x-ray therapy is to be recommended particularly for those cases for which an operation is undesirable.

## 553 Sulphanilamide Treatment of Meningococcal Meningitis

A. ELDAHL (*Ugeskr. Laeg.* April 7 1938 p. 365) has administered streptamid—a Danish sulphanilamide preparation—to twelve consecutive cases of meningococcal meningitis treated at a fever hospital in Denmark. From 5 to 30 ccm of a 0.8 per cent solution were given daily by intrathecal injection. At the same time from 35 to 120 ccm of the same solution were given daily intramuscularly. This treatment was supplemented for the first ten to twenty days by the daily withdrawal of cerebrospinal fluid, the amount withdrawn being always a little more than the amount of solution to be injected. Later these withdrawals of cerebrospinal fluid were undertaken every two to three days. The oldest patient was—

aged 4, and seven were less than 1 year old. Though all the cases were severe, there were only three deaths, one of which was doubtless hastened by double acute suppurative otitis media, present on admission to hospital and by pneumonia. In another of the three fatal cases the general condition of the child had been very unsatisfactory before the meningitis developed, and the percentage of haemoglobin had been only 45. During the past six years the mortality at the author's hospital among sixty-eight children under 4 years, suffering from meningococcal meningitis, has been about 70 per cent. The author notes that in his own and in the experience of others, meningococcal meningitis is apt to prove refractory to sulphanilamide preparations if they are given only by the mouth or by intramuscular injection. But if, at the same time, the latter mode of administration is supplemented by the intrathecal administration of this drug, the results are remarkably good.

#### 554 Vitamin B for Alcoholic Polyneuritis

R. GOODHART and N. JOLLIFFE (*J. Amer. med. Ass.*, February 5, 1938, p. 414) discuss the results of treating with large amounts of vitamin B seventeen mild uncomplicated cases of alcoholic polyneuritis of short duration. All were given by mouth four times their normal requirement of vitamin B and alternate cases (eight of the seventeen) were given intravenously in addition 10 mg. of crystalline vitamin B daily for ten days, thus increasing the vitamin intake to sixteen times their normal requirement. By every method of comparison the response of those cases receiving the crystalline supplement was better and quicker than that of the other nine. The authors conclude that vitamin B deficiency is the primary cause of alcoholic polyneuritis, and that improvement in the objective signs of the disease varies directly with the vitamin B intake.

#### 555 Radium Therapy of Benign Skin Conditions

A. MUSGER (*Wien klin. Wschr.*, March 4, 1938, p. 274) points out that radium is of value in the treatment of certain benign skin conditions. The soft alpha rays may be used in the treatment of herpes zoster, neurodermatitis, forms of dermatitis due to salvarsan, and in pruritus, the rheumatoid dermatoses, and psoriasis. The hard beta and gamma rays should never be used when there is evidence of former damage by irradiation to the skin—for example, telangiectases, atrophy, and pigmentary changes. Treatment should be discontinued when evidence of increased sensitivity to irradiation is present. Radium therapy is the method of choice in the treatment of cavernous haemangiomas, spontaneous keloids and hypertrophy of scar tissue, syphilis, and plastic induration of the penis. Certain conditions react better to radium than to other forms of treatment. They include plantar warts, anal eczema, chronic inflammations of the nail fold and behind the ear, circumscribed pruritus, and various forms of tuberculosis of the skin and mucous membrane.

## Neurology

#### 556 Manganese Chloride in Tuberculous Meningitis

V. GORLITZER (*Med. Klinik*, March 11, 1938, p. 334) describes a new treatment of tuberculous meningitis with manganese chloride. The substance used is  $MnCl_2 \cdot 4H_2O$  in 0.2 molar solution, prepared under the trade name of "metalloid", 1 to 2 ccm. are given rectally twice daily for one to two weeks. 1 ccm. may also be given by intrathecal injection, intravenous injections are not well tolerated. Seven cases are reported, in six of which the treatment led to recovery, in the one case in which it was not effective the patient had generalized military tuberculosis. The values for the chlorides and sugar in the cerebrospinal fluid are not given, but in one case with recovery

acid- and alcohol-fast bacilli were found in this fluid. The author considers that the drug leads to a stimulation of the formation of antibodies, either in the gut during absorption or in the meninges, and does not act directly on the bacillus. He also considers it possible that serous lymphocytic meningitis is a benign form of tuberculous meningitis, and in such cases the effect of manganese chloride is dramatic.

#### 557

#### Delirium Tremens

P. PIKER (*Arch. Neurol. Psychiat.*, Chicago, January, 1938, p. 62) discusses the use of fluids in the treatment of delirium tremens. A series of three hundred cases were divided into two equal groups and similar treatment carried out in each, except that in one group the fluid intake was limited to 1,000 ccm. and in the other fluids were forced to between 3,000 and 4,000 ccm. in the twenty-four hours. No striking difference was observed between the two groups, but a larger number of cases with severe symptoms were found amongst those having forced fluids. Also in this group more cerebrospinal fluid could be drawn off at subsequent lumbar punctures than in the group with restricted fluids. The author points out that owing to other details of the treatment—namely, the administration of hypertonic glucose intravenously—it is impossible to say definitely that the forced fluids led to increase of the cerebral oedema which is present in this condition. There seems, however, little value in restricting fluids unnecessarily; and it is concluded that the patient should be given as much fluid as he desires for comfort, and dehydrants and spinal drainage used as may be indicated by the course of the condition.

#### 558

#### Multiple Sclerosis

G. SCHALTENBRAND (*Med. Welt*, March 26, 1938, p. 435), in discussing the theories of causation of multiple sclerosis, states that the oldest, which held that the condition was hereditary, is again receiving attention. The theory that it is due to a diffusion of a ferment from the blood stream or ventricles into the cord substance has not yet been entirely disproved. Infection has been demonstrated by animal experiment to be an aetiological factor, but no proof has been adduced that multiple sclerosis is a meta-tuberculous disease. The resemblance between sclerosis and funicular myelosis has been pointed out, for in both the blood and bone marrow are affected. In the former, however, the diameter of the erythrocytes is normal. A history of avitaminosis or of accident was obtained in a number of patients. Lead poisoning has been known to produce the disease. Thrombus formation in the cerebral veins is believed to be a causative factor. The author believes multiple sclerosis to be a non-specific neuro-ectodermal reaction.

#### 559

#### Phlegmonous Encephalitis

H. BRUNNER and R. DINOLT (*Z. ges. Neurol. Psychiat.*, 1938, 162, 1 and 2, 107) describe two cases of otogenic purulent progressive encephalitis, a clinical picture which they consider is sometimes obscured under the term 'cerebral abscess'. In the first case a man aged 44, following a right mastoid operation, developed a high temperature, drowsiness, early papilloedema, hemianopia to the left and slight left-sided pyramidal signs, with a high leucocytosis in the blood and an increase of cells and protein in the cerebrospinal fluid. A further operation revealed lateral sinus thrombosis and haemorrhagic and necrotic brain tissue from the occipital lobe protruded into the wound. Death took place fourteen days after the first operation. Necropsy revealed suppurative and haemorrhagic encephalitis throughout the right occipital lobe involving the posterior horn of the ventricle and extending into the corpus callosum. Microscopically thrombosis of vessels, foci of softening infiltrated with leucocytes and streptococci and diffuse suppurative foci were found. The second case was similar, the duration of the illness

after the first operation being twenty-three days. The author regards the condition as a phlegmonous encephalitis distinct from both acute and chronic cerebral abscess. The pathology of cerebral abscess is discussed. Infection which reaches the white matter along the veins first gives rise to a circumscribed focus of purulent encephalitis. This may develop in three different ways and give rise to a chronic abscess, an acute abscess, or a phlegmonous encephalitis. These conditions are all variations of the same pathological process but they merit clinical differentiation.

## 560 Hypertensive Apoplexy

W. H. CHASE (*Arch Neurol Psychiat*, Chicago, December 1937, p. 1176) discusses hypertensive apoplexy and its causation. He made a general clinical and anatomical analysis of eighteen cases of pure uncomplicated hypertension which were found in a series of 105 cases of haemorrhage of the brain. Fifteen of these were cases of essential hypertension without arteriosclerosis and three were cases of hypertension associated with atherosclerosis. Anatomically in the first group he found thickening of the intracranial arteries and haemorrhages varying in size, number, position and age. The larger haemorrhages, over 2 cm. in diameter, consisted of laminated fibre and blood cells and the clot also contained many fine stiff irregular vessels. Multiple minute haemorrhages were found especially in the corpus striatum of the thalamus and pons and perivascular clots, either nodular or encircling the vessel and intimately related to the adventitia, also occurred. Capillary thrombi were numerous but thrombi in the large arteries and veins were not. The view expressed is that the long continued constrictor irritation leads to fatigue and dilatation of the capillaries and arterioles, while the proximal arteries may still be constricted. This parastaltic hyperaemia leads to increased permeability of the dilated vessel walls possibly because of the poor oxygen content of the blood with which their walls are nourished and diapedesis follows although there is no interruption of blood flow beyond the point of diapedesis. If blood movement ceases thrombosis and infarction follow. The intimate perivascular haemorrhages are possibly due to a proximal spread of the vascular spasm and involvement of the vasa vasorum. There is no rupture of the artery wall. In transient hypertension the only changes are petechial haemorrhages from terminal capillaries and arterioles, the causation of which is probably similar.

## 561 Surgery of Trigeminal Neuralgia

A. SNELLMAN (*Nord med Tidskr*, March 19 1938, p. 457) has observed in his hospital in Finland in the course of the past year twenty cases of genuine trigeminal neuralgia, nineteen of which he has treated by electrocoagulation of the Gasserian ganglion according to the technique introduced by Kirschner in 1933. In fifteen cases a single treatment was sufficient to achieve freedom from symptoms and in three cases from two to four treatments were necessary to obtain complete relief. In one case the needle could not pass through the foramen ovale on account of the calcification induced by earlier injections of alcohol. There was also a case which had been treated without effect by electrocoagulation at another hospital; it yielded to antisyphilitic treatment. Among the complications following electrocoagulation was neuroparalytic keratitis, one case, of which was observed eight months after the operation. The author's opinion of this treatment is on the whole favourable and he notes that the complications to which it gives rise are practically identical with those associated with other methods of treatment. The sensory disturbances are as a rule trifling, and involvement of the cornea ought to be avoided by perfecting the technique. This opinion implies keeping the operation in the hands of those who have

specialized in it the necessary technical finesse requiring considerable skill and practice. The author believes that electrocoagulation of the Gasserian ganglion should completely oust peripheral alcohol injections and should at any rate rank as equal with central alcohol injections but it cannot be expected to displace Danov's suboccipital operation.

562 P. WERTHEIMER and G. MIMOUN (*J. Med. Lyon*, March 1938, p. 151) review the late results of retro-Gasserian nerve section by the temporal route. In a series of seventy-eight operations there were two operative deaths which occurred in the first ten cases. Fifty-six of the patients were observed for periods varying between eight months and thirteen years. Eight patients were found to be suffering from recurrence of the pain. Such an event may be due to an incomplete or incorrectly placed section, five patients belonging to this group were completely cured after a second operation. Failure may also be due to operation being performed on unsuitable cases. In five patients the appearance of an ill defined, continuous pain was noted associated with vasomotor and secretory disorders. This was a temporary phenomenon. A third group of patients complained of paraesthetic sensations of a painful nature and localized to a very small area. In 5 per cent of cases neuralgic pain appeared on the opposite side of the face. The post operative anaesthesia was found to be temporary. The corneal reflex was present four months after operation, four years after operation sensation in the area affected was practically normal. Ocular complications were seen in 9 per cent of all cases, only two of these patients are left with permanent corneal scars. Severe neuroparalytic keratitis was not seen. The suggestion is made that post operative paralysis of the oculomotor and facial nerves may be due to a vasomotor disturbance of the vasa nervorum and the authors propose to verify this explanation when next they find a suitable case. Infiltration of the superior cervical or the stellate ganglion should throw some light on this problem.

## Obstetrics and Gynaecology

### 563 Blood Changes in Cancer of the Uterus

P. JACOBY and J. SPOTOFT (*Hospitalstidende*, March 15 1938, p. 274) have investigated in ninety-one cases the influence of cancer of the uterus on the sedimentation rate. Before treatment was instituted this rate was normal in forty-four cases and above normal in the remainder. The further advanced the disease the higher was the proportion of sedimentation rates above normal. Comparing these findings with those of other observers the authors note that their own records show a relatively high proportion of cases with a normal sedimentation rate. Among the thirty-three cases in which the sedimentation rate was measured before and after treatment with radium there were twenty-two in which this rate was increased whereas in the remaining eleven cases it showed a decrease. So far as these observations were concerned the behaviour of the sedimentation rate during treatment would seem to be of little prognostic value. With regard to the significance of the sedimentation rate after the completion of treatment the authors note that as in cancer of the breast a persistently high rate of sedimentation is a sign of ill omen whereas a consistently low or normal rate is of good prognosis.

564 J. NEUKA (*Wien klin Wschr*, April 8 1938, p. 405) has investigated the blood picture and the blood sedimentation rate in twenty-five cases of carcinoma treated with deep x-ray therapy. There were twenty-two cases of carcinoma of the cervix, two of carcinoma of the body of the uterus, and one of carcinoma of the

ovary The white cell picture before the irradiation showed no typical changes In almost one-half of the cases the white cell count was normal, while in the remaining cases the number of leucocytes was increased up to 18,000 per cmm During the course of treatment the leucocyte count dropped to one-half or even to one-third in 92 per cent of cases returning to its original figure after three months The application of 4,000 r in fractional doses distributed over ten sittings in ten days had no injurious effect on the white blood cells The sedimentation rate may be increased in cases of uterine or ovarian carcinoma, a further increase may occur during the course of x-ray treatment The authors conclude that the blood picture and the blood sedimentation rate are of no diagnostic or prognostic significance in cases of uterine or ovarian carcinoma

### 565 Novocain Infiltration of the Pelvic Sympathetic

J HENRIET (*Rev franç Gynec* March 1938, p 139) alludes to recent modifications of current views concerning the anatomy and physiology of the pelvic autonomic nerves in the human subject, and to the evidence—from Leriche's lumbar sympathectomy in Little's disease, Cottes's pelvic sympathectomy for vaginismus, and Reeb's finding of relaxation of the levator ani during labour in a woman in whom the presacral nerve had been resected—that striated as well as smooth muscles are susceptible to autonomic nerve control He records eighty-five obstetrical cases in which he has anaesthetized the pelvic peritoneal plexus, lying laterally to the upper third of the vagina and to the cervix In reaching the plexus access through the lateral fornices is rejected (as carrying, from practical difficulties in a sepsis, the danger of infecting the broad ligament) in favour of insertion of the long needle of the syringe in front of the posterior commissure, external to the labium majus The transit of the needle is controlled by two fingers in the vagina, the injection is made with 20 ccm of 1 per cent novocain, without adrenaline The object of the technique has in fifty-six cases concerned the perineum, in twenty-nine the cervix In the first group it was sought to diminish perineal resistance and prevent tears in four primiparae aged 38 to 43 thirty-one primiparae with vulval constriction, eleven multiparae who had previously had bad tears, and ten cases of abnormal presentation It was found that pain was diminished, passage of the head over the perineum accelerated and facilitated by the muscular relaxation, and the number of obstetrical interventions greatly reduced The second group comprised all cases of protracted first stage of labour from cervical rigidity, oedema, or scarring full dilatation speedily followed Antispasmodics were given at the same time, or small doses of pituitary extract, according to the state of the uterine contractions Obstetrical interventions were unnecessary in the series of twenty-nine cases

### 566 Age and Fertility

O KOLB (*Munch med Wschr* April 8, 1938, p 502) has reviewed 59,117 gynaecological and obstetrical cases from the point of view of fertility and age The fertile period stretched between the ages of 12 and 49, with an optimum at 23 The fertility of the group between the ages of 12 and 15 was only slight, but it rapidly increased from the age of 16 The gradual decrease of fertility after the age of 23, apart from natural causes seemed to be due to diseases resulting from previous childbearing, acquired sterility as a result of criminal abortion, the increase of venereal diseases, the increased use of contraceptives and the decrease in sexual intercourse with increasing age Since the war the difference between the habits of the urban and rural population has been levelled out The rural population too have become acquainted with contraceptives and criminal abortion Conditions have probably changed in those countries where a premium is put on fertility On the whole the survey

showed that fertility in a civilized country is influenced by a variety of factors, not the least of which are economic A true picture of the relationship between age and fertility could only be obtained in a primitive community uninfluenced by modern civilization and free of material cares

## Pathology

### 567 Intradermal Test for Trichinosis

W CALUS (*Acad des Sci de l'Ukraine* 1938 8 316) has investigated the diagnostic value of the reaction caused by injecting intradermally the specific antigen of the trichinella The special antigen prepared for the author by the Institute of Microbiology and Epidemiology was tested 331 times on sixty-six patients suffering from trichinosis The reaction was positive in 74 per cent of the cases, whereas of 104 normal control cases only 5 per cent showed a positive reaction In two cases of hydatid cyst of the liver reaction with the trichinella antigen was negative, while the reaction with the hydatid antigen was positive The reaction is independent of the gravity of the case, though in all the severe cases it was positive

### 568 Non-specificity of "Anti-cancer Serum"

H J PHELPS (*Am J Cancer* November, 1937, p 441) describes experiments undertaken to determine the effect of the sera of rats given repeated injections of Jensen rat sarcoma tissue on Jensen rat sarcoma cells The sera of three series of rats, immunized respectively with Jensen rat sarcoma tissue, emulsions of normal rat spleen and normal rat blood, were tested against cultures of Jensen rat sarcoma cells, normal rat spleen cells, mouse carcinoma 63 cells, and normal mouse spleen cells Sera from both sarcoma-immunized and spleen immunized rats were toxic to cultures of all four types Whole blood was a less effective antigen than the other two agents The author concludes that "anti-cancer sera" have no specific action on malignant cells and probably, therefore, cannot be therapeutically useful that the antigen in cancer cells evoking the antibodies studied is not peculiar to malignant cells, and that these antibodies are probably iso-antibodies formed in response to foreign though homologous cells

### 569 Sulphanilamide and the Pathogenic Anaerobes

R S SPRAY (*J Lab clin Med* 1938, 23 609) has studied the *in vitro* effect of sulphanilamide, disulphanilamide, and prontosil soluble on various spore bearing anaerobic bacilli especially those associated with gas gangrene A broth medium was prepared with 1 per cent tryptone, 1 per cent neo-peptone, and 0.2 per cent dextrose in distilled water Serial dilutions of the drugs were made in the broth tubes, which were covered with a heavy oil seal and autoclaved at 120° C for twenty minutes The tubes were cooled rapidly and inoculated with about 0.05 ccm of a twenty-four-hour-old culture in semi solid agar of the anaerobe to be tested All cultures were incubated at 37° C, and the degree of turbidity was used to measure the amount of growth that had occurred It was found that certain species, such as *Cl tetani*, *Cl oedematis*, *Cl septicus*, and *Cl histolyticum* were specially susceptible to the drugs used, while *Cl welchii* and the highly proteolytic types, such as *Cl sporoginus* and *Cl bifermentans* and including the toxic *Cl botulinum* Type A, were much less affected The bacteriostatic activity increased in the following order: prontosil soluble, sulphanilamide, disulphanilamide The last compound completely prevented growth of all the anaerobes tested in a dilution of 1 in 250 *Cl tetani* and *Cl histolyticum* were inhibited by a dilution of 1 in 1,000, *Cl oedematis* by one of 1 in 4,000, and *Cl septicus* by one of 1 in 8,000

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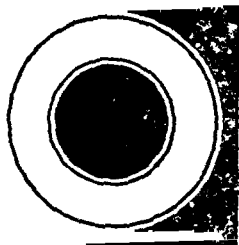
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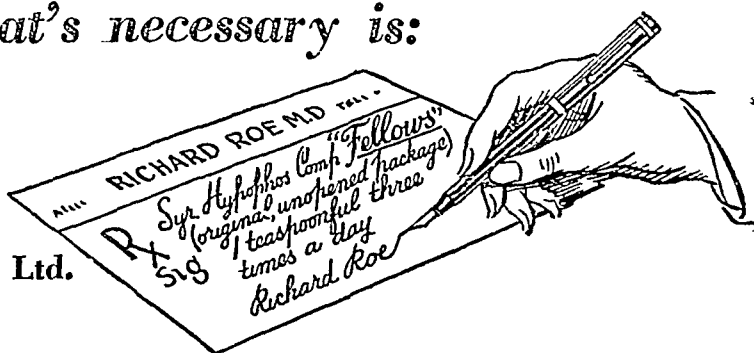
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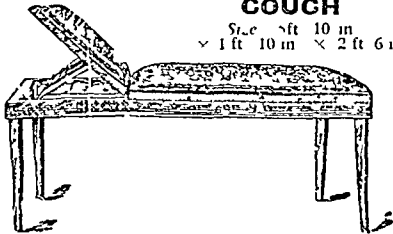
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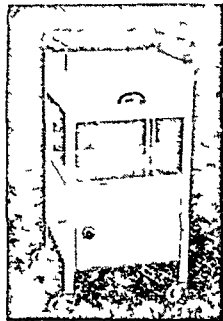
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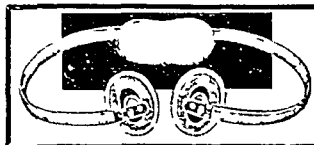
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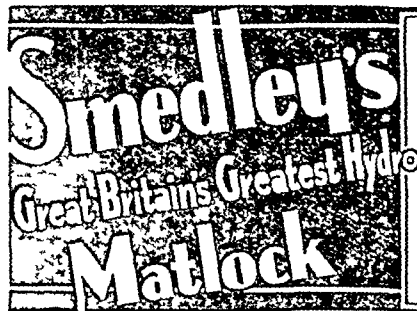
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Patients in Unfitted  
Baths. Mr. J. L.  
uses Treatment. Stools  
for Baths and other  
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PAYING PATIENTS RECEIVED

BOTH MEDICAL and SURGICAL CASES

5 to 8 guineas per week at the Hospital 3 to 4 guineas per week at the Sanatorium  
APPLY TO THE SECRETARY—BROMPTON HOSPITAL SW3

# SHAFTESBURY HOUSE, FORMERLY THE ST. N. H.

Specifically built and licensed for the care and treatment of a limited number of Ladies and Gentlemen suffering from Nervous and Mental breakdown Voluntary and certified patients received Ladies also admitted as Temporary Patients without Certification Terms moderate

Apply RESIDENT PHYSICIAN who may be seen at 31 Rodney Street Liverpool by appointment  
Tel. No. 8 Formby

# WESTON LODGE, BATH NURSING HOME

A country residence with extensive gardens on the outskirts of the City of Bath established by the Mental Treatment Act Committee of the Corporation for the care and treatment of a limited number of women (Voluntary and Temporary patients only) suffering from Functional Nervous Disorders

The Nursing Home is fully staffed with qualified nurses and is equipped for Hydrotherapy and Plombieres Treatment

A few vacant beds available Terms moderate

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SHELTERED SITUATION SPACIOUS GROUNDS HIGHLY QUALIFIED STAFF

The Baths and Treatment Rooms occupy a special wing accessible by lift from all floors and are fully equipped for every form of physical treatment including the most modern hydrological and electrical methods massage and remedial exercises dietetic and occupational therapy Terms £4 4s 0d to £6 6s 0d Inclusive terms for consultation fees treatment board residence and attendance from £6 6s

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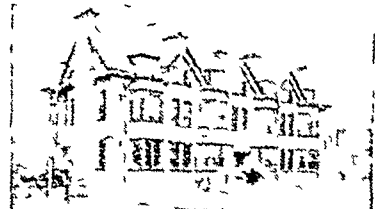
**ROCKSIDE**  
PHYSIOTHERAPEUTIC ESTABLISHMENT  
**MATLOCK**

# ASHWOOD HOUSE, KINGSWINFORD, STAFFORDSHIRE

An old established PRIVATE HOME for the care and treatment of Ladies and Gentlemen mentally afflicted Probationary cases and non-certified patients are received as well as those regularly certified

The home is beautifully situated in its own grounds of 40 acres

Full particulars as to reception terms etc. may be obtained from the Resident Medical Officer



# HOME FOR EPILEPTICS

## MAGHULL (near LIVERPOOL) FARMING and OPEN AIR OCCUPATION FOR PATIENTS

A few vacancies in 1st and 2nd Class Houses  
FEES 1st Class (men only) from 13 p.w. up  
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Secretary 20 Exchange Street East Liverpool 2

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For Mental Disorders with or without Certificates  
Resident Physician CEDRIC W. BOWER

Ordinary Terms Five Guineas per week  
(Including Separate Bedrooms where suitable)  
Interviews in London by Appointment

# WYE HOUSE, BUXTON

For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received Situated 1,000 ft above sea level facing S. 14 acres of grounds—For terms apply to the Resident Medical Sup. W. W. HORTON, M.D. Nat. Tel. 130

# BISHOPSTON HOUSE, BEDFORD

A select Private Mental Home for Ladies Certified and Voluntary with separate House and Gardens for Voluntary Boarders Under personal supervision of a Resident Mental Specialist and Psychiatrist—Medical Supt. Dr J. LANGHAM MACALLAN Tel. Bedford 273

Tel. and Telegrams Haynes Brentwood 45

LIFTON HALL, BRENTWOOD, ESSEX

Large grounds 400 ft above sea level (Home for Ladies) Mentally afflicted Voluntary Boarders received Station Brentwood and Shenfield 1 mile Liverpool St. 26 min. Apply Dr. HAYNES

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1938

The POST GRADUATE COURSES to be held this year comprise

- (1) A COURSE IN OBSTETRICS AND GYNAECOLOGY from July 11th to July 29th Fee £10 10s.  
(2) A GENERAL PRACTITIONERS COURSE from August 15th to September 10th  
Fee £10 10s for whole Course 16/6 for two weeks  
(3) A GENERAL SURGICAL COURSE from August 15th to September 10th  
Fee £10 10s for whole Course 16/6 for two weeks  
(4) A COURSE ON INTERNAL MEDICINE from October 17th to December 10th Fee £15 15s

<p>IN ORDER TO BE OF ANY INTEREST TO THE MEDICAL OCCUPATION TO OCCUR FROM 1951 TO 1953</p> <p>IN ORDER TO BE OF ANY INTEREST TO THE MEDICAL OCCUPATION TO OCCUR FROM 1951 TO 1953</p> <p>INTERPRETATION AND SIGNIFICANCE OF MODERN DIAGNOSTIC METHODS Fee £3 3s</p> <p>DISEASES OF THE BLOOD Fee £3</p> <p>ENDOCRINOLOGY Fee £3 3s</p> <p>DISEASES OF THE NERVOUS SYSTEM Fee £3 3s</p> <p>URINOLOGY Fee £10 10s</p> <p>RAY PHYSICS AND ELECTRO-TECHNICS Fee £3</p> <p>ULTRA-VIOLET RADIATIONS AND THEIR USES Fee £3 3s</p> <p>CYTHALMOSCOPY Fee £5 5s</p> <p>OTOLOGICAL SURGERY Fee £3 3s</p> <p>TREATMENT OF FRACTURES AND ORTHOPAEDICS Fee £5 5s</p> <p>NEUROLOGICAL SURGERY Fee £2 2s</p>	<p>DISEASES OF NOSE EAR AND LARYNX (Royal Infirmary) Fee £10 10s</p> <p>DISEASES OF EAR NOSE AND THROAT (Ear and Throat Department) Fee £4 4s</p> <p>OPERATIVE SURGERY OF THE EAR Fee 2 3s</p> <p>VENERIAL DISEASES Fee £10 10s</p> <p>SURGICAL PATHOLOGY Fee £4 4s</p> <p>ORTHOPAEDIC SURGERY Fee £4 4s</p> <p>CLINICAL MEDICINE INCLUDING CHILD LIFE AND HEALTH Fee £5 5s</p> <p>CLINICAL SURGERY Fee £4 4s</p> <p>MODERN METHODS IN ANAESTHESIA Fees £3 3s and £5 5s</p>
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Further particulars may be had on application to the Hon. Secretary, Post-Graduate Courses in Medicine, University New Buildings, Edinburgh 8.

POST-GRADUATE TEACHING in Glasgow during the Summer of 1938 comprises principally

- A. General Practitioner's Medical and Surgical Courses from July 18th to August 27th and  
B. Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association The University Glasgow

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MD (Lond.)	1901-37 (11 Gold New List during 1913-37)		413
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FRCS (Eng.)	1919-37	Primary Final	199 192
M.R.C.P. (Lond.)	1919-37		286
D.P.H.	(Various) 1906-37 (Completed Exam.)		348
FRCS. (Edin.)	1918-37		65
M.R.C.S., L.R.C.P.	Final 1919-37 (Completed Exam.)		606
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Prerequisites for the above, also for Medical  
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 The method and the cost of entering the Medical Profession. Particulars of all Medical Examinations. Postal Courses and Oral Examinations. Suggestions for the Higher Medical Examinations. Suggestions for the Higher Surgical Examinations. Suggestions for the Special Diploma Examinations. Refresher Courses. Openings for Women. Plans for writing theses.

Medical Prospectus gratis along with List of  
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## MASTERY OF MIDWIFERY

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The Mastery of Midwifery is designed to give evidence of intensive study and practical experience in Ante Natal Care Midwifery and Infant Welfare and their relation to Hygiene and Preventive Medicine

The Diploma of the Mastery indicates competence to undertake the responsible control of Maternity and Child Welfare work.

The tests imposed are stringent the examination written oral and clinical demands thorough and detailed knowledge gained by practical experience and constitutes a definite endeavour to combat Maternal and Infant Mortality

Examinations are held twice yearly in the months of May and November

Regulations and forms of application for admission to the examination may be obtained from —

**THE REGISTRAR.** The Society of Apothecaries, Water Lane, E.C.4

## CITY OF LONDON MATERNITY HOSPITAL

(Incorporated by Royal Charter)  
CITY ROAD E.C.1

The Hospital offers facilities to POSTGRADUATES for observing the work of its Antenatal, Postnatal and Dental Clinics and to male MEDICAL STUDENTS (and Practitioners desiring a Refresher Course) a two or four weeks Midwifery Course (Residential). Nearly 2,000 patients annually.

RALPH B CANNINGS, Secretary

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Short Intensive Oral and Postal Revision  
Courses in preparation for the DPM  
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- Prominent success in education and treatment  
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- Guy's Hospital Gazette.

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ROYAL FACULTY OF PHYSICIANS  
AND SURGEONS OF GLASGOW

**FINLAYSON MEMORIAL LECTURE**

The Dr James Finlayson Memorial Lecture will be delivered in the Faculty Hall 42 St Vincent Street Glasgow on Wednesday June 29th at 8.30 p.m. by Professor Ludwig Aschoff. The subject of the Lecture will be THE HISTORY OF THE CIRCULATION.

All members of the Medical Profession re  
nvited to attend

JOHN HENDERSON  
President.  
42 St Vincent Street, Glasgow C.2.  
June 14th 1938

**NORTH EAST LONDON  
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The Practice of the Hospital is limited to  
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Diploma in Anaesthetics  
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All Medical and Surgical Degrees and Diplomas

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Examinations in which interested

## UNIVERSITY OF LONDON KING'S COLLEGE FACULTY OF MEDICAL SCIENCE

The Medical Faculty at this College of the University gives instruction in the subjects of Medical Science for all the usual Pre medical and Intermediate Examinations in Medicine, Surgery and Dentistry. Through the four associated hospitals, students of the College have clinical facilities of over 1,000 beds.

The Medical Faculty of the College provides a general University education in touch with other faculties, classes of which medical students are permitted to attend. There are many College societies, clubs and functions in which students of all faculties have opportunity of meeting, each other. The College has an excellent athletic ground at Mitcham with a new and well equipped pavilion.

The First Year subjects are taught in the large Departments of the Faculty of Science, and those of the Second and Third Years in the new Medical Department. This includes the Hammersmith Department of Anatomy and an extension to the Department of Physiology recently completed at a cost of £10,000. These new buildings and those of recent years provide the College with a completely new and modern Medical Department which embodies the newest ideas in laboratory construction and equipment.

Valuable scholarships and prizes are awarded on the results of examinations held annually.

The Hostel for men students (The Platens, Champion Hill, S.E. 5) contains accommodation for 50 students. The Hostel for women students is at 55, Queensborough Terrace, Bayswater.

For detailed prospectus of the Medical and Dental Courses and for further information apply to the Dean of the Medical Faculty or to

S. I. SHOVELLON, M.A. Secretary

## ST MARY'S HOSPITAL MEDICAL SCHOOL, W 2 (UNIVERSITY OF LONDON)

### PRIMARY FRCS COURSE

A Course of Instruction for the November EXAMINATION will begin on Monday, September 14th 1938. Fee for the Course £16 10s. or £9 9s. for each section separately. For further particulars apply to the School Secretary.

## UNIVERSITY OF LONDON

### EXAMINERSHIPS, 1939

The Senate announce the following vacant Examinerships for the year 1939

*Final and Higher Examinations for Medical Degrees*  
Applied Pharmacology and Therapeutics—four  
Medicine  
Obstetrics and Gynaecology  
Surgery

Oto-Rhino-Laryngology—two

*First Examination for Medical Degrees*

Chemistry

*Second Examination for Medical Degrees*

Anatomy

Chemistry

*B Pharm Examination*

Pharmaceutical Chemistry

Pharmacognosy

### ASSOCIATE EXAMINERS

Applications will also be invited for Associate Examiners in Medicine, Obstetrics and Gynaecology, Pathology and Surgery. A separate application form must be used for Associate Examinerships and the word Associate must be written on it.

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar.

Candidates must send in their names to the External Registrar A. Clow Ford M.B.F. B.A. with any attestation of their qualifications they may think desirable on or before Monday July 4th 1938. (Envelopes should be marked Examinerships.)

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership. The appointments will be made by the Senate in November. Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application.

HERBERT L. EASON

Principal

University of London  
Senate House W.C.1  
June 1938

## THE MOYNIHAN FELLOWSHIP

THE ASSOCIATION OF SURGEONS OF GREAT BRITAIN AND IRELAND invite applications for the MOYNIHAN FELLOWSHIP to the value of £350 to be held for one year and to be awarded in November 1938.

The object of the Fellowship is to enable its holder to pursue a definite line of research or to study surgery in specified clinics either at home or abroad.

Candidates in their applications are required to state the lines of research or study that they intend to pursue and also to give short accounts of their past careers. No testimonials should be sent but each candidate is required to provide letters of recommendation from two sponsors who will forward them direct to the Secretary.

Applications must be received by the Secretary of the Association on or before September 30th 1938. As must letters from the sponsors of candidates.

PHILIP H. MITCHNER

Hon. Secretary

50 Wimpole Street London W.1

## ADVICE ON THE CHOICE OF SUITABLE SCHOOLS AND TUTORS

for BOYS and GIRLS with prospectuses of recommended establishments will be given free of charge to parents stating age of pupil, district, preferred range of fees and type of school required.

J. & J. PATON,

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## FRCS (Edin)

### EDINBURGH POSTAL COURSES

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## FELLOWSHIP

The EUGENICS SOCIETY offers a LEONARD DARWIN FELLOWSHIP of £250 for one year from October 1st 1938 renewable for a second year tenable in any approved Institution in the United Kingdom for Research on subjects bearing on Eugenics such as the quantitative study of genetics and evolution, human heredity, vital statistics, fertility, the eugenic effects of economic conditions and legislation etc. Forms may be obtained from the Business Secretary, The Eugenics Society, 69 Eccleston Square, London S.W.1 to whom applications for the Fellowship should be sent on or before July 31st 1938.

## COUNTY BOROUGH OF ROTHERHAM MEDICAL SERVICES COMMITTEE

### 1 ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of hospital work for the appointment of a full time Resident Assistant Medical Officer at the Alma Road Hospital, Rotherham at a salary of £350 per annum together with the usual emoluments. The appointment will be made for a period of twelve months.

Candidates must be medical practitioners of at least one year's standing and have held a resident appointment in general hospital or municipal hospital for at least six months.

### 2 JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER

Applications are also invited for the post of Junior Assistant Resident Medical Officer at the Alma Road Hospital, Rotherham at a salary of £180 per annum together with the usual emoluments. The appointment will be for a period not exceeding twelve months determinable by one month's notice on either side.

The above appointments are subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidates will be required to pass a medical examination.

The persons appointed will be required to act under the general direction of the Medical Superintendent.

Forms of application may be obtained from the Medical Officer of Health, Town Hall, Rotherham and must be returned to the undersigned endorsed with the title of the appointment not later than noon on June 30th 1938.

Municipal Offices CHAS. L. DES FORCES  
Rotherham Town Clerk

## COUNTY BOROUGH OF SUNDERLAND

### APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified medical practitioners for appointment as an Assistant Medical Officer of Health and Assistant School Medical Officer. Applicants should have had at least three years' experience of the practice of medicine since qualification and the possession of a Diploma in Public Health will be considered advantageous.

The successful candidate will work under the supervision of the Medical Officer of Health. The work will include Medical Inspection of School Children, Maternity (Ante Natal) and Child Welfare work and such other duties as may be allotted.

The candidate appointed will be required to devote his or her whole time to the duties of the position and will not be allowed to engage in private practice.

The salary will be at the rate of £500 per annum advancing by annual increments of £25 to a maximum of £700 per annum.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the selected candidate will be required to pass a medical examination.

Applications addressed to me and endorsed on cover Assistant Medical Officer must be delivered at my office not later than Saturday July 2nd next.

Conveying either directly or indirectly before the first selection of candidates by the Committee will be a disqualification.

Town Hall G. S. MCINTIRE  
Sunderland Town Clerk  
June 11th 1938

## CITY OF SHEFFIELD NEITHER EDGE HOSPITAL

Applications are invited from duly qualified medical women for the appointment of ASSISTANT MEDICAL OFFICER at the above hospital.

The Medical Officer appointed will be required to reside in the hospital and assist in the medical and maternity sections. She will also take part in the Maternity and Child Welfare work of the Corporation, taking Ante Natal Post Natal or Child Welfare Clinics daily at the Maternity and Child Welfare Centre.

Candidates should have previous hospital experience and postgraduate experience in Midwifery and Ante Natal work is essential.

The salary offered is £350 per annum rising by £25 to £450 with the usual residential allowances. The appointment will be subject to the provision of the Local Government and Other Officers Superannuation Act 1922 and deductions will be made under this Act.

Applications stating age, qualifications and experience accompanied by three recent testimonials should be sent to the Medical Superintendent, City General Hospital, Sheffield S.1 on or before July 6th 1938.

# INDIAN MEDICAL SERVICE

## RECRUITMENT OF EUROPEAN OFFICERS

Applications are invited from Medical Men for Permanent Commissions in His Majesty's Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years service or of £2,500 after 12 years service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

British subjects of pure European descent who are under 27 years of age and who are registered under the Medical Acts in force in Great Britain and Northern Ireland are eligible to apply.

### CAREERS.

The Indian Medical Service offers a permanent career with wide opportunities of medical experience including clinical, preventive, specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant Colonel and by selection to the ranks of Colonel and Major General. An officer may apply at any one year's Indian Service to have his name considered for transfer to the civil side from which appointments are made to Civil Surgeons, which are established at the principal civil centres to provide for the medical needs of Civil Officials and for general medical administrative purposes, to specialist (for example, public health and bacteriological) services, to research posts and to professorships at the Medical Schools.

### RATES OF PAY

Years of Service	Ranks	Basic Pay Rs. per mensem	Overseas Pay £ per month	Total £ per annum
1	Lieutenant	40	15	65
2	"	40	15	750
3	Captain	40	15	795
4	"	550	15	795
5	"	600	15	840
6	"	600	15	840
7	"	600	15	840
8	"	600	15	840
9	"	600	15	840
10	"	600	15	840
11	Major	700	15	1010
12	"	800	15	1100
13	"	800	15	1100
14	"	800	15	1100
15	"	800	15	1100
16	"	800	15	1100
17	"	900	15	1335
18	"	900	15	1335
19	"	900	15	1335
20	"	1100	15	1470
21	"	1100	15	1470
22	Lieut. Col.	1300	15	1695
23	"	1300	15	1695
24	"	1300	15	1695
25	"	1500	15	1815
26	"	1500	15	1815

Note—(1) The rupee is at present stabilized at a rate equivalent to 1s 6d.  
(2) An officer promoted to the rank of Lieut. Colonel before completion of 20 years' service will receive pay at the rate of Rs. 1,500 per mensem (basic) plus £10 per month overseas pay.

Extra—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

### ANTEDATEDS IN COMMISSION

Candidates possessing certain higher medical qualifications or holding the Diploma in Public Health may be granted an antedate in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate. Persons holding or about to hold resident posts at recognized

hospitals may be seconded in those posts for a period. The maximum period of antedate secondment, or antedate and secondment combined admissible under this paragraph is limited to 18 months.

### OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £75 towards the cost of outfit.

### PRIVATE PRACTICE.

With the exception of Administrative Officers military or civil and officers holding certain special appointments, officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

### LEAVE.

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed twelve months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a postgraduate nature. During such leave study allowance at present fixed at the rate of 12s a day in the United Kingdom, £1 a day on the Continent of Europe and £1 10s a day in the United States of America and Canada is granted to an officer in addition to ordinary rates of leave pay.

### PENSIONS

The rates of pensions are as follows — Per annum.

After 17 years' service for pension	Per annum.
" 18 " " "	£572 0s.
" 19 " " "	£400 0s.
" 20 " " "	£428 0s.
" 21 " " "	£463 0s.
" 22 " " "	£502 0s.
" 23 " " "	£539 10s.
" 24 " " "	£576 10s.
" 25 " " "	£614 0s.
" 26 " " "	£651 0s.
" 27 " " "	£697 10s.
" 28 " " "	£744 0s.

There are additional pensions ranging from £65 to £300 per annum for officers who have held administrative appointments.

### PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges. Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

### INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately three months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the UNDER SECRETARY OF STATE FOR INDIA, MILITARY DEPARTMENT, INDIA OFFICE, LONDON, S.W.1. The Selection Committee will meet at the India Office about July 26th next and the selected candidates unless seconded for hospital appointments will be required to join a course of instruction commencing about September 1st prior to sailing for India in December 1938. Applications should reach the India Office as soon as possible.

INDIA OFFICE, JUNE, 1938



# ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in September, 1938

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board.

Selected candidates will be entered for Service for a period of three years, which if desired is usually extended to five years at the discretion of the Admiralty.

At the end of three years' service, officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000.

At the end of five years' Short Service, permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax).

Full opportunities exist for transfer to the permanent list, and periods of unemployed or half pay are very rare. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances.

Opportunities are available for officers on the permanent list for post-graduate study, to specialise, to take higher examinations and to obtain further qualifications.

Naval Medical Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers.

Copies of the regulations for entry and conditions of service, including rates of pay, allowances and retired pay, may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than 31st August, 1938.

## ROYAL NAVAL DENTAL SERVICE

Applications are invited for appointment to commissions as DENTAL OFFICERS in the ROYAL NAVY.

Candidates who must be British subjects below the age of 28 years must hold the degree or diploma of a British University or College of Surgeons and be registered under the Dentists Acts or Medical Acts. Unmarried candidates are preferred. No examination in professional subjects will be held, but candidates will be required to attend at the Admiralty for interview and for physical examination as to their fitness for service in any part of the world.

Successful candidates will be appointed to short service commissions as Surgeon Lieutenants (D) and will receive a grant of £50 towards the cost of providing the necessary uniform on entry. Vacancies in the permanent list will be filled by selection from among officers holding short service commissions who desire to make the Royal Naval Dental Service their permanent career. Officers not transferred to the Permanent List will on the termination of their short service engagement after six years' service receive a gratuity of £1,000.

Opportunities are available for officers on the permanent list for post-graduate study. The assistance of private income is not necessary for the purpose of supplementing official pay and allowances.

Naval Dental Officers are included in the Scheme for Marriage Allowance under the same conditions as for other Naval Officers.

Application Forms and copies of the regulations for entry and conditions of service rates of pay and allowances etc. may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1 and from the Deans of Dental Schools.

## SUDAN MEDICAL SERVICE

Applications are invited for the post of JUNIOR BRITISH LABORATORY ASSISTANT male unmarried in the Stack Medical Research Laboratories, Khartoum to commence duty on November 15th 1938.

The salary commences at ££324 or ££360 (££ = £1 0s 6d) according to age and qualification rising by two-three yearly increments to ££750 after eighteen or twenty years depending on the initial rate. The appointment carries prospects of pensionable service after five years' service. A free passage to the Sudan will be provided.

Candidates should be between 21 and 30 years of age and should hold the Laboratory Assistant's Diploma of Bacteriological Technique and preferably have some experience in Clinical pathology. Application stating age, qualifications and copies of testimonials should be sent to Dr H. C. Scalets, 93 Hurler Street, W. 1.

## THE ARMY DENTAL CORPS

Applications are invited from DENTAL SURGEONS for appointment to a limited number of COMMISSIONS in the Army Dental Corps.

Candidates who should not be over 28 years of age will for the present be selected for commissions without competitive examination but will be required to present themselves in London for interview and physical examination. They must hold the degree or diploma of a British University or College of Surgeons and be registered under the Dentists Acts or Medical Acts.

Successful candidates will in the first instance be given short service commissions for six years at the end of which period they will retire with a gratuity of £1,000 unless they have been granted permanent commissions. Permanent commissions will be given to officers selected from among those who wish to make the Army their permanent career.

Particulars including Regulations for Admission pay and allowances and forms of application may be obtained on request either in writing or in person to the Director Army Dental Service, The War Office, London S W 1.

## BURY AND DISTRICT JOINT HOSPITAL BOARD

### RESIDENT ASSISTANT TO THE MEDICAL SUPERINTENDENT

Wanted an ASSISTANT TO THE MEDICAL SUPERINTENDENT of the Institutions of the Joint Board. These consist of a Fever Hospital (100 Beds), a Sanatorium (70 Beds) and a Small pox Hospital. Candidates must be registered Medical Practitioners. The appointment is a whole time one and the person appointed will asist the Medical Superintendent generally and as he requires. Preference will be given to candidates with hospital experience and special experience in Pulmonary Tuberculosis.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Commencing salary £400 per annum with £25 increase at the end of the first year and a further £25 increase at the end of the second year with board washing and lodging.

Applications stating age, qualifications and experience together with testimonials to be sent to me on or before June 30th.

Hornby Building, The Rock Bury, Lancashire. F. A. BRADLEY, Clerk to the Board.

## CITY OF COVENTRY

### ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

The Coventry City Council invite applications from registered medical practitioners under 40 years of age for the post of Assistant School Medical Officer (male) in connection with the medical inspection etc. of school children. When not engaged in school work the officer will be required to assist in the general work of the Public Health Department.

Applicants must possess a Diploma in Public Health and preference will be given to those with appropriate previous experience.

The salary will be £500 rising by annual increments of £25 to a maximum of £700 per annum.

The post is designated under the Local Government and Other Officers Superannuation Act 1922 as amended in regard to annuities to widows by the Coventry Corporation Act 1936 and the successful applicant will be required to pass a medical examination as to fitness and to contribute to the superannuation fund. The successful applicant will also be required to contribute to the Coventry Staff Widows and Orphans Pension Fund.

Applications together with copies of three recent testimonials must be made on the prescribed form (which may be obtained from the undersigned) and must be delivered not later than June 9th 1938.

FREDERICK SMITH, Town Clerk.

The Council House, Coventry, June 14th 1938.

## CITY OF BIRMINGHAM

### DUDLEY ROAD HOSPITAL (926 Beds)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as JUNIOR MEDICAL OFFICER (male) at the Dudley Road Hospital Birmingham. The appointment will be for a period of six months but may be extended for a further period of not exceeding six months. Salary at the rate of £400 per annum and full residential emoluments.

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age, experience and qualifications with copies of recent testimonials should be forwarded not later than Thursday July 7th 1938.

## COUNTY COUNCIL OF MIDDLESEX

### RESIDENT ASSISTANT MEDICAL OFFICER (SURGICAL)

#### WEST MIDDLESEX COUNTY HOSPITAL. Twickenham Road Islington

Applications are invited from registered Medical Practitioners for the above appointment.  
Candidates must have held recent appointments at a general hospital and have had special experience in surgery.

Salary £500 per annum rising by annual increments of £25 to £475 per annum with board house and laundry.

The appointment which is subject to medical exam at but does not at present carry any superannuation rights will be held during the pleasure of the Council and is for a period of five years. At the end of this period the officer will leave the Council's service. In special cases the Council may desire to retain an officer on the established staff in which case the salary will be increased to a maximum of £500 per annum. The appointment is terminable by one month's notice on either side.

The officer appointed will work under the control of the Medical Superintendent and will devote his whole time to official duties.

Applicants stating age, qualifications and experience to either with copies of not more than three recent testimonials must be received by the undersigned not later than July 2nd, 1935. Relationship to any member or officer of the Council must be disclosed in the application. Envelopes must be endorsed "Resident Assistant Medical Officer West Middlesex County Hospital".

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, "Z"

Clerk of the County Council

Middlesex Guildhall  
Westminster S.W.1  
June 13th 1935

## COUNTY COUNCIL OF MIDDLESEX

### ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment to the post of an Assistant Medical Officer in the Public Health and School Medical Department. Salary £600 per annum rising after two years service by annual increments of £10 to £620 to coincide with out-of-pocket allowances.

Candidates must be duly qualified registered medical practitioners and should have had special experience in public health work. The position of a doctor or diploma in Public Health will be an essential qualification.

The duties of the post are in medical inspection of school children the supervision of treatment of notifiable diseases and the care of women under the Maternity and Child Welfare Scheme and such other duties as may be required by the Council. The officer appointed will devote whole time to the duties of the post and under the direction of the County Medical Officer of Health and will be subject to medical examination which will be held during the pleasure of the Council and will be terminable by one month's notice on either side.

Applicants stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than July 2nd. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed "Assistant Medical Officer Middlesex County Council".

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, "Z"

Clerk of the County Council

Middlesex Guildhall  
Westminster S.W.1  
June and 1935

## WEST SUSSEX COUNTY COUNCIL

### JOINT COMMITTEE OF HORSHAM URBAN AND HORSHAM AND LEWIS RURAL DISTRICTS

#### ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH AND MEDICAL OFFICER OF HEALTH

Applications are invited for the joint whole-time appointment of an Assistant County Medical Officer of Health for the Administrative County of West Sussex (Salary £500 per annum rising by £50 to £550 for the Horsham Urban District and the Horsham and Lewis Rural Districts (Salary £450 per annum)).

Applicants who should not be over 45 years of age must be duly qualified medical men with experience in Public Health duties and must hold the Diploma in Public Health or its equivalent. The officer appointed will be required to reside in Horsham or such other place as may be approved. As regards his duties as Assistant County Medical Officer of Health the officer will act under the general control of the County Medical Officer of Health and will be required to perform such duties as may be from time to time prescribed and as regards his duties as District Medical Officer of Health the officer will be subject to the control and direction of the Local Sanitary Authority.

Office accommodation and clerical assistance will be provided by the Council to be used at the discretion of the appointing authorities and an allowance will be made for travel. The appointment is subject to the approval of the Minister of Health and the Board of Education and so far as the duties of District Medical Officer of Health are concerned to the provisions of the Sanitary Officers (Duties and Regulations) 1935. The joint appointment is designated under the Local Government and Other Officers' Superannuation Act 1934 and the elected candidate will be required to pass a satisfactory medical examination.

The joint appointment will be terminable by three months' notice on either side, subject so far as the duties of the District Medical Officer of Health are concerned to the provisions of the Minister of Health.

Forms of application together with a list of duties and conditions of appointment may be obtained from the undersigned. Applications must be accompanied by a copy of three recent testimonials and be returned to him in the envelope provided not later than July 1st 1935.

A. D. ROBINSON

Deputy Clerk of the West Sussex County Council

F. FRASER HADDOCK

Clerk to the Joint Committee of the Horsham Urban and Horsham and Lewis Rural Districts

County Hall, Chichester

June 10th 1935

## SALOP COUNTY COUNCIL

#### (a) DEPUTY COUNTY MEDICAL OFFICER OF HEALTH AND DEPUTY SCHOOL MEDICAL OFFICER (Male)

#### (b) ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER (Male)

Applications for the above posts are invited from duly registered medical practitioners who possess a recognized qualification in Public Health and have had at least three years' experience in the practice of their profession.

For the position of Deputy Medical Officer of Health and Deputy School Medical Officer, the duties will be in the administrative work of a Public Health Department. The normal salary will be at the rate of £500 per annum rising by annual increments of £25 to £525 together with a travelling allowance in accordance with the County Council's regulations.

The duties of Assistant Medical Officer will include medical inspection of school children, Maternity and Child Welfare work and attendance at associated clinics. The salary will be at the rate of £400 per annum rising by annual increments of £25 to £425 per annum together with a travelling allowance in accordance with the County Council's regulations.

Both appointments will be terminable by three months' notice on either side and each officer appointed will be required to devote the whole of his time to the performance of the duties assigned to him by the County Medical Officer of Health. Both appointments are designated posts for the purposes of the Local Government Officers' Superannuation Act 1934.

Applicants accompanied by a copy of three recent testimonials should be submitted not later than Tuesday July 1st to the County Medical Officer, County Council, Shrewsbury, from whom the necessary forms and conditions of service can be obtained.

W. L. EDGE

Clerk of the Council

Shirehall, Shrewsbury

June 10th 1935

## CITY OF PORTSMOUTH

### SAINT MARY'S MUNICIPAL HOSPITAL (100 Beds)

Appointments are invited for the following appointments at the above Hospital:

**SENIOR ASSISTANT RESIDENT MEDICAL OFFICER.** Applicants must be single, duly qualified and registered not exceeding 10 years and must have had two years' hospital experience. Preference will be given to those having a knowledge of and experience in general medical work. The appointment is limited to a term of not exceeding two years. Salary for the first year £350 and for the second £375.

**JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER.** Applicants must be single, duly qualified and registered not exceeding 10 years and must have had at least one year's experience of hospital work. Experience in anaesthetics will be an additional advantage. The appointment is limited to a term of one year and the salary will be £250 per annum.

The above appointments include service at any institution belonging to the City Council that may be required. The residential emoluments are valued at £125 per annum and the appointments will be subject to termination by one month's notice on either side.

A Resident Medical Superintendent is in attendance.

Application forms may be obtained from and must be returned to the Medical Officer of Health, The Municipal, Portsmouth, not later than 10 a.m. on Thursday July 14th 1935.

Canvassing either directly or indirectly will be deemed a disqualification.

The Guildhall F. J. SPARKS  
Portsmouth Town Clerk  
June 10th 1935

## COUNTY BOROUGH OF WEST BROMWICH

### HALLAM HOSPITAL (472 Beds)

#### (a) RESIDENT OBSTETRICAL OFFICER (b) RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified (unmarried) male Registered Practitioners for the above appointments.

For Candidates for the Obstetrical Officer's post, a qualification in the subject of Obstetrics must be held and for the Assistant Medical Officer's post, a qualification in the subject of General Medicine must be held. The appointments will be for a term of not less than 12 months and a salary of £500 plus out-of-pocket allowances.

The appointments will be terminable by either party by three months' notice. The Assistant Medical Officer—for general duties—Salary £450 together with usual residential emoluments. Appointment is for six months and renewable for a further six months but can be terminated by either party giving six weeks' notice.

All fees received by the persons appointed will be payable into the fund of the Council.

Applications stating age, experience and qualifications together with copies of three recent testimonials must be forwarded to the Medical Officer of Health, 1, Ledebur Road, West Bromwich, so as to arrive not later than by first post on Wednesday July 6th 1935.

Town Hall G. F. DARLOW  
West Bromwich Town Clerk  
June 16th 1935

## CITY AND COUNTY OF NEWCASTLE UPON-TYNE

### NEWCASTLE GENERAL HOSPITAL (800 Beds)

#### TWO HOUSE SURGEONS AND ONE HOUSE PHYSICIAN (Male or Female)

The above posts will shortly be once vacant and applications are invited from duly qualified and registered Medical Practitioners.

The salary in respect of each of the appointments will be £1,000 for a full-time post and the rate of £150 per annum with board, lodging, and laundry.

Application, stating age and qualifications together with copies of not more than three recent testimonials, must be submitted to the Medical Officer of Health, Town Hall, Newcastle upon Tyne, not later than Saturday July 2nd 1935.

## CITY AND COUNTY OF NEWCASTLE UPON-TYNE

### NEWCASTLE GENERAL HOSPITAL (800 Beds)

#### ONE MEDICAL REGISTRAR (Part Time) ONE SURGICAL REGISTRAR (Part Time)

Applications are invited from duly qualified and registered Medical Practitioners for the above posts. The salary in respect of each appointment is £250 per annum.

Further particulars may be obtained from the Medical Officer of Health, Newcastle upon Tyne, Town Hall, Newcastle upon Tyne, to whom applications accompanied by copies of three recent testimonials must be submitted not later than Saturday July 2nd 1935.

## CITY AND COUNTY OF NORWICH

### HELLESDON HOSPITAL (NORWICH CITY MENTAL HOSPITAL)

#### APPOINTMENT OF MEDICAL SUPERINTENDENT

Applications are invited for the whole-time post of Medical Superintendent at the above named mental hospital. The salary offered is £1,000 per annum rising by increments of £100 per annum to a maximum of £1,500 per annum with emoluments for pension purposes valued at £200 per annum. The appointment will be subject to the provisions of the Assistant Officers' Superannuation Act 1934.

Forms of application and particulars and conditions of appointment can be obtained from the Acting Clerk to the Assistant Committee, City Hall, Norwich, to whom applications endorsed "Medical Superintendent" must be delivered on or before July 5th 1935. Canvassing either directly or indirectly will be a disqualification.

## NORTHAMPTONSHIRE COUNTY COUNCIL

Appointment of Assistant County Medical Officer and District Medical Officer of Health

Applications are invited from registered medical practitioners holding a diploma in public health or similar qualification for the appointment of Assistant County Medical Officer of Health under the above County Council and District Medical Officer for the Borough and Rural District of Brackley. The officer appointed will also act as temporary District Medical Officer of Health for the Brackley Rural District but ultimately he will vacate this appointment and will take over other districts adjacent to the Brackley area.

The inclusive salary will be at the rate of £500 per annum with a travelling allowance on the scale from time to time approved by the County Council Office accommodation and clerical assistance will be provided. The present allocation of the annual salary is County Council £520 Brackley Rural District £175 Brackley Borough £10 and Brackley Rural District £75.

The appointment under the County Council and the Brackley and Brackley Rural District Councils are designated posts for purposes of the Local Government and Other Officers Superannuation Act 1922 and the salary attaching to those appointments will be subject to a deduction of 5 per cent per annum for superannuation in accordance with the provisions of that Act.

The officer appointed will act under the Sanitary Officers (Outside London) Regulation 1915 and the Local Government Act 1931 and the officer appointed will be required to perform in the districts of the Local Sanitary Authorities referred to all the duties imposed on a District Medical Officer of Health by the relevant Acts, Orders and Regulations.

The officer will be required to devote his whole time to the duties of the office and to reside in a place approved by the Authorities.

The candidate appointed will be required to pass a medical examination.

The appointment will be determinable (subject to the relevant provisions of the Local Government Act 1931) upon three months notice on either side.

Applicants stating the qualifications and experience together with copies of not more than three recent testimonials should reach the undersigned not later than July 11th 1938.

Conveying will disqualify.

H. S. MARTIN

Clark of the County Council

County Hall Northampton  
June 21st 1938

## LONDON COUNTY COUNCIL

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing to under-mentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade I).  
—Salary £380-£425 with board lodging and washing.

(1) HACKNEY HOSPITAL Homerton High Street E9. Duties mainly medical.

(2) HIGGATE HOSPITAL Dartmouth Park Hill N19. Duties mainly medical experience in anaesthetics desirable.

(3) LEWISHAM HOSPITAL Lewisham S E 13. Mainly anaesthetics with medical duties.

(4) MILE END HOSPITAL Boroct Road Mile End E1. Duties mainly surgical.

(5) ST GEORGE IN THE EAST HOSPITAL Runc Street Wapping E1. Duties obstetrical gynaecological operative surgical experience essential.

ASSISTANT MEDICAL OFFICERS (Grade II).  
—Salary £250 together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(1) MILE END HOSPITAL Boroct Road Mile End E1. General medical duties experience in anaesthetics desirable.

(2) ST CHARLES HOSPITAL St Charles Square Eadbrock Grove W10. Medical duties and male tuberculosis wards.

(3) ST PANCRAS HOSPITAL Pancras Road N W 1. General duties experience in anaesthetics essential.

\* Male candidates only.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2a County Hall S E 1 returnable by July 11th. Conveying disqualifies.

PRESTON AND COUNTY OF LANCASTER  
QUEEN VICTORIA ROYAL INFIRMARY

The post of HOUSE SURGEON to the Eye Ear Nose and Throat Department at this General Infirmary is vacant for three months owing to the illness of the present occupant.

The duties include the care of twenty-seven beds and assistance at the Out Patient Clinics.

Salary at the rate of £180 per annum with board residence and laundry.

Application may be forwarded immediately to the Superintendent Royal Infirmary Preston.

## CITY OF BIRMINGHAM

CITY MENTAL HOSPITAL  
WINSON GREEN DIVISION

## MEDICAL SUPERINTENDENT

The Committee of Visitors invite applications from duly qualified medical men for the position of Medical Superintendent of the Winson Green Division of the City Mental Hospital at a commencing salary of £1100 per annum plus emoluments valued for superannuation purposes at £300 per annum.

Applicants must be not more than 45 years of age must possess a recognized degree or diploma in psychological medicine and preference will be given to a holder of one or both of the following qualifications—Doctor of Medicine of a British University or a Member of a Royal College of Physicians experience in the treatment of mental disorders and in the administration of a Mental Hospital is essential.

The candidate appointed will be required to pass a medical examination and to contribute under the Asylums Officers Superannuation Act 1909. He must also devote the whole of his time to the duties of the office and must not engage either directly or indirectly in private or consulting practice.

All fees received in connexion with panel work will be required to be paid into the Borough funds but for making insurance reports reports on compensation cases and coroners inquests the fees can be retained.

The appointment is subject to one month's notice on either side.

There is a Chief Medical Officer of the City of Birmingham Mental Hospital who is also the Medical Superintendent of the Rubery Hill and Hollymoor Division.

Applications endorsed Medical Superintendent Winson Green stating age full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials must be addressed to the undersigned so as to be received not later than Friday July 8th 1938.

Conveying either directly or indirectly will be a disqualification.

F. H. C. WILTSHIRE

Clark to the Committee of Visitors

Town Clerk's Office  
Birmingham 1 June 10th 1938

## BOROUGH OF EALING

MATERNITY AND CHILD WELFARE SERVICES

## WOMAN ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified medical practitioners for the position of Woman Assistant Medical Officer.

The duties will mainly consist of work in connexion with the Council's Maternity and Child Welfare Scheme embracing attendance at the health centres and medical attendance on patients in the Perinatal Maternity Hospital. The person appointed will reside at this hospital board and furnished rooms being provided for her.

Applicants must have had previous experience of maternity and child welfare work and particularly of work in a maternity hospital.

The person appointed will be required to devote her whole time to the duties and will not be allowed to engage in private practice.

The salary will be at the rate of £450 per annum rising by £25 per annum to a maximum of £550 plus board and residence as indicated above and valued at £150 per annum. A deduction of 5 per cent will be made in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922 which has been adopted by the Council and the appointment will be subject to the candidate passing the Council's medical examination in connexion therewith. Conveying will be a disqualification.

Copies of the application form and terms of appointment can be obtained from Dr THOMAS ORR Medical Officer of Health Town Hall Ealing W 5 to whom applications accompanied by copies of not more than three recent testimonials must be delivered not later than Thursday June 30th.

Town Hall R. H. WANKLYN Town Clerk

Ealing W 5

## CITY OF NOTTINGHAM

ISOLATION HOSPITAL HUCKNALL ROAD

A RESIDENT MEDICAL OFFICER (either sex) is required. The Hospital has 200 beds of which about 125 are used for acute infectious diseases and the remainder for tuberculosis.

The resident medical officer will have the advantage of service under non-resident specialists and may obtain experience of other Health Department activities if desired.

Salary at the rate of £200 per annum with board and lodging tenure of office six months renewable for a further six months.

Apply forthwith to the undersigned with particulars of qualifications and experience.

Guildhall J. E. RICHARDS Town Clerk

Nottingham

June 12th 1938

## RHONDDA URBAN DISTRICT COUNCIL

WOMAN ASSISTANT MEDICAL OFFICER

Applications are invited from unmarried or widowed women medical practitioners not exceeding 45 years of age for appointment as ASSISTANT MEDICAL OFFICER under the direction and supervision of the Council's Medical Officer of Health and School Medical Officer at a salary of £500 rising by annual increments of £25 to £700 a year the first annual increment being payable on April 1st following the completion of six calendar months service under the Council travelling expenses necessarily incurred in the performance of the duties will also be allowed. Candidates must have had not less than three years professional experience subsequent to registration and must be experienced in the disease of children the possession of a Diploma in Public Health is also considered desirable.

The appointment which is designated under the Local Government and Other Officers Superannuation Act 1922 will be subject to the passing of a medical examination and will be terminable by two calendar months notice on either side. The Officer appointed will be required to reside within the Rhondda Urban District and will not be allowed to engage in private practice.

Applications are to be made on forms obtainable from the Medical Officer of Health Tŷdŷil House Llewellyn Street Pentre Rhondda by whom they must be received endorsed Assistant Medical Officer and accompanied by copies of three recent testimonials not later than the first post on Thursday June 30th 1938.

The Council Offices D. J. JONES

Pentre Rhondda Clerk of the Council

June 13th 1938

UNIVERSITY COLLEGE HOSPITAL  
MEDICAL SCHOOL

## JOHN MARSHALL FELLOWSHIP

The School Committee are prepared to consider applications from candidates for the above Fellowship.

The appointment to the Fellowship which is tenable at University College Hospital Medical School University Street London W C 1 is made by the University of London on the nomination of the School Committee.

The Fellowship is tenable for a period of two years in the first instance at a salary at the rate of £500 per annum without superannuation benefits.

The holder is eligible for re-election for a further period of one year.

It is the duty of the Fellow to be responsible primarily for the surgical pathology in the Hospital to attend the surgical post mortems and to devote the remainder of his (her) time to research work.

Applications to be supported by copies of testimonials to be forwarded to the Secretary University College Hospital Medical School University Street London W C 1 not later than Monday July 11th 1938.

## LONDON COUNTY COUNCIL

## CONSULTANT AND SPECIALIST SERVICES

Application invited for appointment as PART TIME EAR NOSE AND THROAT SPECIALIST for one session a week for duty at St Andrew's Hospital Bow.

Salary £125 (£75 a year if already employed as a part time consultant or specialist in hospital service) and additional remuneration at rate of £2 12s 6d a visit for emergency visits made in excess of number of routine sessions.

Application forms containing full particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (6) County Hall S E 1 returnable by July 9th. Women eligible. Conveying disqualifies.

## THE QUEEN'S UNIVERSITY OF BELFAST

## LECTURESHIP IN PHYSIOLOGY

Applications are invited for the Lecturehip in Physiology. The salary offered is £600 per annum with contributory pension.

Applications accompanied by twelve copies of recent testimonials will be received up to July 15th 1938. Further information may be obtained from Queen's University RICHARD H. HUNTER Secretary

## WALSALL GENERAL HOSPITAL

The Committee invite applications from men for the post of HOUSE SURGEON. Must have had previous experience in the administration of anaesthetics.

Candidates who must be registered under the Medical Act must produce three recent testimonials. The appointment will be for six months. Salary at the rate of £140 per annum. The Hospital contains 145 beds and is equipped in all special departments.

Applications to be sent at once to the undersigned.

WATER FRANKCOMB House Governor

June 8th 1938



JUNE 25, 1938

# DEVONSHIRE ROYAL HOSPITAL

Burton Derbyshire (300 Beds)  
(A National Hospital for Rheumatism and Allied Diseases)

**HOUSE PHYSICIAN (male)** Salary £150 rising to £175 after three months service (and prospects of promotion to Resident Medical Officer) with board residence and laundry.  
Candidates must be fully qualified and registered six months and may be extended for a further period of six months.  
Applications endorsed Medical Appointment with copies of three recent testimonials together forwarded without delay to the undersigned from whom any further particulars may be obtained. Considerable orthopaedic experience is available and the appointments offer special facilities for a gentleman preparing a thesis or wishing to undertake special work as the Hospital contains all the necessary laboratory and other facilities for research.  
Canvassing will disqualify.  
By Order of the Committee of Management  
**A. PRESTON TURNER**  
General Superintendent and Secretary

## CUMBERLAND INFIRMARY CARLISLE

OFFICE of HONORARY ASSISTANT SURGEON

The Committee of Election invite applications for the above vacant office.  
Particulars respecting the qualifications of candidates and the duties of the office can be obtained from the undersigned by whom applications accompanied by three recent testimonials must be received by first post on July 16th 1938. Candidates are required to supply 36 copies of their application and testimonials for circulation to the members of the Committee.  
The appointment will be made on July 27th 1938.  
Personal canvassing on the part of any candidate will constitute disqualification.  
By Order  
**J. S. RIPPET**  
Carlisle June 23rd 1938  
Secretary Superintendent

## ADDENBROOKS HOSPITAL CAMBRIDGE

Applications are invited for the following posts—  
(a) **HOUSE SURGEON** from August 1st  
(b) **HOUSE PHYSICIAN** from August 1st  
Each appointment is tenable for a period of six months but is terminable at an earlier date by one month's written notice on either side.  
The salary of each officer will be at the rate of £110 per annum with board residence and laundry.  
Candidates (male) who must be unmarried and duly registered are requested to forward their applications stating age qualifications and testimonials with copies of not more than four testimonials to the undersigned on or before Wednesday July 6th 1938.  
**J. A. BEARDSALL**  
Secretary Superintendent

## CLAYTON HOSPITAL WAKEFIELD

There will be vacancies for **THREE HOUSE SURGEONS** duties to be taken up on the following dates—  
July 29th August 2nd August 31st  
The appointment in each case will be for six months renewable. Candidates should be of British nationality male and single. Salary £200 per annum with board residence, etc.  
Applications stating age qualifications and testimonials together with copies of three recent testimonials should be sent to the undersigned by July 4th.  
**T. F. W. MACKEOWN**  
Supt and Secy

## BUTE HOSPITAL LUTON

**HOUSE SURGEON (male)** wanted to commence duties on July 1st or as soon after as possible. Salary £150 per annum with board residence and laundry.  
Applications stating age nationality and experience together with copies of not more than three recent testimonials should be sent immediately to the Secretary of the Medical Advisory Committee at the Hospital.  
**R. E. LINGARD**  
Secretary Bute Hospital

## BURTON ON TRENT INFIRMARY GENERAL

Applications are invited for the position of **CASUALTY OFFICER AND HOUSE PHYSICIAN** salary at the rate of £100 per annum with board residence and laundry. Duties to commence July 1st 1938.  
Application giving age qualifications and nationality together with copies of testimonials to be sent to **L. W. FLORENCE** Secretary.

## ROYAL UNITED HOSPITAL BATH

HONORARY STAFF APPOINTMENTS

The Board of Management invite applications for the undermentioned honorary posts  
**ASSISTANT DERMATOLOGIST**  
**PHYSICIAN FOR MENTAL DISEASES**  
**MEDICAL REGISTRAR**  
Applicants must be graduates in medicine of a University of the British Empire or a Fellow or Member of the Royal College of Physicians or a Licentiate of the Royal College of Physicians.  
Applications stating age qualifications and experience together with three testimonials to be addressed to the undersigned by first post July 12th 1938.  
Canvassing will be deemed a disqualification.  
The names and addresses of members of the Board of Management will be sent to applicants in order that they may send a copy of their application and testimonials to each member.  
**J. LAWRENCE MARS**  
Secretary Superintendent  
June 18th 1938

## MANCHESTER ROYAL INFIRMARY

RESIDENT SURGICAL OFFICER

The Board of Management invite applications for the above appointment which will become vacant on July 15th 1938. Applicants must not be less than 25 years of age. They must be registered and hold a Medical and Surgical qualification.  
The appointment is for twelve months renewable for a further period of one year subject to the provision of the B.M.A. Laws is to notice. Salary £200 per annum with allowance for laundry.  
Full information is obtainable from the undersigned to whom applicants must send fifteen copies of their application and testimonials by Thursday June 30th.  
By Order  
**F. J. CABLE**  
June 20th 1938  
General Supt and Secretary

## DISTRICT INFIRMARY LYNE ASHTON UNDER

(General Hospital 200 Beds)

**CASUALTY HOUSE SURGEON (male)**  
required for July 1st next.  
Applicants must have had previous experience. Salary at the rate of £150 with the usual residential emoluments.  
**HOUSE SURGEON** required for July 1st next. Six months appointment which may be renewed. The Staff comprises a Resident Surgical Officer and two House Surgeons.  
Salary at the rate of £150 per annum with board residence and laundry.  
Applications with testimonials to be sent at once to the undersigned.  
**FRANK OLIVER**  
General Superintendent and Secretary

## DISTRICT INFIRMARY LYNE ASHTON UNDER

(200 Beds)

**RESIDENT SURGICAL OFFICER** required immediately.  
Six months appointment with possibility of renewal. Salary at the rate of £200 per annum with the usual residential emoluments.  
Applications with testimonials to be sent at once to  
**FRANK OLIVER**  
General Superintendent and Secretary

## ROCHDALE INFIRMARY AND DISPENSARY

(110 Beds Three Residents)

The Board of Management invite applications from gentlemen for the appointment of **SECOND HOUSE SURGEON**.  
The salary attached to the appointment is at the rate of £150 per annum including board residence and laundry.  
Applications stating age nationality etc. together with copies of three recent testimonials to be sent to the Secretary endorsed House Surgeon.  
Conditions of the appointment may be had on application to the Secretary.  
**W. WYNNE**  
Infirmary Office  
Rochdale, Lancs  
Secretary

## PRINCESS ALICE HOSPITAL EASTBOURNE

(Voluntary General Hospital 120 Beds Two House Surgeons)

**RESIDENT HOUSE SURGEON** required on July 9th next. Salary at rate of £150 per annum with board and laundry.  
Applications with copies of three recent testimonials to be delivered to the undersigned by first post on Wednesday June 29th.  
**W. RUSSELL RUDALL**

## THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

(232 Beds Six Residents)

Applications are invited for the post of **CASUALTY OFFICER (male)**. Salary at the rate of £150 per annum with board residence and laundry.  
The appointment is for six months which may be extended for similar periods by re-election from time to time.  
Applicants must have held a resident appointment and have had experience in fracture work. The elected candidate will also be required to deputise for the Resident Surgical Officer during his absence.  
Applications stating age qualifications experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than Tuesday July 5th.  
The elected candidate will be required to enter upon his duties at once.  
**F. J. SYMONS**  
Secretary  
June 23rd 1938

## THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

(232 Beds Six Residents)

Applications are invited for two posts of **HOUSE SURGEON (males)**. The salary for each post is at the rate of £150 per annum with board residence and laundry.  
The appointments are for six months which may be extended for similar periods by re-election from time to time.  
Applications stating age qualifications experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned at once.  
The elected candidates will be required to enter upon their duties on Thursday June 30th 1938.  
**F. J. SYMONS**  
Secretary  
June 23rd 1938

## THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

(232 Beds Six Residents)

Applications are invited for the post of **HOUSE PHYSICIAN (male)**. Salary at the rate of £150 per annum with board residence and laundry.  
The appointment is for six months which may be extended for similar periods by re-election from time to time.  
Applications stating age qualifications experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned.  
The elected candidate will be required to enter upon his duties at once.  
**F. J. SYMONS**  
Secretary  
June 23rd 1938

## SOUTHEND ON SEA GENERAL HOSPITAL

(235 Beds) Eight Residents  
Hon Specialist Staff of 20 Members

Applications are invited for the posts of  
(1) **RESIDENT ANAESTHETIST (male)** Salary £125 p.a. with board residence and laundry. Previous experience in administration of anaesthetics essential.  
(2) **FIRST HOUSE SURGEON (male)** Salary £100 p.a. with board residence and laundry. The Hospital is recognized by the Royal College of Surgeons in respect of this post.  
The appointments are for six months from August 1st 1938.  
Applications with copies of two recent testimonials should be sent to the undersigned not later than July 8th.  
**I. H. CONSTABLE** Secretary

## ROYAL SURREY COUNTY HOSPITAL GUILDFORD

Wanted August 1st  
**HOUSE SURGEON (MALE)**  
General Surgery Orthopaedic and Casualty.  
Six months appointment recognized for the F.R.C.S. Salary £150 per annum with board residence and laundry. Applications stating age and essential particulars with copies of not more than three testimonials to reach the Secretary Superintendent not later than July 5th.

## THE BABIES HOSPITAL

Newcastle on Tyne

**NON RESIDENT MEDICAL OFFICER** required August 1st. The duties are those of a House Physician with time and opportunities for research work. The appointment is for six months subject to reappointment. Salary £150 per annum. Applications with two testimonials and particulars of previous appointments held to be lodged by July 5th with the Secretary The Babies Hospital 33 West Parade Newcastle-on Tyne 4.

**DEWSBURY AND DISTRICT GENERAL INFIRMARY**  
(100 Beds)

The Senior Post is required by the Royal College of Surgeons (R.C.S.) and

An applicant is required for the post of SENIOR HOUSE SURGEON (male) vacant September 1st. Salary £100 per annum with board residence and laundry.

Also for the post of SECOND HOUSE SURGEON (male) vacant August 1st. Salary £80 per annum with board residence and laundry. The candidates should be those of a House Physician and Casualty Officer.

The Infirmary is a modern Infirmary with 100 beds and is situated in the town of Dewsbury. It is a General Hospital with a full complement of medical and surgical departments. The Infirmary is situated in the town of Dewsbury and is a very convenient place for a House Physician and Casualty Officer to be situated. The Infirmary is a very convenient place for a House Physician and Casualty Officer to be situated.

FRED SMITH  
Secretary, Dewsbury

**COUNTY MENTAL HOSPITAL, LANCASTER**

An applicant is required for the post of ASSISTANT MEDICAL OFFICER (male).

Candidates must be of the age of 25 years or over. Commence salary £80 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons. The candidate must be a qualified Medical Officer of the Royal College of Surgeons.

The successful candidate will be required to live at the Hospital and will be provided with board and laundry. The candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, County Mental Hospital, Lancaster.

For particulars of the post and for an application form, apply to the Secretary, County Mental Hospital, Lancaster.

**EAST SUFFOLK AND IPSWICH HOSPITAL**  
(100 Beds) 100 Residencies

Wanted August 1st HOUSE SURGEON (male) to be a General Surgeon and Casualty Officer. The Hospital is situated in the town of Ipswich. The Hospital is a very convenient place for a House Surgeon and Casualty Officer to be situated.

Applicants must be of the age of 25 years or over. Commence salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, East Suffolk and Ipswich Hospital, Ipswich.

**BIRMINGHAM MATERNITY HOSPITAL**

HOUSE SURGEON (man or woman) wanted for 6 months from August 1st. The Hospital is situated in the town of Birmingham. The Hospital is a very convenient place for a House Surgeon to be situated.

Applicants must be of the age of 25 years or over. Commence salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, Birmingham Maternity Hospital, Birmingham.

**BRADFORD CHILDREN'S HOSPITAL**

HOUSE SURGEON (lady) required immediately. Salary £100 per annum with board residence and laundry.

Applicants must be of the age of 25 years or over. Commence salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, Bradford Children's Hospital, Bradford.

**CO. SUMPTION SANATORIUM**  
(100 Beds) 100 Residencies

Wanted August 1st HOUSE SURGEON (male) to be a General Surgeon and Casualty Officer. The Sanatorium is situated in the town of Colwyn Bay. The Sanatorium is a very convenient place for a House Surgeon and Casualty Officer to be situated.

Applicants must be of the age of 25 years or over. Commence salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, Co. Sumption Sanatorium, Colwyn Bay.

**COSSHAM MEMORIAL HOSPITAL**  
Kingswood Bristol

A vacancy will appear at the end of July for a JUNIOR RESIDENT MEDICAL OFFICER to remain for six months in the first instance. Applicants (males) should be British nationals fully qualified and registered.

Applicants must be of the age of 25 years or over. Commence salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, Cossiam Memorial Hospital, Kingswood Bristol.

**COSSHAM MEMORIAL HOSPITAL**  
Kingswood Bristol

Wanted an additional HONORARY SURGEON for general surgical work. Apply with full particulars to the Secretary.

**HOSPITAL OF ST. CROSS RLCBY**  
(100 Beds)

An applicant is required for the post of ONE MALE RESIDENT MEDICAL OFFICER (R.M.O.).

Salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, Hospital of St. Cross, RLCBY.

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**HULL ROYAL INFIRMARY**

Applications are invited for the post of SECOND CASUALTY OFFICER (male) vacant June 30th. Salary £100 per annum plus board residence and laundry.

In addition to carrying out duties in the Casualty Department the officer appointed will act as House Surgeon to one of the Infirmary Assistant Surgeons and will obtain Ward and Theatre experience.

He will be eligible for promotion to a more senior post after a vacancy occurs.

The appointment will be for a period of six months but will be determinable at any time by 7 months' notice on either side.

Applicants must bring particulars of a previous experience and must submit with copies of recent testimonials to be addressed to the undersigned.

J. J. CARLESS  
June 1st 1938  
House Governor

**MANCHESTER ROYAL INFIRMARY**

JUNIOR ASSISTANT MEDICAL OFFICER IN RADIOLOGICAL DEPARTMENT (LOCAL TENENS)

The Board of Management invite applications for the above appointment. Applicants must be registered and hold a Medical and Surgical qualification and the D.M.R.E. or equivalent.

The appointment is for three months. Salary at the rate of £350 per annum. Applicants must state age and send copies of their application and testimonials to the undersigned by Thursday June 30th 1938.

By Order  
F. J. CABLE,  
General Super and Secretary

June 1st 1938

**ROYAL DEVON AND EXETER HOSPITAL**  
Exeter

HOUSE SURGEON (MALE) TO THE EAR, NOSE AND THROAT DEPARTMENT

Applicants are invited for this post which is a half-time vacant. The appointment is for six months. Candidates are eligible for re-employment. Salary at the rate of £100 per annum with board and laundry.

Applicants must be of the age of 25 years or over. Commence salary £100 per annum with board residence and laundry. The post is a full-time post and the candidate must be a qualified Medical Officer of the Royal College of Surgeons.

For particulars of the post and for an application form, apply to the Secretary, Royal Devon and Exeter Hospital, Exeter.

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## THE ROYAL GWENT HOSPITAL Newport Mon

### APPOINTMENT OF HONORARY SURGEON

The Board of Directors of the Royal Gwent Hospital invite applications for the above appointment. Applicants must hold the senior surgical degree of a University or be Fellows of the Royal College of Surgeons of England Ireland or Edinburgh and shall be in full Consulting practice.

The successful candidate will be required to hold the office subject to the rules and regulations of the Hospital.

Members of the present Surgical Staff are applying for the appointment.

Further particulars may be obtained from the undersigned to whom all applications should be sent by June 30th 1938.

By Order of the Board of Directors

ALAN RUDDLE

June 20th 1938

Secretary Superintendent

## THE RETREAT YORK

A REGISTERED MENTAL HOSPITAL  
under the Management of a Committee of  
the Society of Friends

A MEDICAL SUPERINTENDENT will shortly be required at the above Hospital and applications are invited for the position.

The initial salary will not be less than £1000 per annum with a house and other emoluments valued at £300 p.a. for Pension purposes.

Facilities will be given if desired for obtaining some special experience prior to taking up the appointment. The doctor appointed will be expected to work in sympathy with the ideals of the Society of Friends.

Applications with not more than three testimonials should be sent before August 27th to the Chairman of the Committee The Retreat York.

## THE ROYAL INFIRMARY SHEFFIELD (500 Beds)

Applications are invited for the post of CLINICAL ASSISTANT to the Ophthalmic Department (male or female). The Ophthalmic Department contains 68 Beds and an Out Patient Department which is open daily.

Salary £300 per annum.  
The appointment will be for one year subject to two months notice and the officer elected will be eligible for reappointment. Letters stating age and giving full qualifications previous hospital experience etc. to be forwarded to the General Superintendent and Secretary immediately.  
June 14th 1938

## THE ROYAL INFIRMARY SHEFFIELD

Applications are invited for the post of ASSISTANT PATHOLOGIST. The salary is £00 (non resident) for one year.

Applications together with copies of three testimonials and the names of three referees to be sent on or before July 3rd to the General Superintendent and Secretary.  
June 20th 1938

## PRESTON AND COUNTY OF LANCASTER QUEEN VICTORIA ROYAL INFIRMARY

The Board of Management invite applications from unmarried gentlemen properly qualified and registered for the post of HOUSE PHYSICIAN (vacant July 1st) with resident charge of the Medical Beds (approximately 80).

Salary at the rate of £150 per annum with board residence and washing. Six months appointment. Total resident staff 5.

Applications stating age, particulars of qualifications and previous hospital posts (if any) to be forwarded to Mr JOHN GIBSON, F.H.O.A. Superintendent and Secretary Royal Infirmary Preston.

## WORTHING HOSPITAL

Applications are invited for the post of HOUSE SURGEON vacant on July 21st. The appointment is for six months. Salary at the rate of £130 per annum with board lodging and laundry.

Candidate (male) should forward application stating age, nationality, qualifications and experience accompanied by testimonials to the undersigned.

V. V. OAKTON

Secretary Superintendent

## THE SHEFFIELD RADIUM CENTRE at The Royal Infirmary Sheffield 6

Applications are invited for the post of RADIO THEORIST (Locum Tenens) at the above Centre for the period July 1st to September 30th 1938. Salary from £75 per week according to experience.

A. J. GREEN

Secretary

## YORK DISPENSARY

Applications are invited for the post of RESIDENT MEDICAL OFFICER (female) to commence duties as soon as possible. As there are TWO VACANCIES applications from doctors knowing each other would be welcomed.

The resident medical staff consists of two medical officers whose duties are to visit and attend the sick poor in their own homes and to assist the honorary staff.

Candidates must be duly qualified registered and unmarried. Experience in the administration of anaesthetics is essential.

Salary £175 per annum with board lodging and attendance with an allowance towards car expenses and for laundry.

Applications with testimonials to be sent on or before July 2nd to

JOHN C. PETERS

4 New Street York

Secretary

## THE SUSSEX MATERNITY AND WOMEN'S HOSPITAL Brighton (Founded 1830)

The Committee of Management of the above Hospital give notice that at a meeting to be held at the Hospital 80 Buckingham Road Brighton on July 8th 1938 at 11.30 a.m. they will elect an HONORARY OBSTETRIC AND GYNAECOLOGICAL SURGEON. Candidates must be duly registered under the Medical Acts.

Applications with copies of testimonials should be sent to the Secretary 50 Buckingham Road Brighton on or before July 4th. Envisaging is not permitted.

Board Room PERCY F. SPOONER

80 Buckingham Road

Secretary

Brighton June 16th 1938

## VICTORIA HOSPITAL DEAL (50 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) British nationality, unmarried. The appointment to commence on July 14th for six months. Salary £150 per annum with board lodging and laundry. Special knowledge of anaesthetics is desirable.

Applications stating age and qualifications together with copies of three recent testimonials to be sent not later than July 4th to the Secretary of the Medical Board Victoria Hospital Deal Kent.

## WEST SUFFOLK GENERAL HOSPITAL Bury St Edmunds (112 Beds)

Applications are invited for the following post: HOUSE PHYSICIAN. Duties include charge of the Medical Beds, Maternity Ward and Casualty and Administration of Anaesthetics. Salary £150 per annum with board lodging and laundry. Vacancy June 30th 1938.

Applicants for the post must be registered Practitioners. Applications stating age, experience and nationality with copies of three recent testimonials to be sent to the Secretary. The appointment is for six months.  
May 30th 1938

## EAST HAM MEMORIAL HOSPITAL Shrewsbury Road E7 (100 Beds)

The General Committee invite applications for the post of HONORARY GYNAECOLOGIST.

Candidates must be Fellows of the Royal College of Surgeons and engaged solely in Gynaecology. Applications stating age and full particulars together with copies of three testimonials should reach the undersigned on or before July 14th.

Candidates will be expected to send copies of their application and testimonials to and call upon members of the honorary medical staff.

REGINALD PERRY

Secretary

## THE STAMFORD RUTLAND AND GENERAL INFIRMARY Stamford

HOUSE SURGEON (British male or female) wanted for the middle of July 1938 for a period of six months. Salary at the rate of £150 per annum with board residence and laundry in the Infirmary. Candidates to forward three recent testimonials with particulars as to age, qualifications and experience to us not later than June 30th 1938.

Stamford

STAPLETON AND SON

Secretaries

## THE VICTORIA INFIRMARY OF GLASGOW

Wanted for July and August full time RADIOLOGIST to assist the Honorary Radiologist. Salary £10 10s to £12 15s per week according to experience.

Applications to be sent to the Medical Superintendent Victoria Infirmary Langside Glasgow.

## ROYAL FREE HOSPITAL AND LONDON (R.F.H.) SCHOOL OF MEDICINE FOR WOMEN

### OBSTETRICAL AND GYNAECOLOGICAL UNIT

Applications are invited from registered medical women for the immediate temporary appointment for three months of SECOND ASSISTANT full time. Salary at the rate of £500 p.a.

Applications accompanied by copies of not more than three testimonials and the names of two persons to whom reference can be made should reach one of the undersigned from whom further particulars may be obtained by the first post on Friday July 1st. Three copies of all documents must be furnished.

RICHARD T. BARTLEY Secretary  
Royal Free Hospital WC1  
NANCIE MOLLER Wardn and Sec  
London (R.F.H.) School of Medicine  
for Women WC1

June 22nd 1938

## ST. PETER'S HOSPITAL FOR STONE ETC Henrietta Street Covent Garden WC2

The office of HOUSE SURGEON will fall vacant about August 20th and applications are invited from male candidates with previous experience in a similar office at a General Hospital. The salary offered is at the rate of £75 per annum with board lodging and laundry.

On April 1st 1939 and subject to the recommendation of the Medical Committee the House Surgeon will be advanced to the office of Resident Surgical Officer for a period of six months. Candidates should therefore be prepared if successful to remain at the hospital for about thirteen months in all.

Applications accompanied by copies of testimonials should be forwarded to reach the undersigned not later than the first post on Wednesday July 6th.

BEECHEY ROGERS Secretary

## THE MANOR HOUSE HOSPITAL Golders Green London NW11 (140 Beds)

Applications are invited for the post of JUNIOR MEDICAL OFFICER. Salary at the rate of £200 per annum with board residence. Candidates (male and unmarried) must be fully qualified and registered. The successful candidate will be required to take up his duties on Monday July 25th 1938. Applications stating full particulars and accompanied by copies of not more than three recent testimonials should be addressed to reach the undersigned not later than the first post on July 1st next.

JAMES W. LINKHORN F.C.C.S.

Secretary

## BOLINGBROKE HOSPITAL Wandsworth Common SW11 (135 Beds)

The Board of Governors invite applications for the appointment of HONORARY PHYSICIAN.

Applicants must be Fellows or Members of the Royal College of Physicians. The successful candidate will be required in addition to his other duties to take charge of the Children's Department and to attend at the Hospital on the day or days and at the hours arranged and on such occasions as the condition of the patients under his care demands.

Applications stating age and qualifications should be forwarded to the undersigned on or before July 11th.

W. S. RANDOLPH BISS

Secretary Superintendent

## WESTMINSTER HOSPITAL Broad Sanctuary SW1

There is a vacancy for an ASSISTANT HOUSE SURGEON for duty in the Surgery until August 31st to be followed by six months duty as House Surgeon in the Eye, Ear, Nose and Throat Departments. The appointment in the surgery is not resident but meals are provided. The appointment as House Surgeon is resident and board is provided and salary is payable at the rate of £52 per annum.

Applications should be addressed to the undersigned immediately.

CHARLES M. POWER Secretary

## ST. PANCRAS DISPENSARY 39 Oakley Square NW1

There is a vacancy for an HONORARY GYNAECOLOGIST who must possess the qualifications and experience appropriate to such description. The successful candidate will be required to attend once weekly on Wednesday afternoon. Applications accompanied by testimonials should reach the Honorary Secretary at the Dispensary not later than Saturday July 9th 1938.

## APPOINTMENTS—Important Notice

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Secretary, 7, Drumheugh Gardens, Edinburgh).

### (a) British Islands

Town or District	Town or District	Town or District
<b>CONTRACT PRACTICE</b>	<b>CONTRACT PRACTICE—(contd.)</b>	<b>PUBLIC HEALTH</b>
ABERYSSWYTH MEDICAL AID SOCIETY (Medical Officer)	MID RHONDDA MEDICAL AID SOCIETY (Medical Officer)	MOUNTAIN, URBAN, DISTRICT COUNCIL AND EDUCATION COMMITTEE (Assistant Medical Officer of Health and Assistant School Medical Officer)
ELLENWON MEDICAL SOCIETY (Chief Medical Officer)	NEATH AND DISTRICT (Medical Officer)	COUNTY OF ROXBURGH (Assistant Medical Officer of Health)
GILFACH GOCH CLAMORGAN (Assistant Medical Officer)	GOMRE VALLEY CLAMORGAN (Assistant Medical Officer)	<b>DISPENSARY APPOINTMENTS</b>
LLWYNNPIA, CLYDACH VALL, PENYGRAIG CLAMORGAN (Duckington Medical Scheme)	OAKDALE, MON. (Medical Officer of Public Health)	LIMERICK CITY (Medical Dispensary Medical Officers)

### (b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Secretary to the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
<b>NEW SOUTH WALES</b> (All Firms) (See also 1938)	The Medical Secretary New South Wales Branch, 111, Market Square, Sydney, N.S.W.	<b>VICTORIA</b> (1) Institute of Medical Officers	The Honorary Secretary Victoria Branch British Medical Association Medical Society, 111, Albert Street, Melbourne, Victoria	<b>WESTERN AUSTRALIA</b> (Contract and Local Practices)	The Hon. Sec. Western Australia Branch British Medical Association Shelf House 105 St. George's Terrace Perth, Western Australia
<b>QUEENSLAND</b> (Branches and Firms) (See also 1938)	The Hon. Sec. Queensland Branch Medical Association B.M.A. House Wickham Terrace Brisbane, B.17				

June 22 1938

By Order of the Council

G. C. ANDERSON Secretary

#### PENBROKE COUNTY WAR MEMORIAL HOSPITAL

Haverfordwest, Pembrokeshire  
14 Beds to be increased to 100 Beds)

##### RESIDENT HOUSE SURGEON

Applications are invited for the post of Resident House Surgeon (male or female) from duly qualified registered Medical Practitioners with previous relevant experience to commence on July 1st 1938. Salary £200 per annum, a house allowance (to be paid on a board and laundry basis) and accompanied by a car. Applications should be sent to the undersigned at the above address.

B. GLANVILLE DAVIES  
Secretary

#### MONTAGU HOSPITAL, MENDORSLOUGH (113 Beds) (3 Residents)

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (Males). Commencing salary £150 per annum with the usual residential allowances. The appointment is for six months and is subject to renewal.

Applicants should send an equality qualification and experience accompanied with copies of testimonials to be sent to the undersigned.

JOHN V. DRAKE  
Secretary, Superintendent

#### NORTH LONSDALE HOSPITAL, Barrow-in-Furness, (164 Beds)

Secretary July 1st 1938 RESIDENT CASUALTY OFFICER (male)

Applications are invited for the above position from duly qualified Practitioners experienced in the administration of Anaesthetics. Salary £120 per annum with board allowance and laundry. Applicants should send an equality qualification, experience and testimonials, accompanied by copies of three recent testimonials, should be sent to the Secretary not later than Tuesday, June 28th.

#### THE BOLTON ROYAL INFIRMARY (115 Beds in addition to Auxiliary Hospitals)

Applications are invited from L.D.S. and registered in the post of HOUSE SURGEON.

The duties of the post include Ear, Nose and Throat work and Gynaecology. Salary £120 per annum with board and laundry.

Applicants for the post should be a nationality and experience to their work in the post. They should be recommended by the undersigned and a possible date of interview on July 1st 1938.

H. CORLESS Secretary

#### THE ST HELEN'S HOSPITAL, LANCASHIRE

Applications are invited for the position of SENIOR HOUSE SURGEON (male) in the Hospital at a salary of £120 per annum plus board and laundry.

Applicants should be a nationality and experience to their work in the post. They should be recommended by the undersigned and a possible date of interview on July 1st 1938.

GEORGE HARPER  
Secretary

#### WESTMORLAND SANATORIUM (160 Beds)

Near Grange-over-Sand

JUNIOR ASSISTANT MEDICAL OFFICER wanted to commence duties in August. Appointment for six months. Salary £60 per annum with board and laundry.

Applicants with full particulars and copies of testimonials to be sent before June 28th to the Medical Superintendent.

#### WINGFIELD-MORPIS ORTHOPEDIC HOSPITAL, OXFORD

RESIDENT HOUSE SURGEON (male) required for six months. Salary at rate of £100 to £120 per annum.

Applicants with testimonials should be sent to Professor G. R. Girdlestone before July 1st.

#### ROYAL INFIRMARY, BRADFORD

RESIDENT SURGICAL OFFICER (male) required to superintend the work of the House Surgeon and to be fully responsible for the medical work of the hospital. Candidates must be in the 30th year of age, have had previous hospital experience and a special surgical qualification. Salary £200 per annum with board and laundry. There are no fees and no residential charges.

Applicants should send an equality qualification and previous experience with copies of not more than three recent testimonials to be received by the undersigned not later than July 1st.

H. TRUSSON

June 1st 1938 House Officer and Secretary

#### THE WEST NORFOLK AND KINGS LYNN GENERAL HOSPITAL

RESIDENT SURGICAL OFFICER

Applications are invited for the above post which will become vacant on July 10th 1938. Salary £200 per annum. The duties will include much operative work and patients will be given to the candidate on the F.R.C.S. examination.

Applicants should send an equality qualification and copies of recent testimonials, should be sent to the undersigned immediately.

JOSEPH E. SEARJEANT F.R.C.S.

House Officer and Secretary

#### ROYAL VICTORIA HOSPITAL, DOVER (65 Beds)

Wanted for July 1st, HOUSE PHYSICIAN who will have charge of Casualty Department. Salary £100 per annum. At the end of six months he will be eligible for the post of House Surgeon at a salary of £100 per annum.

Applicants should send an equality qualification, experience and testimonials, accompanied by copies of three recent testimonials, should be sent to the Hon. Secretary as soon as possible.

(Appointments continued on p. 51)



JUNE 25, 1938

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**WANTED IMMEDIATELY INDOOR ASSISTANT** (male single) for mixed panel and private East London Dispenser kept night work. Salary £350 all found. Little allowance—Address No 6617 BMA House Tavistock Square W.C.1

**WANTED IMMEDIATELY INDOOR MALE ASSISTANT** English with experience for good-class mixed practice near Leeds. Salary according to experience. View to succession—Address No 6906 BMA House Tavistock Square W.C.1

**WANTED IMMEDIATELY—INDOOR AND OUTDOOR ASSISTANTS** for town and country practices with and without view to partnership. Good salaries offered. State full particulars—British Medical Bureau 33 Cross Street Manchester 2

**WANTED IMMEDIATELY MARRIED ASSISTANT** (British) for South Wales colliery practice with early view 30/35 Salary £450 and car allowance or car provided with free unfurnished house—Apply with photograph. Address No 6634 BMA House Tavistock Square W.C.1

**WANTED IMMEDIATELY MALE ASSISTANT** with view preferably married in pleasant city suburb excellent doctor's house and surgery. Salary £400 and free house—Address No 6814 BMA House Tavistock Square W.C.1

**WANTED JULY 1st 1938 INDOOR MALE ASSISTANT** married preferred with view to plus board and lodging. Car allowance £52 p.w.—Address No 6613 BMA House Tavistock Square W.C.1

**WANTED JULY 1st MALE ASSISTANT** preferably English unmarried. Panel and dispensing. Cumbria and adjoining Lakes. Address No 6825 BMA House Tavistock Square W.C.1

**WANTED AT ONCE OUTDOOR ASSISTANT** in industrial practice near Nottingham. Either sex—Address No 6909 BMA House Tavistock Square W.C.1

**WANTED—OUTDOOR ASSISTANT IN** Colliery Practice in Glamorgan. One with car preferred. Salary £400 p.w. and £20 car allowance with room and attendance—Address No 6811 BMA House Tavistock Square W.C.1

**WANTED OUTDOOR MALE ASSISTANT** for panel and private practice in the Mid-lands. Salary £400 per annum. Must be reliable. Car supplied. Usual bond—Address No 6826 BMA House Tavistock Square W.C.1

**WANTED ASSISTANT OUTDOOR** salary £450 with view to partnership 1/2 to 1/3 share in £3 000 practice at 2 years purchase. South coast—Address No 6830 BMA House Tavistock Square W.C.1

**WANTED MALE ASSISTANT LARGE** mixed country practice. Mid Cornwall. Private and panel. Dispensing. Must be young and well qualified. Good prospects for energetic worker. Salary £300 all found. Car or car allowance. Interview essential. Usual bond—Address No 6445 BMA House Tavistock Square W.C.1

**WANTED EXPERIENCED MARRIED ASSISTANT** for large practice in Cheshire. Panel + 000. Good salary and early view. Free unfurnished house. RC preferred. Scotch or English only. Minor surgery and anaesthetics—Address No 6820 BMA House Tavistock Square W.C.1

**WANTED TWO ASSISTANTS ONE** ophthalmic the second ENT. Give full particulars. HS DOMS or DLO an advantage—Address No 6607 BMA House Tavistock Square W.C.1

**WANTED WOMAN DOCTOR AS ASSISTANT** in Sanatorium. Previous experience not necessary—Address No 6836 BMA House Tavistock Square W.C.1

**AN ASSISTANT IS REQUIRED IN A** Radiological Practice in South Africa. Applicants between the ages of 30 and 35 will be given preference. Commencing salary £1 200 to £2 000 per annum depending on experience and qualifications. Partnership will be offered to suitable applicant—Address No 5639 BMA House Tavistock Square W.C.1

**ASSISTANT REQUIRED SCOTTISH OR** English unmarried experience of general practice South East London. Own rooms at branch surgery. £150 per annum garage and £50 car allowance. Required end of July or early August—Address No 6453 BMA House Tavistock Square W.C.1

**FAR EAST—ASSISTANT REQUIRED** AS soon as possible. Commencing salary £500 p.a. Contract 4 years. Pension paid. Applicant must be of German or Austrian nationality hold ing British qualification not over 38 years of age and preferably unmarried—Apply British Medical Bureau Tavistock House, South Tavistock Square W.C.1

**INDOOR ASSISTANT REQUIRED IN EASILY** worked industrial practice in beautiful S. Wales colliery district. Golf bathing etc. Good hospital. Option of outdoor assistantship in three months with good house. Indoor salary all found £365. Outdoor salary to be arranged—Address No 6832 BMA House Tavistock Square W.C.1

**LADY ASSISTANT INDOORS EASY REACH** desired Cardiff. Work light time for study it. Address No 6821 BMA House Tavistock Square W.C.1

**PERMANENT ASSISTANT FOR OCTOBER** Suitable for married man. House provided. State experience and all essential particulars—Address No 6160 BMA House Tavistock Square W.C.1

**QUALIFIED LADY MEDICAL REQUIRED** to give HELP in small practice country. Sign usual bond—Address No 6831 BMA House Tavistock Square W.C.1

**TEMPORARY PART TIME ASSISTANT RE-** quired London N.W.6. Would suit recently qualified man. Ample time for reading. State all essential particulars—Address No 6907 BMA House Tavistock Square W.C.1

## LOCUMS

**WANTED LOCUM AUG 14th 25th FOR** compact industrial practice Birmingham. Work light—Address No 6904 BMA House Tavistock Square W.C.1

**WANTED LOCUM COUNTRY OR COAST** desires change. Commencing about 1st week August for two or three weeks. Own car—Address No 6905 BMA House Tavistock Square W.C.1

**WANTED FOR INDIAN DOCTOR'S** practice London E. Locum TENENS. First two weeks in July. Light work—Address No 6834 BMA House Tavistock Square W.C.1

**DOCTOR SMALL WEST END PRACTICE** no panel. Own car. Does non resident. Locums in Bayswater Kensington etc. Full list August free. Numerous references—Address No 6903 BMA House Tavistock Square W.C.1

**EXPERIENCED GP RESIDENT DUBLIN** desires summer LOCUM WORK. Usual fees. Full travelling expenses. Free July 23rd Sept 3rd—Address No 6803 BMA House Tavistock Square W.C.1

**EXPERIENCED LOCUM DISENGAGED** July 22nd to Aug 6th and after Aug 21st. Moderate fee for light prolonged engagement—Locum Byron House, Redfield, Bristol

**HOLIDAY LOCUMS AND ASSISTANTS—** experienced ladies and gentlemen available. Immediate or near future are invited to communicate with—FHE Medical Agency Ltd 36/38 Southampton Street Strand W.C.2

**HOSPITALITY LOCUM MAN OR WOMAN** wanted West London end July one month visiting by locum. Garden tennis—Address No 6822 BMA House Tavistock Square W.C.1

## MEDICAL POSTS, DISPENSERS

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bat over 10 years

Secretary

## Date \_\_\_\_\_

# BATTERSEA GENERAL HOSPITAL

(15 Beds)  
London SW 11

Applications are invited for the post of

**HOUSE PHYSICIAN (female)** Salary at the rate of £100 per annum

**HOUSE SURGEON (female)** Salary at the rate of £100 per annum. Other terms to be arranged on appointment. The successful candidate will be required to take on their duties on 1st July 1938.

Female applicants are required to state age and experience with copies of three recent testimonials to be sent to the undersigned not later than 5 p.m. 14th July 1938.

G. L. BENNETT Secretary

# CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL

Gray's Inn Road W.C.1

## ASSISTANTS IN THE OUTPATIENT DEPARTMENT

Third Assistant to attend on Wednesdays at 4 p.m.

Third Assistant to attend on Saturdays (first session) at 9.0 a.m.

The duties are to assist the Surgeon in seeing outpatients and the posts are full time. Applications which may be for periods of three or six months should be sent to the undersigned immediately.

JOHN H. YOUNG

Secretary

# CONNAUGHT HOSPITAL WALTHAMSTOW

E17

1112 Beds with Four Resident Medical Officers

**CASUALTY OFFICER (male)** required to commence duties July 1st.

The appointment is for six months with remuneration at the rate of £110 per annum with board residence and laundry.

Applicants, stating age, nationality, qualifications and experience, accompanied by copies of not more than three testimonials must be delivered to the undersigned not later than July 5th 1938.

R. HALTON HARRISON

Acting Secretary

# HAMSTEAD GENERAL HOSPITAL

Hamstock Hill NW 3  
(City Road Department, Camden Town NW 1)

A vacancy is declared in the post of **HOUSE SURGEON** to OUTPATIENTS. Candidates must be Fellows of the Royal College of Surgeons in England and be required to call upon members of the Honorary Medical Staff of the Hospital.

Applications, stating age, qualifications and experience, with copies of three testimonials should reach the undersigned by July 15th from whom full particulars may be obtained.

KENNETH A. J. MILES

Secretary

# HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

Brompton SW 3

The Committee of Management invite applications for the post of **HOUSE PHYSICIAN** (for whom there are three vacancies). The duties involve work in the Outpatient Department as well as in the Wards. The appointment is for six months commencing on August 1st with an honorarium of £50.

Applications with copies of testimonials must reach the undersigned not later than Saturday July 5th 1938.

Brompton SW 3

F. G. ROLVRAJ

Secretary

# CHARING CROSS HOSPITAL

Applications are invited for the post of **HONORARY CLINICAL ASSISTANT** in the X-ray and Electro-Therapeutics Department. Candidates should have by preference the qualification of D.M.R.E.

Applications, together with copies of three recent testimonials, should be sent to the undersigned not later than first post June 28th 1938.

GEORGE J. JONES

Secretary

Charing Cross Hospital W.C.2

# GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL

London W.1

Applications are invited for the post of **REGISTRAR**. Applicants stating age, qualifications and experience, accompanied by copies of three testimonials should be received on or before July 5th 1938 by the undersigned from whom further particulars may be obtained.

F. P. CARROLL

June 1st 1938 Secretary Superintendent

# PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E1  
(135 Beds)

Applications are invited for the post of **ASSISTANT SURGEON** in the above hospital. Candidates should be duly qualified duly registered in this country and fellows of the Royal College of Surgeons in England and engaged solely in the practice of surgery. They should also have special experience in orthopaedic surgery but would be expected to share in the ordinary medical work of the hospital.

They should also have in view the fact that the early removal of the infant department of the hospital to Barsestead Surrey is contemplated. A list of the honorary medical staff on whom duties are expected to call and other necessary information can be obtained from the Secretary to whom all applications should be sent not later than July 5th 1938.

# ROYAL LONDON OPHTHALMIC HOSPITAL

(Maxillofacial Eye Hospital)  
City Road E.C.1

Applications are invited for the post of **TWO OUTPATIENT OFFICERS** one to attend on Monday and Thursday and one on Tuesday and Friday (morning) each week.

Candidates must be registered Medical Practitioners.

Salary at the rate of £100 per annum. The Outpatient Officers will be appointed for a period of one year and will be eligible for reappointment.

Copies of testimonials can be obtained on application.

Applications with testimonials stating age and qualifications must be sent to the undersigned not later than July 5th 1938.

A. J. M. TARRANT

Secretary

# PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN

St. Quintin Avenue North Kensington W.10  
(Ladbroke 0133)

The Board of Management invite applications for the post of **HONORARY ASSISTANT PHYSICIAN** with beds.

Applicants must be graduates of a University and must hold the M.R.C.P. (London) and the successful candidate will be required to see Outpatients.

Applications accompanied by copies of three testimonials should be sent to the undersigned at the Hospital from whom any further information can be obtained and should reach him not later than Tuesday July 5th 1938.

H. J. ELEY

Secretary

# PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN

St. Quintin Avenue North Kensington W.10  
(Ladbroke 0133)

The Board of Management invite applications for the combined post of **HONORARY ASSISTANT PHYSICIAN** with beds and **PHYSICIAN IN CHARGE** of the Child Guidance Clinic. Applicants must be graduates of a University and must hold the M.R.C.P. (London) and the D.P.M. and must have had practical experience in a Child Guidance Clinic.

Applications accompanied by copies of three testimonials should be sent to the undersigned at the Hospital from whom any further information can be obtained and should reach him not later than Tuesday July 5th 1938.

H. J. ELEY

Secretary

# ROYAL CHEST HOSPITAL

City Road E.C.1  
(Royal Northern Group of Hospitals)

Applications are invited for the following post: **HOUSE PHYSICIAN** additional (male) vacant August 1st for a period of six months. Salary at the rate of £100 per annum with board residence and laundry.

Applications with copies of testimonials should be sent by July 1st to the undersigned from whom the necessary forms of application and rules can be obtained.

GILBERT G. PANTER

Royal Northern Hospital  
Holloway London N7

# KING GEORGE HOSPITAL

Ilford (near London) (107 Beds)

**RESIDENT MEDICAL REGISTRAR (male)** required at a salary of £150 p.a. for a period of two months.

Forms of application may be obtained from the undersigned to whom they should be returned duly completed.

G. AUSTIN HEPWORTH

Secretary and Superintendent

# HOSPITAL OF ST JOHN & ST ELIZABETH

60 Grove End Road NW 3

Applications are invited for the post of **RESIDENT HOUSE PHYSICIAN (male)**. The post is recognized for the degree of M.D. London University. The appointment will be for six months from August 1st 1938. Salary at the rate of £100 per annum with full board.

Applications to either with copies of three testimonials, should reach the undersigned by June 5th 1938. Applicants will be required to attend a meeting of the Medical Committee at 8.30 p.m. on July 5th at the Hospital.

F. DUDLEY HOBBS

B.A. Secretary

# SAINT MARY'S HOSPITAL FOR WOMEN AND CHILDREN

Harlow E.13

Applications are invited for the post of **RESIDENT SURGICAL OFFICER** male or female.

The appointment is for six months. Board and residence are provided. Salary at the rate of £155 per annum including £5 a week for laundry.

Personal examination not desired. Applications with copies of three recent testimonials to be sent to the undersigned as soon as possible.

A. ERNEST WILKES

Secretary

# ROYAL NORTHERN HOSPITAL

Holloway N7

Applications are invited for the post of **OPHTHALMIC REGISTRAR**. The appointment is for one year with eligibility for reappointment. Times of attendance on application.

Honorarium £20 per annum with certain fees.

Applications with copies of testimonials should be sent by July 1st to the undersigned from whom the necessary forms of application and rules can be obtained.

GILBERT G. PANTER

Secretary

# ST GEORGES HOSPITAL SW 1

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1 KENT COAST—Well known town SEVEN TENTHS SHARE of old established good class PRACTICE local receipts £2 000 p.a. Fine house on rental Premium two years purchase

2 KENT—Developing part Very promising NUCLEUS Receipts last 5 months £1 5 Panel 140 increasing Fine corner house cash terms of mortgage Premium for Practice £275 Excellent opportunity Great scope

3 A number of small PRACTICES at low premiums Excellent opportunities for practitioners wishing to get a Practice with scope

4 NR VICTORIA SW—Well established mixed class PRACTICE Receipts last year £1 000 small panel Nice flat also branch Premium £550 payable £600 down

5 NR HOLBORN WC—Well established PRACTICE Receipts average £1 000 p.a. Panel 1104 Splendid surgery recommendation only Long introduction if desired Premium £2 000

6 NEAR FINCHLEY N—Well established PRACTICE in developing part Receipts last year about £400 panel 163 increasing Fine corner house and garden easy terms of mortgage Premium for Practice about £750

7 NEAR FULHAM SW—Well established mixed class PRACTICE Receipts last year over £900 panel nearly 500 increasing Nice house on rental Premium £1 250

8 LARGE MIDLAND TOWN (Suburb)—PRACTICE held 16 years by Vendor Receipts average nearly £500 p.a. good panel Attractive house on rental Premium about £1 500

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2 LANCS—Old established middle and working class PRACTICE Receipts over £1 400 p.a. Panel 1 700 ample scope to increase and good house

3 GLOUCESTERSHIRE—Well established middle and working class PRACTICE Receipts over £1 700 p.a. Panel of 1 700 Good scope to increase and excellent house

4 LANCS—Old established middle and working class PRACTICE Receipts over £1 200 p.a. Panel 1 000 Excellent house with all services

5 LONDON—Old established PRACTICE Receipts over £1 750 p.a. Panel 906 Good house

6 GLOUCESTERSHIRE—Old established middle and working class PRACTICE Receipts over £900 p.a. Panel 500 scope to increase and good house

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DEATH VACANCY—GLOS—£900 p.a. or more Panel over 800 Premium £900 Semi detached house 5 bed etc Large garden £800 freehold—1

MIDDLESEX SUBURB—HAIF SHARE of about £2 000 p.a. Increasing panel over 600 Developing area Choice of house Premium £2 000—2

GUILDFORD—NEARLY £700 P.A. fast increasing Small panel Scope Small house to rent £70 p.a.—3

LONDON, NE—£1 400 P.A. PANEL 2 300 Ample scope Half share with succession soon Rent £45 p.a.—4

DEVON—UNOPP COUNTRY OVER £1 100 p.a. and increasing Panel worth £360 p.a. Apprs £60/70 Premium £1 950 Excellent freehold house 6 bed garden etc—5

LONDON N12—OVER £500 IN CLOSING and scope Panel 350 Fees 5/ to 10/6 Cons house in excellent position to rent—6

NEAR BIRMINGHAM—AVERAGE £7/500 p.a. Panel 500 Premium £1 500 House 4 bed garden etc Price £900 or let—7

LONDON, W—AVERAGE £1 260 P.A. Better class non panel Fees 21/ Premium £1 750 or near Excellent house 6/7 bed etc to rent—8

SCOTLAND (N)—COUNTRY OVER £1 000 p.a. incl panel of £300 p.a. Visits 5/ to £5 5s Premium 1½ years purchase or offer Good house rent or sell—9

MIDDLESEX—SUBURB £1 030 P.A. Panel 600 increasing PMS £100 Premium 2 years purchase Comfy house (4 bed) Sell or let—10

MIDLANDS—AVERAGE £1 068 Panel nearly 1 000 Prem 11 years purchase Good detached house 6 bed nice garden etc £1 250 freehold—11

LOCK-UP LONDON SW—HELD BY WOMAN £485 p.a. Panel abt 500 Prem 1½ years purchase—12

LONDON W2—AVERAGE £1 900 p.a. Panel 1 300 Fees 5/ to 21/ Lease of imposing house for disposal—13

LADY DR S PRACTICE—EASTERN SUBURB £1 400/£1 500 p.a. Small panel and PMS Premium 1½ years purchase Well equipped surgery and living room £50 p.a.—14

KENT SUBURB—ABOUT £300 P.A. increasing Panel 140 Fees 3/6 to 7/6 Premium £300 Detached modern residence 4 bed and good garden—15

LONDON W12—AVERAGE £800 P.A. Selected panel of 900 scope Visits 1/6 to 6/ Premium 2 years purchase Large house part let off it over £700 p.a.—16

LONDON N18—£300 P.A. WITH scope Branch PRACTICE Panel 200 Nice house to rent—17

GLOS—1 SHARE OF £2 800 P.A. Panel 3 000 Apprs £60 or more Premium 2 years purchase Choice of house—18

CO DURHAM—AVERAGE £1 250 No panel or dispensing Premium £2 000 Semi detached 4 bed etc and large garden 1½ c £1 00—19

KENT COAST TOWN—1 OR 1 SHARE receipts £3 650 p.a. Panel over 2 000 Good house on rental £15 p.a. Premium 2 years purchase—20

CROYDON AREA—NEARLY £700 p.a. Panel 400 increasing Club etc Premium about £5 0 Semi detached house to rent—21

LONDON SUBURB W—£2 200 P.A. No panel Fees 5/ to 21/ Premium 2 years purchase Corner house on main road For sale etc hold £ 000—22

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**LINCOLNSHIRE**—Very old-established **PRACTICE** in pleasant country. Cash receipts last year £2,771. Panel about 1,400. Cottage Hospital. Good house 5 bedrooms, small garden, garage etc. Premium—£1,000. For sale—£1,132.

**NEAR LEEDS**—Old-established middle and working-class **PRACTICE**. Cash receipts average £1,000 p.a. Panel 1,500. Excellent detached house with reception 4 bedrooms, 3 professional rooms (separate entrance), garage and 100 ft. garden. Price £1,000. Mortgage can be arranged. Premium—£1,000. For sale—£1,100.

**SOUTH COAST—SEAFORD TOWN**—Old-established good mixed-class **PRACTICE**, average last 3 years £1,000 p.a. and including transferable patients £250 p.a. Panel over 1,700. Great scope. Local Hospital. Excellent reception 2 reception 1, 5 bedrooms, large and nice garden. Rent £10 p.a. Premium—£1,500. No 1129.

**SHROPSHIRE**—Old-established on proposed Country **PRACTICE**. Cash receipts last year £2,000. Panel 450. Modern house 2 reception 5 bedrooms, 3 professional rooms, garage and large garden. Electric light. Rent £20 p.a. Premium—best offer. No 106.

**MANCHESTER**—Well-established mixed Panel and Private **PRACTICE** in pleasant suburban district adjacent to city. House 9 E. etc. Cash receipts premium £1,100. Panel about 1,000.

Excellent modern house 2 reception on 4 bedrooms, garage and nice garden. For sale or may be let. Premium—£1,000. For sale—£1,100.

**WORCESTERSHIRE**—Very old-established country **PRACTICE** in beautiful district. Cash receipts £2,000 p.a. Panel 400 and appointments 1,500 p.a. Nearest opponent 5 miles. Attractive house 2 reception 5 bedrooms, electric light etc. and large garden. Good sport. Premium—£1,000. No 1097.

**MIDLAND HEALTH RESORT—PARTNERSHIP** in very old-established middle and better working-class **PRACTICE**. Cash receipts last year £1,500. Panel 1,000. Excellent house with 2 reception, 4 bedrooms, 2 professional rooms, garage and garden. Premium—£1,000. For sale—£1,100.

**MANCHESTER**—Sound old-established mixed Panel and Private **PRACTICE** in industrial district. Cash receipts last year £2,200. Panel 2,200. Good house, reception room 4 bedrooms, 2 professional rooms, small garden. Rent £9 p.a. Premium—best offer. No 1054.

**MIDLANDS**—Very old-established **PRACTICE** in pleasant Country district near large town. Cash receipts last year £2,345. Appointments about £40 p.a. Panel 1,600. Scope. Excellent detached house 3 reception 7 bedrooms, 3 professional rooms, garage and large garden. Premium—2 years purchase—£1,000. No 1093.

**LIVERPOOL**—Steadily increasing, mixed-class **PRACTICE** in suburbs. Cash receipts last year £7,700. Panel 1,670. Excellent detached house 2 reception 6 bedrooms, garage and garden. Premium—Practice—best offer. No 1056.

**MANCHESTER**—Mixed Panel and Private **PRACTICE**. Cash receipts last year £2,400. Panel 1,250. Good house 3 bedrooms 2 living rooms, 2 professional rooms, small garden. Rent £6 p.a. (including rates). Premium—£1,000 to include drugs and dispensary furniture. No 1117.

**YORKSHIRE (W.R.)**—Very old-established mixed Panel and Private **PRACTICE** in large town. Cash receipts over £1,600 p.a. Panel 1,150. Detached house 2 reception, 6 bedrooms, 3 professional rooms (separate entrance), garage and garden. Premium—2 years purchase—£1,100. No 1130.

**MANCHESTER**—Old-established **PRACTICE** in industrial district. Cash receipts last year £1,200 including vaccination appointments £15 p.a. Panel 1,100. Scope. Good house 2 reception 3 bedrooms and 3 professional rooms, garage. Rent £70 p.a. Premium—£1,000 to include book debts (to £500). For sale—£1,100. No 1131.

**NORTH WALES**—Sound Best in Good-class **PRACTICE**. Cash receipts £1,200. Panel 425. Welsh non-English house with garage and garden, to rent or purchase. Good winter climate. Premium—£1,000 or near offer. No 99.

**LANCAS TOWN**—Very old-established mixed Panel and Private **PRACTICE**. Cash receipts last year £1,372. Panel 1,950. Scope. Good house 2 reception 4 bedrooms 3 professional rooms (separate entrance). Price £1,000. Freehold. Premium—Practice—£1,000. For sale—£1,100. No 1131.

**DERBYSHIRE**—Old-established **PRACTICE** (capable of great increase). Cash receipts last year £700 (increase in). Panel 562. Excellent house 2 reception 4 bedrooms, 3 professional rooms (separate entrance), garage and good garden. Premium—Practice and house £1,600. No 929.

**NORTH LANCs—YORKSHIRE BORDER**—Old-established proposed Country **PRACTICE** in pleasant hands 40 years. Cash receipts £1,000 p.a. Panel and appointments approximately £4,000 p.a. Well-built house with ample accommodation central heating electric light, garage and garden of 2 acres. Rent £75 p.a. Premium—£1,500. Vendor returns—No 1119.

**YORKSHIRE (W.R.)**—Old-established mixed Panel and Private **PRACTICE** in better working-class and rural district. Cash receipts last year £1,100. Panel 1,350. Scope. Good house 2 reception 3 bedrooms, maid's room 3 professional rooms (separate entrance), garden with tennis court. Rent £25 p.a. Garage rented. Premium—2 years purchase or near offer. No 111.

**NEAR MANCHESTER—PARTNERSHIP** in very old-established middle and better working-class **PRACTICE** WITH SUCCESSION in one or two years. Cash receipts £2,600 p.a. Panel 1,450. Good scope. Suitable accommodation available for temporary assistance if desired. Premium—2 1/2 shares—2 years purchase—No 1108.

**NORTH EAST COAST**—Old-established mixed Panel and Private **PRACTICE**. Cash receipts last year £2,160. Panel 2,000. Appointments and Clinics (transferable) approximately £64 p.a. Good house 2 reception, 3 bedrooms, 3 professional rooms, garage and small garden. Price £700. Premium—2 years purchase or near offer. No 1094.

**NORTH STAFFS**—Very old-established better working and middle class **PRACTICE**. Cash receipts last year £2,431. Panel 1,225. Scope as district developing. Excellent house 2 reception 4 bedrooms, maid's room, separate surgery premises, garage and garden. For sale. Freehold. Premium—Practice—£1,000. For sale—£1,100.

**MIDLANDS**—Old-established middle and working-class **PRACTICE** in large town. Cash receipts last year £1,911. Panel over 1,100. Scope. Excellent modern house 2 reception 4 bedrooms, garage and large garden. For sale. Freehold. Premium—Practice—£2,000. No 1123.

**SOUTH YORKSHIRE**—Well established middle and better working-class **PRACTICE** on outskirts of town. Scope for increase as district develops. Cash receipts last year £1,471. Panel 1,000. Excellent house (built 3 years ago), 2 reception 3 bedrooms, garage, garden, 3 professional rooms (separate entrance). Price £1,400. Premium—1 1/2 years purchase or near offer. No 1111.

**NORTH WEST LANCs**—Old-established mixed Panel and Private **PRACTICE** in large town. Cash receipts last year £1,102. Panel over 1,000. Good house pleasantly situated. 2 reception 5 bedrooms, garage and small garden. Premium—Practice—1 years purchase—No 1105.

**NEAR MANCHESTER—PARTNERSHIP** in old-established mixed-class **PRACTICE** (care to recent death of senior partner). Average cash receipts £4,000 p.a. (increasing). Scope for increase. Good house 2 reception, 5 bedrooms, 3 professional rooms, garage and small garden. Premium—one half share—2 years purchase or near offer. No 111.

**NORTH MIDLANDS**—Old-established mixed Panel and Private **PRACTICE** in Country district near large town. Average cash receipts £1,067 p.a. Panel 900 and transferable appointments £200 p.a. Excellent detached house 2 reception 6 bedrooms, professional rooms, garage and large garden. Price £1,200. Premium—1 years purchase—No 1117.

**LANCS SEASIDE RESORT**—Small increasing **PRACTICE** in developing area. Cash receipts last year £500. Panel 302. Great scope. Well-built detached six roomed bungalow, garage, small garden. Rent £42 p.a. Premium—best offer. No 1116.

**YORKSHIRE**—Old-established **PRACTICE** in pleasant country town. Cash receipts last year £1,000. Panel 600 (producing £200 p.a.). Scope. Excellent house 2 reception 6 bedrooms. Professional rooms, garage and large garden. Good sport and educational facilities. Premium—Practice—£1,700. No 110.

**NEAR MANCHESTER**—Sound old-established middle-class **PRACTICE** in pleasant suburb. Vendor prepared to sell whole practice or one half share with succession in about two years. Cash receipts last year £572. Panel 1,110. Plenty of scope. Good house available with garden and garage. Premium—2 years purchase—No 1107.

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2 MIDLANDS—PARTNERSHIP in mixed Practice £4,800 p.a., in prosperous town. Panel over 3 500. Modern labour-saving house to rent. Premium one third share £3 500, to include drugs, etc. Hospital

3 S W OF ENGLAND—PARTNERSHIP in mixed country town Practice, over £6 400. Panel 4,500. Share worth £1 200 at two years purchase. Preliminary Assistantship

4 W MIDLANDS—PARTNERSHIP in non-dispensing Practice about £3,750 p.a. in beautifully situated country town. Panel 2 800. House to rent. One fourth share at first at two years purchase. Aged about 30 with F.R.C.S. preferred. Preliminary Assistantship

5 MIDDLESEX—PARTNERSHIP in steadily increasing town Practice about £2 000 p.a. Panel 1 800. House to rent. Premium one half share two years purchase. Applicant should be English or Scottish

6 SURREY—Medical Woman's PRACTICE in outlying suburban district. Receipts last year £340. House for sale or rent. Scope. Premium one year's purchase

7 S AFRICA—Medical Woman holding D.O.M.S. required in Ophthalmic Practice. Experienced in operative work and not over 40 preferred. SHARE about £1 000 offered after ASSISTANTSHIP

8 SUSSEX—PARTNERSHIP in good-class Practice newly £3 000 in favourite market town. Panel about 1 200. House (4 bedrooms) etc. Rent £80 p.a. Premium one half share £3 000

9 S COAST—PARTNERSHIP in Practice over £3 000 p.a. in seaside resort. Panel about 2 000. Semi-detached house (3 bedrooms) for sale or rent. Premium one half share £3 000. Excellent hospital and scope for surgery

10 MIDLANDS—Country PRACTICE over £1 200 p.a. in hunting district. Panel 346. Good house (5 bedrooms) garage and good garden. Main water and electricity. Price £1 400 freehold. Premium two years purchase

11 N E ENGLAND—PARTNERSHIP in non-panel Practice doing about £6 000 in one of the chief towns. House available. One sixth share at two years purchase. Partner should be surgically inclined

12 LONDON S E 1—PRACTICE about £1 150 p.a. in populous district. Panel 1 800. Corner house. Rent £105 p.a. Scope. Premium two years purchase

13 LONDON S E 13—PRACTICE averaging over £600 p.a. Panel 300. Accommodation available. Premium £1 150 or near offer to include waiting room furniture etc.

14 LONDON, N W—Medical Woman's PRACTICE over £500 p.a. in growing district. Panel 740. House for sale or rent. Premium 1½ years purchase. Appointments worth £250 p.a. additional possibly transferable

15 S COAST HEALTH RESORT—PARTNERSHIP in Practice about £1 500 p.a. Panel over 1 100. House (3 bedrooms) garage and garden to rent. Premium two thirds share £1 250 to include drugs etc.

16 N OF ENGLAND INLAND SPA—PARTNERSHIP in Practice about £1 900 p.a. Panel 1 200. Excellent house (8 bedrooms etc.), for sale. Scope. Premium one half share £1 800

17 S COAST—PARTNERSHIP in non dispensing Practice, over £5,600 p.a. in health resort. Panel about 600. Share worth about £900 at two years purchase. Further share in two years

18 S OF ENGLAND—Easily worked PRACTICE about £1 000 p.a., in Cathedral city (clubs worth about £160 and panel 1 065). House (6 bed and dressing rooms) for sale. Premium 1½ years purchase or very near offer

19 LONDON, W C—PRACTICE averaging £1 460 (including branch surgery in N 7 area). Panel 1 600. Rent private residence £210. Surgery also rented. Good scope. Premium two years purchase

20 WEST END OF LONDON—Good class non dispensing PRACTICE about £1 150. No panel. Large house to rent. Premium lease and practice £3,000

21 BUCKS—PRACTICE in growing town. Receipts last year £894. Panel about 790. House for sale. Well equipped hospital. Premium £1 500

22 LONDON, W 6—Non dispensing PRACTICE £1 000 p.a. Pleasant suburb. No panel. House (3 bedrooms) garage and garden. Premium house and practice £2 500

23 ESSEX—Country PRACTICE, about £700 p.a. Panel about 450. Very good house (5 bedrooms), garage and garden. Rent £65 p.a. Premium £1 050

24 LONDON S W—Medical Woman's PRACTICE about £960 p.a. in outlying suburb. No panel. Suitable accommodation available. Premium £950

25 SURREY—Medical Woman's PRACTICE, about £500 in developing district. No panel. Rent of house £100 p.a. Scope. Premium £500

26 SMALL RADIOLOGICAL PRACTICE in provincial town. Good opportunity for young, able man. Prospect of hospital appointment later. Premium £1 600 to include modern plant (value about £1 100)

27 PARTNERSHIP in increasing Ear Nose and Throat Practice in provincial town. Partner must hold F.R.C.S.

28 MIDDLESEX—FOURTH PARTNER required in Practice over £7 600 p.a. in residential district on the Thames. Panel 3 600. House (3 bedrooms) to rent. Scope. Premium 6/30ths share £3 100

29 LONDON, N W—PARTNERSHIP in Practice averaging about £5 200 p.a. Panel about 6 000. Maisonette (2 bedrooms etc.) to rent. One fifth share at first at two years purchase

30 N E COAST—Middle and better working class PRACTICE over £1 150 p.a. in seaport town. No panel. Private residence for sale. Premium £750 to include furnishings etc. of consulting rooms

31 LONDON W 9—PRACTICE doing between £900/£950 p.a. in residential district. Panel about 60 but plenty of scope. Rent of maisonette (4 bedrooms) £200 p.a. Premium £1 000 or offer

32 S WALES—Chiefly non dispensing PRACTICE £830 p.a. in seaside town. Panel 380. Centrally situated house. Price £1 250. Good scope. Premium £1 450



# British Medical Bureau

(THE SCHOLASTIC CLINICAL & MEDICAL ASSOCIATION LTD)  
(FOUNDED 1910)

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Telephone Euston 1644  
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## Practices and Partnerships for Disposal (continued)

- 33 LONDON, N.W.4—Middle class PRACTICE about £100 p.a. in developing part. Panel 60. House (3 bedrooms) for sale or rent. Scope. Premium £1250.
- 34 LONDON SW 16—Medical Woman's PRACTICE over £1000 p.a. Panel 40. Semi-detached house. Price £950 freehold. Scope. Premium £1500.
- 35 HOME COUNTY—FOURTH PARTNER required in Practice in growing town. Panel 3000. Income, partner must be energetic, aged about 40 (married preferred) with a learner, towards middle age. Initial share about £1250 p.a. Premium £1000. Preliminary Assistantship.
- 36 SW OF ENGLAND—Non dispensing PRACTICE averaging £166 p.a. in favourite watering place. Small panel. Semi-detached house for sale. Good hospital. Premium £200.
- 37 CORNWALL—PRACTICE averaging £650 in market town in West coast. Panel 200. House (5 bedrooms) and garden for sale or rent. Scope. Premium one and a quarter years purchase (half down).
- 38 LONDON SE 22—PRACTICE in suburban district. Receipts per year £124. Panel 700. Good house with garage and nice garden for sale or rent. Premium two years purchase.
- 39 HOME COUNTY—PARTNERSHIP in Practice averaging £150 p.a. in beautifully situated country town. Panel 130. Clinic of house. Incoming partner must be experienced and aged about 35-40. Premium one half year two years purchase. Hospital.
- 40 LONDON N 7—PRACTICE averaging about £203 p.a. including valuable appointment and panel 1200. Small house (3 bedrooms) garage and small garden for sale or rent. Premium £500 or near offer.
- 41 LONDON SW—PARTNERSHIP in mixed class Practice about £350 p.a. in residential suburb. Panel 2500. Very nice house with garage and quarter acre garden for sale. Two-fifths share at first at two years purchase.
- 42 N MIDLANDS—PRACTICE in residential district near progressive town. Receipts 1937 £770. Panel about 160. House (4 bedrooms) for sale. Good scope. Premium £1000.
- 43 LONDON SW 9—Non panel PRACTICE averaging over £150 p.a. House on main road to rent on lease. Premium one year's purchase.
- 44 S Lincs—Country PRACTICE nearly £800 p.a. in agricultural district. House to rent. Premium £1300 to include surgery furniture Morris 8 Saloon car etc. etc.

- 45 CORNISH COAST—PARTNERSHIP in non dispensing Practice nearly £3000 in favourite resort. Panel 1200. House obtainable. One third share at two years purchase. Good anaesthetist required. Short Assistantship.
- 46 LONDON N 12—PRACTICE doing about £400 in growing district. Panel 16. Attractive modern double fronted 1 1/2 hour saving house (4 bedrooms etc.) for sale. Premium £750.
- 47 S COAST—PARTNERSHIP in Practice £4770 p.a. in residential town and health resort. Panel 6000. Semi detached house (5 bedrooms) garage and garden to rent. Premium one fourth share. £2500.
- 48 W OF ENGLAND—PARTNERSHIP in Practice about £2500 in first rate residential town. Panel about 500. House obtainable. Good scope. One third share at first at two years purchase.
- 49 MIDLANDS—PARTNERSHIP in old established Practice £270 p.a. in manufacturing town. Panel 50. Modernized house 14 bedrooms and professional accommodation. Good garage and garden for sale or rent. Premium one fourth share. £3270.
- 50 LONDON SW—Good class PRACTICE about £1000 in residential part near West End. Fees £115 upwards. Rent of consulting room £200 p.a. on lease. Premium two year purchase.
- 51 LONDON EC—Old established City PRACTICE averaging about £1700 p.a. Panel 16. Premiums entered on lease. Good scope. Premium one and a half years purchase.
- 52 HOME COUNTIES—PARTNERSHIP in increasing middle class Practice about £1600. Panel about 500. Modernized house for sale or rent. Scope. Cottage hospital. Premium one half share. £1600.
- 53 S OF ENGLAND—PARTNERSHIP in Practice over £600 p.a. in growing seaport town. Panel 225. One fifth share at two year purchase. Prelim Assistantship.
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- 55 FRENCH RIVIERA—Old established PRACTICE. M.D. or M.R.C.P. necessary.
- 56 S MIDLANDS—PARTNERSHIP in Practice nearly £5000 p.a. in first rate town. Panel over 100. Applicant should be about 25-30 years of age and well qualified. One fourth share at two years purchase after Assistantship.
- COLONIES—Number of Colonial PRACTICES. Income range from about £750 p.a. upwards.

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All communications to be addressed to The Manager

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- A YORKSHIRE—Country PRACTICE Receipts £1200. Panel 500. Excellent house with garage. Price £1200 freehold. Premium one and three quarter years purchase.
- B E OF SCOTLAND—Manufacturing town. Receipts about £120. Panel 1250. Attractive house. Price £1500. Premium one and three quarter years purchase or near offer.
- C EDINBURGH—DEATH VACANCY—Private PRACTICE averaging £635. Ample scope for increase and of acquiring a panel. Excellent house for sale.
- D E OF SCOTLAND—Country town. Receipts last year £685 (appointments £112 panel 265). Excellent house with garage and garden. Price £1450. Premium £1000.

For further details apply The Manager 21 Alva Street, Edinburgh

Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed.

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- E EDINBURGH—Lady Doctor's PRACTICE. Receipt last year £690. Panel 90. Suitable house for sale. Premium one and a half years purchase.
- F N OF SCOTLAND—Country PRACTICE. Long established. Receipts approximately £1000. Panel 270.
- G WALES—PARTNERSHIP in country town. Receipts £1200. Panel over 1000. Suitable house. Price £500. One half share at one year's purchase.
- H EDINBURGH—PRACTICE doing £450. House must be bought. Premium practice and house £160.
- I EDINBURGH—PRACTICE averaging £1022. Panel 505. Price of house £1200. might let on lease. Premium one and three quarter years purchase or near offer.
- K EDINBURGH—PRACTICE about £400. Suitable house to rent. Reasonable offer considered.



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